Learning Styles of Community Health Nursing Students' at Faculty of Nursing and Technical Institute of Nursing - In Alexandria

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Abstract: Learning styles and preferred learning approaches are believed to have an influence on students' learning. Nurse educators need to be cognizant of their students' learning styles in order to adapt their particular mode of teaching to complement the learner group. Hence, the aim of the present study is to identify the learning style preferences of nursing students at faculty of nursing & technical institute of nursing in Alexandria. Comparative descriptive study design was adopted to carry out this study. The study was conducted at Technical institute of nursing & faculty of nursing in Alexandria .Total sample was 288 nursing students registered at the course of community health nursing 169 students from faculty of nursing &119 from technical institution. One tool was used by the researcher in order to collect the necessary data. It included two parts 1 interview questionnaire .part 2 VARK assessment sheet. The findings of the present study revealed that, the most prominent learning style among nursing students of faculty of nursing is auditory style; while among technical institute nursing student is Kinesthetic style. Statically significant differences was found between two group regarding their age and score of community health course. The study **concluded that** Learning styles helping in understanding the many different preferences that the students bring to. They also highlight that techniques and strategies that can be developed by teachers must be varied to encourage effective learning. . It **is recommended** that Assessment of students' learning style should be done to help the teacher and students to develop collaborative partnerships that will foster the acquisition of the knowledge and skills necessary to practice professional nursing .Nurse educators should provide positive reinforcement of students' active involvement in the learning process, which will stimulate continued self-direction. Encourage students to use all four learning styles when appropriate than to reply solely on one preferred learning style.
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Key wards: Learning style, student nurses.

1. Introduction:

Today's changes in the health care require that nurse educators take actions to ensure the availability of large numbers of knowledgeable practitioners skilled in adapting to this pace of change. Teachers, students and curricula determine the quality of nursing education. In most nursing schools, emphasis is always on curriculum development, selection and organization of content, organization of teaching, and student evaluation. Certain dimensions of the nurse educators' role, such as the ability to develop objectives, assess students' needs, and evaluate their performance, are frequently discussed in the nursing literature [1]. An important aspect of the nurse educators' role has traditionally received less attention, namely their role in identifying the factors that should be considered in the selection of teaching – learning strategies particularly, students' learning preferences, styles and concerns **(Callister et al. 2000[2]; Ostmoe et al. 1984[3])**. **Stutsky & Laschinger(1995)** [4] added that nurse educators should be cognizant of their students' learning styles so as to design well-rounded curricula. **Rourke & Lysynchuck (2002)** [5] indicated that recently many

researchers accepted learning styles as an important construct in education. A learning style is generally described as an attribute or quality of an individual which reflects a pattern of information-processing behaviors used to acquire knowledge or skills and prepare for an anticipated test of memory **(Kelly 1997[6]). Biggs (1994)** [7] describes approaches to learning as: 'ways in which students go about their academic tasks, thereby affecting the nature of the learning outcome'. Several theoretical models have been proposed to explain how do students learn? This question has been an area of interest for instructors and researchers for many years. Several learning styles models and several instruments for measuring learning styles have been developed in an attempt to answer this question. , some of which are the Kolb experimental model, Canfield model, VARK model and Wit kin's field independence–dependence model **(Cleverly 1994)[32]**.In 1991, Campbell reviewed 32 instruments for measuring learning style preferences **(Campbell, 1991).** Some of these instruments are free and some are not. Some can be self-administered, but trained personnel must administer others[8,9]. AS, VARK model Visual-Auditory-

Kinesthetic - Read & write learning styles model has evolved since the been adapted to suit a wide range of learning, behavior and assessment situations. There are 4 styles of preferred learning using sensory skills: Visual (See / imagine / pictures) Auditory (Hear / listen / sounds)
Read &write (Tactile) / Kinesthetic (Touch / move / experience)

Each preferred style has several specific characteristics that contribute to learning. An individual prefers to use these characteristics when they learn. People with a visual style tend to learn mostly through ' sight' they often think in pictures and learn best from visual displays. Those with an auditory learning style will benefit most from listing to lectures, speeches and oral sessions. They prefer to hear an explanation of something rather than read about it. People with Read &write learning style converting visual information like diagrams into descriptions that use words). Finally, People with a kinesthetic learning style prefer to carry out a physical activity rather than listening to a lecture or merely watching a demonstration [10,11] .

Effective teaching considers how students learn best .For example, some students learn better through listening, other by reading, and still others by viewing and doing something at the same time .Students can be more effective learners if they are aware of their preferred learning style. Although it is impossible to accommodate the individual learning styles of an entire group of students ,it is feasible to engage students in a variety of learning activities :to listen ,look at visual aids ,ask questions ,simulate situations ,read ,write ,practice with equipment, and discuss critical issues [12] . Knowing the students learning style give the teacher certain indication about how instruction can be modified in terms of grouping, pacing , materials and teaching style to optimize learning performance[13] . Moreover, individual learning styles affect not only academic learning but also broader aspects of adaptation to life, such as decision making, problem solving and life style in general. . Therefore ,We elected to use the VARK Learning styles in this study because VARK model is very ease and students can self-administer this questionnaire at no cost. In addition, the learning style dimensions are numerically coded and easily quantified for analysis[14,15].

Aim:
The aim of this descriptive study was to determine the learning style preference of nursing students 'enrolled at community health nursing at faculty of nursing &technical school of nursing by using VARK model.

Research question
1- What are the learning style of nursing students at faculty of nursing and technical institute of nursing ?
2- Is there a relation between learning style and teaching methods?

2. Material & Methods
Research design
A comparative descriptive design was used to conduct the study,
Setting
The study was conducted at two different nursing educational program in Alexandria mainly; the technical institute of nursing and faculty of nursing
Subjects
The study subjects consisted of all students enrolled in Technical Institute of Nursing, and Faculty of Nursing at the final grad studying the community health nursing course at the time of data collection.The sample included a total of 288 nursing students in previous educational programs; 169 students from the Faculty of Nursing and 119 students from Technical Institute of Nursing.

Tool for data collection:- one tool was used to collect the necessary data:
Tool I: structured questionnaire
A questionnaire sheet was used for collection of relevant data,
It was entailed two parts:
Part I: -
Basic data such as, educational setting , age , sex , academic achievement of community health nursing course , the actual and preferred teaching methods
Part II:
learning style inventory based on VARK questionnaire (Felming2001)it was entailed questions in relation to students preferred methods or styles of persevering and expressing information related to four learning styles which include visual (by reading),auditory (by listening), Read & write is the same name of tactile or kinesthetic(by experience). The VARK questionnaire was developed by **Neil in Newzeland at(2006)** [16] . The questionnaire consists of 16 questions. the participant are asked to choose from four responses that best represents their way of learning with the availability of more than one answer then the number of responses selected corresponding to the different learning modalities based on the scoring chart sent by Neil (appendex1) is totaled and significance of differences is also calculated to determine the learning preference which may be uni mode, Bi- mode .,tri -mode or multi mode if the four mode are preferred.

Methods

1-permisssion to conduct the study was obtained from all responsible authorities in the Faculty of Nursing & Technical Institute of Nursing.

2- The permission for using The version 7.0 of VARK was obtained from Neil D.Flemmimg through mail at the end of2009 appendix(VARK)

3-Apilot study was carried out on a sample of thirty students ,15 from the Faculty of Nursing and other 15 belongs to Technical institute of nursing .The aim of the pilot study was to ascertain the applicability of the study tool.

4-The purpose of the study was explained to all students before data collection in order to gain their cooperation & confidence.. An informed consent also obtained from each student before conducting the study.

5- The VARK questionnaire was individually administered to each student in the study settings. Data was collected over two months period for the academic year 2009-2010.

6-Students`s academic grades were obtained from the Faculty of nursing &Technical institute of nursing records.

Statistical analysis

The collected data was coded and analyzed using PC with statistical Package for Social Sciences (PASW Statistics 18)

The 0.05 level was used as the cut off value for statistical significance and the following statistical measures were used.

A-Descriptive statistics

1-Count and percentage; used for describing and summarizing qualitative data.

2-Minimum, Maximum, Arithmetic mean, Standard deviation; they were used as measures of central tendency and dispersion respectively for normally distributed quantitative data.

B-Analytic statistics

1- Chi square($x2$) was used to test the association between two qualitative or to detect the difference between two or more proportions.

2-Firsher'Exact test or Monte carlo correction-test was used

3-For normally distributed data comparisons between two independent population were done using indepent t- test

4-Significance test results are quoted as two –tailed probabilities. Significance of the obtained results was judged at the 5%level

3. Results

Table I: Shows that the studied cases age in both faculty of nursing and Technical Institute of nursing ranged from 18 to 24 years old. Also, this table indicates that the mean age of the faculty studied cases that prefer aural, kinesthetic, read write and visual learning style were 21.24, 21.28, and 20.86 respectively. While, the mean age of the Technical Institute of nursing studied cases that prefer oral, kinesthetic, read write and visual learning style were 19.55,19.70, 19.56 and 19.63 respectively.

In relation to academic achievement of faculty of nursing the higher percent 19.4% was with excellent for those prefer visual learning style, while the lowest percent 4% was for those prefer read and write learning style. On the other hand, In Technical Institute of nursing it was observed that the higher percent 48.3% was with good for those prefer visual learning style.

Table II: Shows that 35.5% of the studied cases of faculty of nursing prefer Aural mode style and 29.6% of them prefer kinesthetic mode style. While, 51.3% of the studied cases of Technical Institute of nursing prefer kinesthetic mode style and 26.9% of them prefer read and write style.

Table III: indicates that the most common learning style was unistyle (89.3%) in faculty of nursing students and 89.9% Technical Institute of nursing while, the rest was reported as bi or multi styles.

Table IV: shows the comparison between the most prominent learning styles (aural and kinesthetic in each studied group. This table illustrates that there is no statistically significant difference regarding age, sex in both nursing students at faculty of nursing and technical institute of nursing. Moreover , this table indicates that there was a statistically significant difference between academic achievement in CHN course among Technical and faculty of nursing students.

Table V: Illustrates that there was statistically significant difference was observed between actual and preferred teaching methods of faculty studied cases in relation to all teaching methods that include (lecture, role play, discussion, demonstration, field trip and others respectively.

Furthermore, this table indicates that there was statistically significant difference was observed between actual and preferred teaching methods of technical school of nursing studied cases in relation to all teaching methods except discussion.

Table VI: This table shows the relation between learning styles of nursing students and their actual teaching methods used in their institutes.

Statistically significant relations were observed between the learning style of the faculty students and actual teaching methods including (lecture, role play, discussion, demonstration, field trip and others (MCP= 0.363, P= 0.162, P= 0.155, P=0.928,, P= .549 and p= 0.835 respectively.

Furthermore, this table indicates that there was no statistically significant relations were observed between the learning style of the institute of nursing students and actual teaching methods.

Table VII: The table reveals that no statistically significant difference was observed between preferred teaching method and mode style of the studied sample either for faculty of nursing students or technical Institute of nursing students.

Table VIII: shows the relation between the student sample age and their learning style statistically significant difference was observed between faculty and technical institute of nursing students age in relation to their learning styles including aural, kinesthetic, read write and visual (6.813, 8.112, 9.79and 4.997 respectively).

Table IX: shows the relation between the studied sample sex and their learning style. No statistically significant difference was observed between faculty and technical institute of nursing students sex in relation to their learning styles including aural, kinesthetic, read write and visual.

4. Discussion

Students seem to have a learning style preference based on their sensory intake of information. Most students use all learning style preference to some degree. It may be visual, auditory, tactile (read &write) or kinesthetic. Current theories of learning however favor the use of global or multi-sensory approach for class room instruction. In this approach the learner's preferred style is used to engage him or her and begin instruction, then his learning is reinforced through other styles. It is assumed that learning through several inputs is most effective[17].

People and students are now expected to become lifelong learners and as such, they most identify their learning styles preferences to better cope with what they learn and how they learn. Learners must know how to adjust to fit the information they are learning[18].

So, the aim of this study is to investigate the students nurse's approaches of learning at faculty of nursing of technical institute of nursing.

In this study four learning styles were identified using VARK questionnaire [16].

findings from the present study showed that, the most preferred learning styles reported by Faculty of Nursing students (baccalaureate programs) were aural and tactile (read & write) learning style (table 2). This might be baccalaureate nursing students are engaged in an educational pursuit to provide a complex nursing care requiring specialized skills and problem-solving techniques[19]. Therefore, these styles might help them in learning. These findings are

supported by the literature about learning theories, where, **Knowles (1980)[21]** suggests that, older adult learners prefer instructional situation that, emphasize practical, experience-related learning opportunities and assists them to be actively involved in increasing their competence to perform the developmental tasks of various social roles ; and allows them to be self-directing and independent in pursuing their individual learning needs[20 ,21].

Moreover, similar findings reported by **Merritt's(1983)** who revealed that baccalaureate nursing students expressed a higher preference for tactile (read & write) learning style [22]. in contrast with these findings**, Osman (2004)** found that the visual and the tactile (read –write) were the most preferred learning styles[23].

On the other hand, findings of the present study revealed that technical institute of nursing students (associate program) expressed strong preference for kinesthetic and Read &write style.

These findings are in line with the results of a study done by **Linares (1989**) which revealed that the most common learning style preferred among students of associate and baccalaureate programs were concrete learning and practical tasks (kinesthetic\tactile)[24].

Results of this study revealed that ,statistical significant difference was found in all four learning style (VARK) regarding the age of nursing students either at Faculty of Nursing or Technical School of Nursing. These findings were in accordance with that of Rusian**. (2005) [25].**

Findings of the present study revealed that the majority of the nursing students in both faculty of nursing and technical institute of nursing had the uni-style based on the VARK model of learning style , which came in disagreement with the study conducted by **Baykan** (2007) and **Alkhasawneh (2008)**. As They were used VARK tool to show the learning preferences of medical and dental students. Their studies revealed that, Approximately 64% of the medical students in Michigan and Turkey had multimodal learning preferences , compared with a slightly lower percentage (56%) of dental students[26,27].

Results of the present study is congruent with that of **Salehi ,.(2007)[18]** who found ,that no significant relationship between the learning style and gender [18]Moreover, results of present study also revealed that, no significant relationship was found between the learning style and score of the subject of community health nursing among students both in faculty students and technical institute.

Table (1): Distribution of studied sample's learning styles according to their demographic data

Variables	Faculty's students *								Technical's students*							
	Aural (n = 60)		Kinesthetic (n = 50)		Read & write (n = 57)		Visual (n = 36)		Aural (n = 29)		Kinesthetic (n = 61)		Read & write (n = 32)		Visual (n = 19)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Age																
18	0	0.0	0	0.0	0	0.0	0	0.0	1	3.4	4	6.6	0	0.0	0	0.0
20-	13	21.7	12	24.0	15	26.3	15	41.7	26	89.7	48	80.3	32	100.0	17	89.5
22-	47	78.3	38	76.0	42	73.7	21	58.3	2	6.9	8	13.1	0	0.0	2	10.5
Range	19.0- 23.0		19.0 – 23.0		19.0 – 24.0		19.0 – 23.0		18.0 – 21.0		18.0 – 21.0		19.0 – 20.0		19.0 – 21.0	
Mean± SD	21.24±1.11		21.11±1.04		21.28±1.13		20.86±1.12		19.55±0.69		19.70±0.78		19.56±0.50		19.63±0.68	
Sex																
Male	22	36.7	19	38.0	14	24.6	12	33.3	7	24.1	18	29.5	7	21.9	5	26.3
Female	38	63.3	31	62.0	43	75.4	24	66.7	22	75.9	43	70.5	25	78.1	14	73.7
Academic achievement of Community course																
Excellent	11	18.3	9	18.0	8	14.0	7	19.4	0	0.0	3	4.9	2	6.3	0	0.0
Very good	24	40.0	13	26.0	26	45.6	16	44.4	4	13.8	18	29.5	9	28.1	6	31.6
Good	24	40.0	26	52.0	21	36.8	12	33.3	14	48.3	28	45.9	12	37.5	10	52.6
Satisfactory	1	1.7	2	4.0	2	3.5	1	2.8	11	37.9	10	16.4	6	18.8	2	10.5
Failed	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	3.3	3	9.4	1	5.3

*more than one answer

Table (5):Comparison between the actual and preferred teaching methods in each studied group

Teaching methods	Faculty *				Test of sig.	Technical*				Test of sig.
	Actual (n = 169)		Preferred (n = 169)			Actual (n = 119)		Preferred (n = 119)		
	No.	%	No.	%		No.	%	No.	%	
Teaching methods										
Lecture	163	96.4	91	56.2	= 82.124 p <0.001*	119	100.0	24	20.2	FEp<0.001*
Role playing	69	40.8	27	16.7	= 25.664 p <0.001*	0	0.0	0	0.0	-
Discussion	113	66.7	72	44.4	=20.073 p <0.001*	43	36.1	35	29.4	=1.221 p = 0.269
Demonstration	115	68.0	62	38.3	=33.317 p <0.001*	118	99.2	53	44.5	FEp<0.001*
Field trips	121	71.6	50	29.6	=59.665* p <0.001	28	23.5	104	87.4	FEp<0.001*
Other	19	11.2	9	5.6	=3.894 p = 0.048*	0	0.0	0	0.0	-

²: Chi square test   FEp: p value for Fisher Exact test   *: Statistically significant at p ≤ 0.05

Table (2): Distribution of studied samples according to their most learning style preference

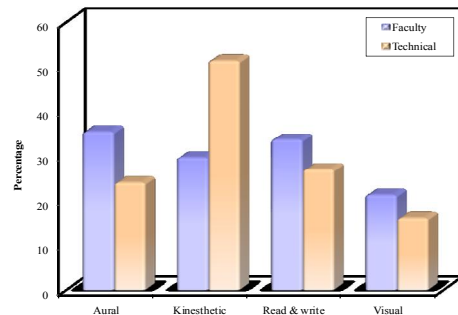| learning style preference	Faculty (n = 169)		Technical (n = 199)	
	No.	%	No.	%
learning style				
Aural	**60**	**35.5**	**29**	**24.0**
Kinesthetic	**50**	**29.6**	**61**	**51.3**
Read & write	57	33.7	32	26.9
Visual	36	21.3	19	16.0

Figure (1): Distribution of studied samples according to learning styles preference

Table (3):Distribution of studied samples according to learning style profile

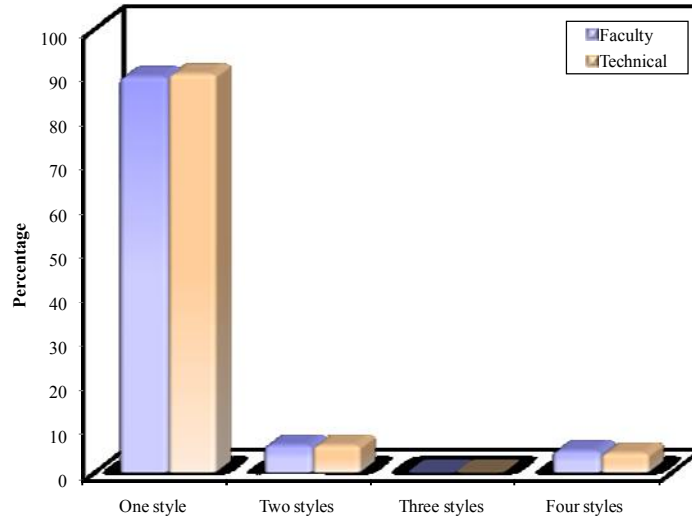| learning style	Faculty (n = 169)		Technical (n = 119)		Total	
	No.	%	No.	%	No.	%
learning styles						
Uni style (One style)	151	89.3	107	89.9	258	89.6
Bie style (Two styles)	10	5.9	7	5.9	17	5.9
Multi styles (three &/ Four styles)	8	4.7	5	4.2	13	4.5

Figure (2): Distribution of studied samples according learning styles profile

Table (4): Comparison between the most two prominent learning styles (Aural and kinesthetic) in each suited group

Variables	Faculty				Test of sig.	Technical				Test of sig.
	Aural (n = 60)		Kinesthetic (n = 50)			Aural (n = 29)		Kinesthetic (n = 61)		
	No.	%	No.	%		No.	%	No.	%	
Age										
18	0	0.0	0	0.0	-	1	3.4	4	6.6	FEp= 1.000
20	13	21.7	12	24.0	=0.085 p = 0.771	26	89.7	49	80.3	FEp= 0.369
22	47	78.3	38	76.0	=0.085 p = 0.771	2	6.9	8	13.1	FEp= 0.491
Range Mean± SD	19.0- 23.0 21.24±1.11		19.0 – 23.0 21.11±1.04		t = 0.623 p = 0.534	18.0 – 21.0 19.55±0.69		18.0 – 21.0 19.70±0.78		t =0.902 p = 0.369
Sex										
Male	22	36.7	19	38.0	= 0.021 p = 0.885	7	24.1	18	29.5	=0.283 p = 0.595
Female	38	63.3	31	62.0	=0.021 p = 0.885	22	75.9	43	70.5	=0.283 p = 0.595
Academic achievement of Community course										
Excellent	11	18.3	9	18.0	=0.002 p = 0.964	0	0.0	3	4.9	FEp= 0.548
Very good	24	40.0	13	26.0	=2.395 p = 0.122	4	13.8	18	29.5	FEp= 0.123
Good	24	40.0	26	52.0	=1.584 p = 0.208	14	48.3	28	45.9	=0.045 p = 0.833
Satisfactory	1	1.7	2	4.0	FEp= 0.590	11	37.9	10	16.4	=4.656[*] p = 0.024
Failed	0	0.0	0	0.0	-	0	0.0	2	3.3	FEp=1.000

  : Chi-square test   FEp: p value for Fisher Exact test   t: Student t-test
*: Statistically significant at p $\leq$ 0.05

Table (8): The relation between the studied sample's age and their learning styles in each group

Age	Faculty	Technical	Test of sig.
Aural N Range Mean± SD	 60 19.0 – 23.0 21.24 ± 1.11	 29 18.0 – 21.0 19.55 ± 0.69	 t = 8.813[*] p <0.001
Kinesthetic N Range Mean± SD	 49 19.0 – 23.0 21.11 ± 1.04	 61 18.0 – 21.0 19.70 ± 0.78	 t = 8.112[*] p <0.001
Read & write N Range Mean± SD	 57 19.0 - 24.0 21.28 ± 1.13	 32 19.0 – 20.0 19.56 ± 0.50	 t = 9.791[*] p <0.001
Visual N Range Mean± SD	 36 19.0 – 23.0 20.86 ± 1.12	 19 19.0 – 21.0 19.63 ± 0.68	 t = 4.997[*] p <0.001

t: Student t-test   *: Statistically significant at $p \leq 0.05$

Table (9):The relation between the studied sample's sex and their learning styles in each group

Sex	Faculty		Technical		(p)
	No.	%	No.	%	
Aural					
Male	23	38.3	7	24.1	1.763 (0.184)
Female	37	91.7	22	75.9	
Kinesthetic					
Male	15	30.0	16	26.2	0.194 (0.660)
Female	35	70.0	45	73.8	
Read & write					
Male	22	38.6	8	25.0	1.695 (0.193)
Female	35	61.4	24	75.0	
Visual					
Male	8	22.2	5	26.3	0.115 (0.734)
Female	28	77.8	14	73.7	

: Chi-square test

Table (6):Relation between learning style of studied samples and actual teaching methods used in their institution

	Faculty								Test of sig.	Technical								Test of sig.
	Aural (n = 60)		Kinesthetic (n = 50)		Read & write (n = 57)		Visual (n = 36)			Aural (n = 29)		Kinesthetic (n = 61)		Read & write (n = 32)		Visual (n = 19)		
	No.	%	No.	%	No.	%	No.	%		No.	%	No.	%	No.	%	No.	%	
Actual teaching method																		
Lecture	59	98.3	47	94.0	55	96.5	33	97.1	MCp= 0.363	29	100.0	61	100.0	32	100.0	19	100.0	-
Role playing	27	45.0	17	34.0	24	42.1	21	58.3	= 5.140 p = 0.162	0	0.0	0	0.0	0	0.0	0	0.0	-
Discussion	40	66.7	35	70.0	36	63.2	17	47.2	=5.245 p = 0.155	15	51.7	24	39.3	8	25.0	6	31.6	=5.004 p = 0.171
Demonstration	42	70.0	37	74.0	39	68.4	26	72.0	=0.457 p = 0.928	28	96.6	60	98.4	32	100.0	19	100.0	MCp = 0.623
Field trips	38	63.3	34	68.0	42	73.7	27	75.0	=2.112 p = 0.549	8	27.6	14	23.0	5	15.6	5	26.3	=1.451 p = 0.694
Other	8	13.3	4	8.0	6	10.5	3	8.3	MCp = 0.835	0	0.0	0	0.0	0	0.0	0	0.0	-

: Chi-square test   MCp: p value for Monte Carlo test

Table (7):Relation between learning style of studied samples and preferred teaching methods used in their institution

Preferred teaching method	Faculty								Test of sig.	Technical								Test of sig.
	Aural (n = 60)		Kinesthetic (n = 50)		Read & write (n = 57)		Visual (n = 36)			Aural (n = 29)		Kinesthetic (n = 61)		Read & write (n = 32)		Visual (n = 19)		
	No.	%	No.	%	No.	%	No.	%		No.	%	No.	%	No.	%	No.	%	
Lecture	30	50.0	28	56.0	33	57.9	18	50.0	= 1.038 p = 0.792	1	3.4	11	18.0	7	21.9	5	26.3	=5.523 p = 0.137
Role playing	13	21.7	10	20.0	6	10.5	6	16.7	= 2.900 p = 0.407	15	51.7	20	32.8	12	37.5	5	26.3	=4.100 p = 0.251
Discussion	23	38.3	23	46.0	22	38.6	13	36.1	=1.093 p = 0.779	11	37.9	27	44.3	14	43.8	10	52.6	=1.011 p = 0.799
Demonstration	25	41.7	17	34.0	14	24.6	14	38.9	=4.169 p = 0.244	27	93.1	52	85.2	26	81.3	18	94.7	MCp = 0.428
Field trips	20	33.3	15	30.0	16	28.1	9	25.0	=0.835 p = 0.841	0	0.0	0	0.0	0	0.0	0	0.0	
Other	5	8.3	3	6.0	6	10.5	2	5.6	MCp = 0.812	0	0.0	0	0.0	0	0.0	0	0.0	-

Chi-square test   MCp: p value for Monte Carlo test

Failure to find significant difference between the different learning styles , sex and achievement of community health nursing course within the students of faculty of nursing and technical institute of nursing was not surprising because it conforms with the **Linares's (1999)** study findings which attributed the absence of significant correlation occurred because of the student nurses represent the same population[29] .   .

Furthermore, the findings revealed that there was no significant difference between baccalaureate and associate nursing students in relation to learning styles. The finding was supported by the finding of **Fojtasek (1988)** study. He revealed that associate and baccalaureate nursing students are similar in their preference of kinesthetic and tactile (read & write) learning styles [30].

Teaching nursing is a complex activity that integrates art and science of nursing process and clinical practice into the teaching learning process. Findings drown from the present study showed that, there was significant difference between the actual &preferred methods of teaching used at the faculty of nursing and at technical institute of nursing. Good teaching requires linking specific teaching strategies with students needs, abilities, interests and learning styles. the finding of this study revealed that ,the lecture is one of the most common actual teaching strategies as it was reported by the majority of students either at faculty of nursing or at technical institute of nursing [31]. These results is in agreement with the other studies which showed the same ([31 ,32 ,33).

It is important to understand the theoretical foundation for describing how people learn and perform within an organization. If learning methods where differ from teaching methods staff will never develop a full understanding of the subject and theory can never be completely applied to practice[34].

There are wide individual differences among learners . Some are ear- oriented, some can be helped through visual demonstration , while others learn better by doing. The use of a variety of audio-visual aids helps in meeting the needs of different types of students . Researches indicated that, people generally remember 10 percent of what they read, 20 percent of what they hear, 30 percent of they see, 50 percent of what they hear and see, 70 percent of what they say, and 90 percent of what they say as they do thing [35] .

In this study ,it was alarming to find that, the role play and other teaching methods (such as moving films and videos related technology) were not reported by technical institute of nursing students either as a preferred teaching method or actual teaching method ,in all four learning style however, these methods were reported by faculty of nursing students. This may be attributed to the technical institute of nursing programs prepare technical nurses who provide direct client care in a variety of health care settings and provides an emphasis on clinical practice to be more competent care givers [36] .

While , at the faculty of nursing especially community health nursing department .The nursing curriculum is designed to expose the learner to a variety of learning environments including classroom , nursing laboratories, clinical areas in various health care institutions[37, 38]. additionally, community health nursing department encourages the use of specific the innovative teaching methods such as e-learning, video related technology, simulation,etc…………).

Much of the available research tend to draw similar conclusions that teaching should not be confined to the classroom and should include practical as well as theoretical aspects [39, 40].

Conclusion & Recommendations

Based on the results of the present study learning styles help us to understand the many different ways of learning. Moreover, it also highlight the techniques and strategies that can be developed by teachers to encourage effective learning. The uni-model of learning styles was observed among faculty &technical institute of nursing students. Moreover, there was no statistical significant differences between learning style and teaching methods. Thus, **the following Recommendation are suggested:**

- Assessment of students' learning style should be done to help the teacher and students to develop collaborative partnerships that will foster the acquisition of the knowledge and skills necessary to practice professional nursing .
- Nurse educators should provide positive reinforcement of students' active involvement in the learning process, which will stimulate continued self-direction.
- Encourage students to use all four learning styles when appropriate than to reply solely onone preferred learning style.
- Nurse educators need to be aware of their own teaching styles, which are unlikely to match the learning styles of all students. Hence, they should develop skills, which are likely to enhance the learning to all students.
- Nurse educators should act as facilitators of learning and should ensure the availability of resources and opportunities for practice.
- Courses on study skills, writing skills and literature searching skills should be introduced early in the nursing programmes.
- Sessions on counseling and clinical supervision should be encouraged for all students throughout the program to help them acquire skills in problem solving and critical thinking.

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