



Teacher's Knowledge On And Use Of Teaching Strategies In The Training Of Nursing Students In Fako Division, South West Region, Cameroon

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ABSTRACT

Background: Recently teachers are challenged with the need to use a variety of teaching strategies and methods correctly during the teaching-learning process in order to ensure learners with different learning styles learn effectively.

Objectives: This study aimed at investigating teachers' knowledge and use of teaching strategies in the training of nursing students and identify the barriers encountered.

Methods: The study adopted a cross-sectional descriptive study design. Purposive, consecutive convenient and probability proportionate to size samplings were used to select the study sites and enroll participants respectively. The study was conducted in five institutions which train nursing students. The participants were teachers of nursing with at least one year teaching experience, who gave their consent to participate in the study. Data was collected using a pre-tested observation checklist and semi-structured self-administered questionnaire made up of both open and closed-ended questions. Data was coded, entered into an Excel 2010 spreadsheet and analysed using SPSS Version 20. Chi squared test was used to test for association between variables at 5% confident interval.

Results: A total of 104 respondents participated in the study; females were the most represented (65.4). Most (65.4%) of the participants knew more about the direct teaching strategy. There was a significant association between qualification and years of experience of teachers and the knowledge of teaching strategy (p-values of 0.001 and 0.022 respectively). Teachers' main teaching method was lecture 96(92.3%). The results from observations showed that most of the teachers (66.7%) did not use varieties of teaching strategies. There was a significant association between age group, qualification and years of experience of teachers and the use of teaching strategy (p-values of 0.000, 0.028 and 0.000 respectively). Also, there was a significant association between teachers' knowledge of teaching strategies and teachers' use of teaching strategies ($X^2 = 75.902$, $p=0.000$). Class size 72(69.2%) and lack of equipment (64.4%) were the major challenges faced in selecting teaching strategies to use in teaching.

Conclusion: Most participants knew more of the direct teaching strategy with lecture being their main teaching method. They had adequate knowledge of teaching strategies, but majority of them did not use a variety of the teaching strategies. The class size was a barrier in using particular teaching strategies.

Keywords: Knowledge, nursing students, teaching methods, teaching strategies

1. INTRODUCTION

A growing number of diverse students are currently being allowed to enter into higher learning institutions, which demands teachers to be charged with levels of academic diversity [1, 2]. As it is evidenced across literature, the “one-size-fits-all” approach to teaching no longer meets the different needs of the learners of today [1]. A study by Mbirimtengerenji and collaborators [3] conducted in Malawi revealed that direct teaching strategy is very common. On the other hand, using a variety of teaching methods and strategies benefits all students by focusing on essential skills and ideas in content areas, responding to individual learner variance, and integrating assessment with teaching [4]. Literature demonstrates that teachers use different teaching methods and strategies to teach students such as formal and informal assignments, class presentations, clinical studies, role play, group sessions, clinical and ward rounds [5]. Within this approach, all learners profit from a variety of teaching strategies with an appropriate balance of challenging teaching and successful learning opportunities [6]. Using different teaching strategies when teaching students provide all learners the maximum opportunity to fully succeed in school and to be good practitioners at their work environment.

Early educators such as Dewey, Montessori and Froebel believed that effectiveness of teaching and learning is determined by the type of teaching strategies applied in classroom. National research council echoes the same thoughts when it asserts that pedagogical practices that address students’ initial understanding and preconceptions about topics provide a base for factual knowledge and conceptual understanding [7]. In a contemporary classroom where there is academic diversity, no two students learn using the same approach or at the same pace. Each student is unique and thus has different learning styles and preferences. Therefore, teachers are supposed to meet the needs of all learners in these diverse classrooms. This presents daily challenges for them to address the learning needs of students [8]. Using different teaching methods and strategies is a highly effective means of educating learners with diverse learning styles found in the classrooms. This will enable teachers meet the unique learning needs of all students in their respective classes.

It is worth stating that one of the major challenges in nursing education is to foster the critical thinking and autonomous learning abilities for students. But the effect of different strategies and methods on these abilities of nursing students depends on the knowledge and proper use of strategies and methods by teachers [9]. The important issue in teaching is to identify particular behaviors that help effective teaching and learning to occur. These positive behaviors that aid effective learning are referred to as teaching strategies. Therefore, a teaching strategy is an educational technique, method or plan of classroom actions or interactions intended to accomplish specific teaching-learning goals [10].

Students’ academic needs are more readily met in a classroom where teachers use different teaching strategies and methods [11], this enhances quality teaching and results in meaningful student learning. In this regards it said that teachers have a responsibility to make institutions a place where every student can benefit to the fullest potential [12]. Therefore, teachers need to assist in creating teaching environments that will maximize the learning opportunities and will help students in developing the knowledge and skills necessary for achieving positive learning outcomes [13]. Thus teachers are very important in helping students to reach their heights and maximum students’ potentialities in learning. Nowadays, teachers encounter unprecedented pressure to raise learning standard while meeting the needs of all learners in the diverse classroom.

Faculties are really feeling the pressure to make learning environments more interactive, to integrate technology into learning experience and for teachers to use the correct teaching strategies when appropriate. Thus, the immense student diversity in the contemporary classrooms of health institutions or nursing training schools causes teachers to be faced with a tremendous challenge to plan teaching strategies that focuses on individual student’s academic needs [1]. Teachers are being encouraged to appropriately use teaching strategies and methods which will enable students to learn effectively and achieve their goals. The teaching and learning strategies in nursing education are expected to promote nursing students to be actively involved in self-regulated learning [14], while the teacher adopts the role of a facilitator. As a result, teachers are obligated to create learning environments that include the different teaching and learning strategies because not only it is important what students learn, but also equally important how they learn.

Teachers’ knowledge is of great importance in determining the effective implementation of teaching strategies and methods for learners to be successful [15]. However, it is not known to what degree teachers are positive in implementing this approach. Thus, the study aimed at investigating the teachers’ knowledge and use of the different teaching strategies in the training of nursing students. Specifically, we sought to assess teachers’ knowledge on the different teaching strategies used in the training of nursing students, determine the use of the different teaching strategies by teachers and identify the barriers encountered during the use of teaching strategies in the training of nursing students in Fako Division. The findings from this study could guide the development of a framework which may enhance the ability of teachers to use different strategies to teach effectively and improve on the training of nursing students.

MATERIALS AND METHODS

A cross-sectional descriptive study was conducted from January to May 2023 to investigate teachers’ knowledge and use of the different teaching strategies in the training of nursing students. Both qualitative and

quantitative approaches were employed to collect and process data. A self-administered semi-structured questionnaire and an observation checklist was used to collect data. The target population comprised all teachers of Public and Private Government Accredited Nursing Institutions in Fako Division, South West Region, Cameroon, who have taught for at least one year. Fako Division is largely inhabited by the Bakwerians; other ethnic groups include Barondos, Bakundus, Bayangis, Bakossians, North westerners, Bamilekes, the Nordis and other immigrants from Nigeria.

A purposive sampling method was used to select five nursing institutions out of fourteen in Fako Division. These include the University of Buea (UB), Biaka University Institute of Buea (BUIB), Redemption Higher Institute of Biomedical and Management Sciences (RHIBMS), Maflekumen Institute of Health Sciences (MAFLEKUMEN) and Training School for Health Personnel, State Registered Nursing Limbe (SRN). These schools were selected based on the fact that they have existed for over five years and thus, had experienced teachers. The sample size was calculated using the Cochran's formula and the minimum sample size required for this study was 104 teachers. Probability proportionate to size sampling method was used to get the number of participants required per school as shown in Table 1.

Table 1: Distribution of Teachers

Institution	Number teachers in each institution	Proportion	Number of teachers required
University of Buea	46	0.32	33
BUIB	30	0.21	22
RHIMBS	23	0.16	17
SRN	13	0.10	10
MAFLEKUMEN	30	0.21	22
TOTAL	142	1.0	104

Data was collected on participants' knowledge regarding the different teaching strategies and methods, the use of teaching strategies and barriers encountered by teachers when using teaching strategies. Participants' knowledge on teaching strategies was evaluated using four questions. Each question was given a point, making a total of four points; a score of 1 on 4 (25%) was referred to as not knowledgeable (poor knowledge) while a score of 2-4 on 4 (50-100%) was referred to as knowledgeable (good knowledge). An observation checklist was used to determine teachers' use of teaching strategies in the training of nursing students.

Before administering the questionnaire, it was pre-tested by administering 10 copies to ten teachers who were not part of the study population. Their responses confirmed the clarity and validity of the questions. Copies of the questionnaire were then administered to the participants who completed the various sections of the questionnaire.

Data was analysed using inferential and descriptive statistics. The descriptive statistics included the use of tables, frequencies, percentages and charts to explain the results. For inferential statistics, the Chi-squared test for independent variable was used where appropriate to test for association, a p-value <0.05 was considered statistically significant. The results were expressed in frequencies and percentages.

Ethical Approval

This study was authorised by the Department of Nursing, Faculty of Health Sciences, University of Buea, Cameroon. Administrative authorisation (ethical approval) was first obtained from the Institutional Review Board (IRB) of the Faculty of Health Sciences, University of Buea, Cameroon. Also, permission was sought from the authorities of each school. All participants provided written consent before participating in the study by signing the consent form.

RESULTS

A total number of 104 teachers participated in this study. Among these participants 68 (65.4%) were females, and 37 (35.6%) were between the ages 41 – 50 years. Majority 61 (58.7%) had M.Sc. degree, 16 (15.4%) Doctorate and 33 (31.7%) had teaching experience of 6 – 10 years. Sixty-six (63.5%) taught BNS/BSc students (Table 2).

Table 2: Socio Demographic Data

Variables	Categories	N (%)
Sex	Male	36 (34.6)
	Female	68 (65.4)
	Total	104 (100.0)
Age group (Years)	24 – 30	26 (25.0)
	31 – 40	27 (26.0)
	41 – 50	37 (35.6)
	51 – 60	12 (11.5)
	61 – 65	2 (1.9)
	Total	104 (100.0)
Qualifications	B.Sc.	21 (20.2)

	M.Sc.	61 (58.7)
	Doctorate	16 (15.4)
	Others	6 (5.8)
	Total	104 (100.0)
Experience (Years)	1 – 5	32 (30.8)
	6 – 10	33 (31.7)
	11 – 15	28 (26.9)
	16 – 20	4 (3.8)
Experience (Years)	26 – 30	1 (1.0)
	31 – 35	6 (5.8)
	Total	104 (100.0)
Programmes taught by participants	SRN	26 (25.0)
	MWS	22 (21.2)
	HND	32 (30.8)
	BNS/B.Sc.	66 (63.5)
	NAS	4 (3.8)
	MRS	150(100.0)

Regarding participants' knowledge on teaching strategies; 102(98.1%) of the participants agreed that teaching strategies are methods that teachers use to deliver course materials in ways that keep students engaged and practicing skills Table 3 shows the proportion of multiple responses of the participants and the different teaching strategies that they knew. Majority 68 (65.4%) of the participants knew about the direct teaching strategy while the minority 13 (12.5%) knew the independent teaching strategy (Table 3).

Table 3: Different Teaching Strategies known by Teachers

Variable	Categories	Yes n (%)	No n (%)
Different Teaching strategies known by teachers	Direct Instruction	68 (65.4)	36(34.6)
	Indirect Instruction	31 (29.8)	73(70.2)
	Interactive instruction	62 (59.6)	42(40.4)
	Independent Instruction	13 (12.5)	91(87.5)
	Experiential Instruction	32 (30.8)	72(69.2)

Classifying teaching methods into various teaching strategies, majority 57.8% of the participants knew the different methods under the interactive teaching strategy while 35.0% knew the different methods in the indirect teaching strategy (Figure 1).

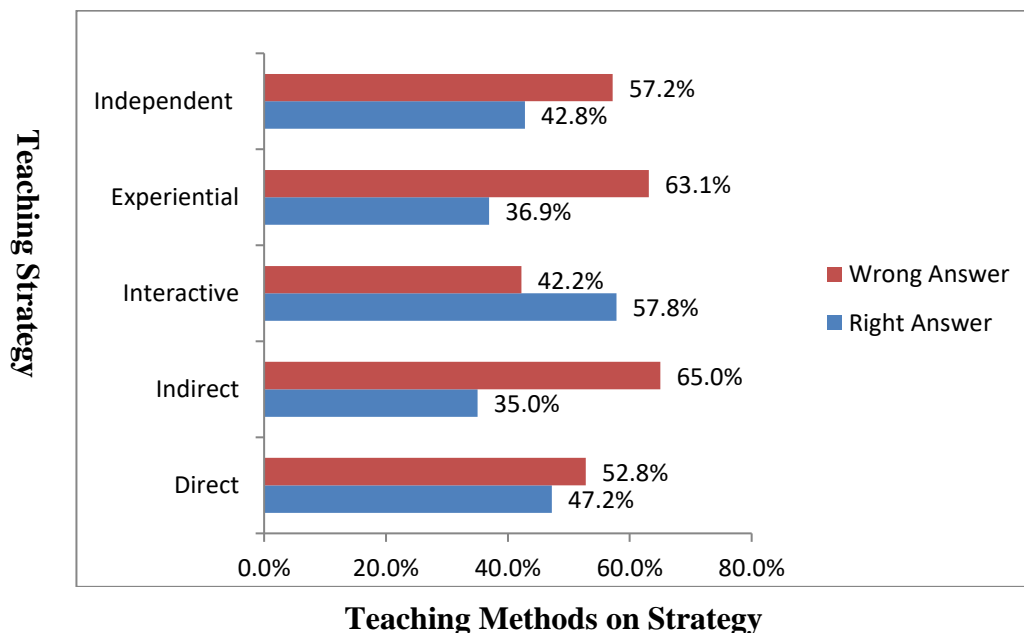


Figure 1: Classification of Teaching Methods into Various Teaching Strategies by Teachers

Almost all 102 (98.1%) of the respondents agreed that good knowledge and well applied teaching strategies have a great positive impact on nursing students, while just 2 (1.9%) of the respondents disagreed. Majority of the participants 69 (66.3%) said unit topic was the main factor that determines a teacher's choice of a particular teaching strategy and minority 4 (3.9%) said teacher's choice of teaching strategy depends on students learning styles, among others (Table 4).

Table 4: Factors that Determine Choice of Teaching Strategies

Variable	Categories	Yes n(%)	No n(%)
Factors that determine the choice of teaching strategies by teachers.	Unit Topic	69(66.3)	35(33.7)
	Grade Level	58(55.8)	46(44.2)
	Class Size	47(45.2)	57(54.8)
	Age of learners	5(4.8)	99(98.4)
	Available Resources	48(46.2)	56(53.8)
	Environment	5(4.8)	99(98.4)
	Time Allocated	37(35.6)	67(44.2)
	Teacher's knowledge and Skills	46(44.2)	58(55.8)
	Students learning styles	4(3.9)	100(98.8)
MRS		319(34.1)	617(65.9)

There was a significant association between qualification and years of experience of the participants and the knowledge of teaching strategy with p -values of 0.001 and 0.022 respectively. While gender ($p = 0.191$, $p > 0.05$) and age group ($p = 0.106$, $p < 0.05$) had no significant association with the knowledge of teaching strategy (Table 5).

Table 5: Association of Demographic Data and Knowledge of Teaching Strategy

Variables	Categories	N(%)	Yes n(%)	No n(%)	X ²	df	P-value
Sex	Male	36(34.6)	13(36.1)	23(63.9)	7.431	5	0.191
	Female	68(65.4)	28(41.2)	36(58.8)			
Age group (Years)	24 – 30	26(25.0)	11(42.3)	15(57.7)	28.141	20	0.106
	31 – 40	27(26.0)	11(40.7)	16(59.3)			
	41 – 50	37(35.6)	14(37.8)	23(62.2)			
	51 – 60	12(11.5)	5(41.7)	7(58.3)			
	61 – 65	2(1.9)	0(0.0)	2(100.0)			
Qualification	B.Sc.	21(20.2)	10(47.6)	11(52.4)	37.830	15	0.001
	M.Sc.	61(58.7)	23(37.7)	38(62.3)			
	Doctorate	16(15.4)	7(43.8)	9(56.2)			
	Others	6(5.8)	2(33.3)	5(66.7)			
Experience (Years)	1 – 5	32(30.8)	13(40.6)	19(59.4)	41.195	25	0.022
	6 – 10	33(31.7)	13(39.4)	20(60.6)			
	11 – 15	28(26.9)	11(39.3)	17(60.7)			
	16 – 20	4(3.8)	2(50.0)	2(50.0)			
	26 – 30	1(1.0)	1(100.0)	0(0.0)			
	31 – 35	6(5.8)	2(33.3)	4(66.7)			

Concerning the participants' knowledge on teaching strategies; majority 102 (98.1%) of the participants agreed that teaching strategies are methods that teachers used to deliver course materials in ways that keep students engaged and practicing skills. When asked the different teaching strategies known by teachers, majority 314 (60.4%) of the responses from participants was no, when participants were asked to classify teaching methods into various teaching strategies, majority 808(55.4%) of their responses was wrong. when asked a good knowledge and well applied teaching strategies have a great positive impact on nursing students, majority 102(98.1%)of the participants said yes, and when asked for the factors that determine the choice of teaching strategies by teachers, majority 617(65.9%) of the responses from respondents were against the factors listed (Table 6).

Table 6: Level of Teachers' Knowledge of Teaching Strategy

Questions	Yes n(%)	No n(%)
Teaching strategies are methods that teachers use to deliver course materials in ways that keep students engaged and practicing skills	102(98.1)	2(1.9)
Different Teaching strategies known by teachers	206(39.6)	314(60.4)
Classification of Teaching Methods into Various Teaching Strategies by Teachers	649(44.6)	808(55.4)
A good knowledge and well applied teaching strategies have a great positive impact on nursing students.	102(98.1)	2(1.9)
Factors that determine the choice of teaching strategies by teachers.	319(34.1)	617(65.9)
Average Score on Teachers' Knowledge	62.9%	37.1%

Majority of the participants had knowledge of the various teaching strategies (Figure 2).

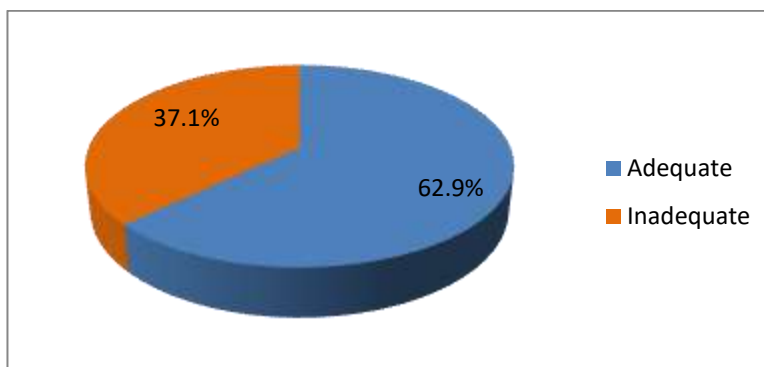


Figure 2: Level of Teachers' Knowledge on Teaching Strategy

With respect to the different teaching strategies used by teachers in nursing schools, majority 94 (90.4%) of the respondents used direct teaching strategy while 51 (49%) used experiential teaching strategy (Table 7).

Table 7: Teachers' Use of the Different Teaching Strategies

Teaching Strategies	Yes (Always + Sometimes)	No (Never + Uncertain)
Direct Instruction	94(90.4)	10(9.6)
Indirect Instruction	77(74.0)	27(26.0)
Interactive instruction	59(56.7)	45(43.3)
Experiential Instruction	51(49.0)	53(51.0)
Independent Instruction	59(56.7)	45(43.3)

Talking about the various teaching methods used by teachers in nursing schools majority 96 (92.3%) of the respondents used lecture while 15 (14.4%) of the respondents used model building as their teaching method (Table 8).

Table 8: Teaching Methods used by Teachers of Nursing Students 1/2

Teaching Strategies	Teaching Methods	Yes (Always + Sometimes)		No (Never + Uncertain)	
		N	%	n	%
Direct	Lecture	96	92.3	8	7.7
	Demonstration	72	69.2	33	30.8
	Advance Organizer	20	19.2	84	80.8
	Drill and practice	21	20.2	83	79.8
	Structured overview	25	24.0	79	66.0
Indirect	Discussion	71	68.3	33	31.7
	Problem solving	51	49.0	53	51.0
	Case studies	42	40.4	62	59.6
	Inquiry	38	36.5	66	63.5
	Concept mapping	19	18.3	85	81.7
Interactive	Debates	28	26.9	76	73.1
Teaching Methods used by Teachers of Nursing Students 2/2					
Teaching Strategies	Teaching Methods	Yes (Always + Sometimes)		No (Never + Uncertain)	
		N	%	N	%
Experiential	Role playing	28	26.9	76	73.1
	Brainstorming	57	54.8	57	45.2
	Cooperative learning	41	39.4	63	60.6
	Jig saw	18	17.3	86	82.7
	Field trips	23	22.1	81	77.9
	Simulations	49	47.1	55	52.9
	Story telling	47	45.2	56	54.8
Independent	Model building	15	14.4	89	85.6
	Research projects	43	41.3	61	58.7
	Journals	18	17.3	86	82.7
	Reports	33	31.7	71	68.3

Majority 83 (79.8%) of the respondents always took into consideration the unit topic and level of students before choosing a teaching strategy while students' learning styles was the least 47 (45.2%) considered (Figure 3).

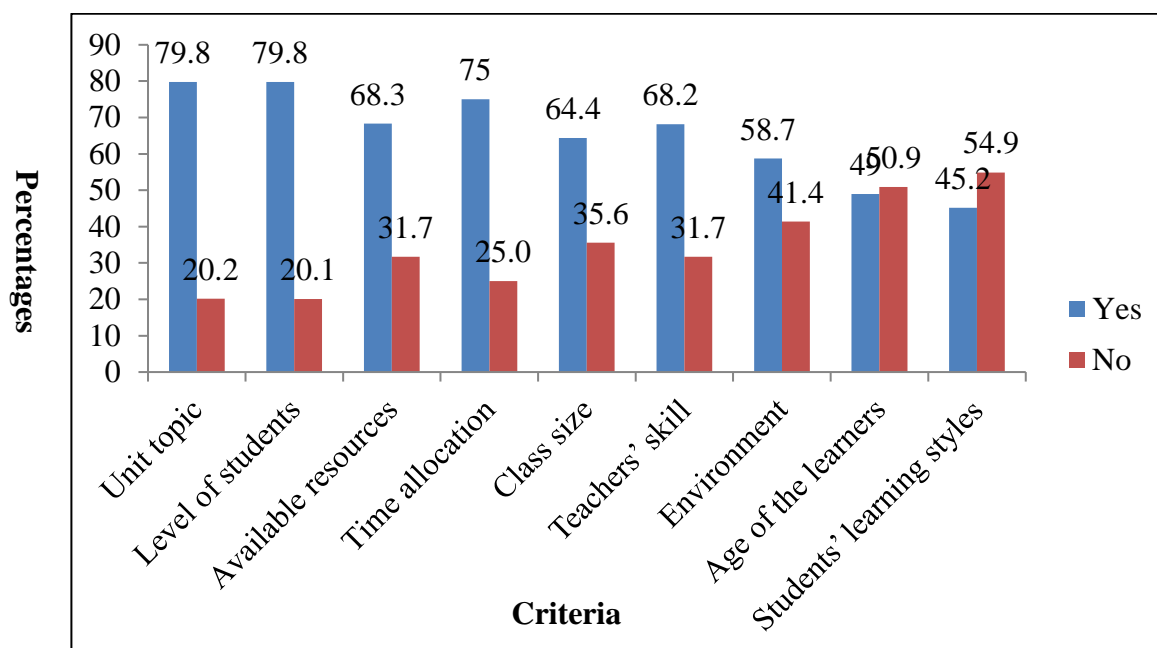


Figure 3: Criteria used by Teachers in selecting their Teaching Strategies

With respect to how often teachers evaluate the effectiveness of their teaching strategies, majority 71 (68.3%) of the respondents always evaluate the effectiveness of their teaching strategies while 33 (31.7%) sometimes did so. Also, majority 73 (38.2%) of the participants used students' test results to evaluate their teaching strategies (Table 9).

Table 9: Teachers' Evaluation of Teaching Strategies

Variables	Categories	N(%)
Frequency of evaluation of effectiveness teaching.	Always	71(68.3)
	Sometimes	33(31.7)
	Total	104(100.0)
Frequency of evaluation of teaching strategies.	Self-assessment	36(18.8)
	Student assessment	69(36.1)
	Peer reviews	11(5.8)
	Video recordings	2(1.0)
	Students test results	73(38.2)
	MRS	191(100.0)

When asked the teaching strategies that will add value to their teaching, majority 74 (71.2%) said interactive teaching strategy would add value to their teaching while 34 (32.7%) of them said indirect teaching strategy (Figure 4).

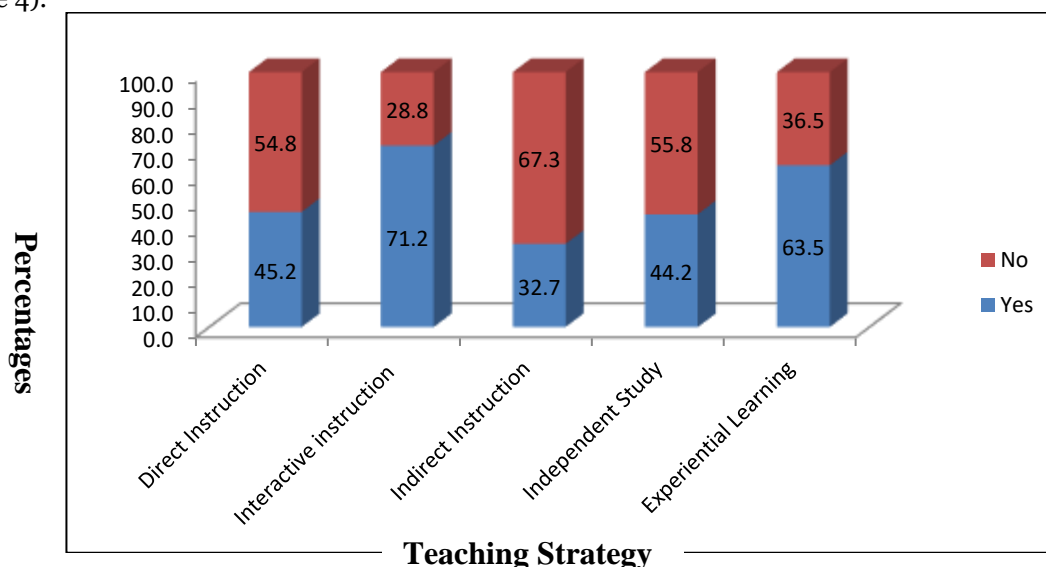


Figure 4: Teachers' Choices of Teaching Strategy that will add Value to their Teaching

Regarding the teachers' choices of teaching methods that will add value to their teaching, majority 62 (59.6%) of the respondents said demonstration teaching method will add value to their teaching while a minority 18 (17.3%) said the use of journals (Table 10).

Table 10: Teachers' Choices of Teaching Methods that will add value to their Teaching

Teaching Strategies	Teaching Methods	Yes (Always + Sometimes)		No (Never + Uncertain)	
		N	%	N	%
Direct	Lecture	52	50.0	52	50.0
	Demonstration	62	59.6	42	40.4
	Advance Organizer	24	23.1	80	76.9
	Drill and practice	39	37.5	65	62.5
	Structured overview	22	21.2	82	78.8
Indirect	Discussion	54	51.9	50	48.1
	Problem solving	41	39.4	63	60.6
	Case studies	34	32.7	70	67.3
	Inquiry	31	29.8	73	70.2
	Concept mapping	25	24.0	79	76.0
Interactive	Debates	38	36.5	66	63.5
	Role playing	25	24.0	79	76.0
	Brainstorming	45	43.3	59	56.7
	Cooperative learning	45	43.3	59	56.7
	Jig saw	24	23.1	80	76.9
Experiential	Field trips	37	35.6	67	64.4
	Simulations	41	39.4	63	60.6
	Story telling	27	26.0	77	74.0
	Model building	36	34.6	68	65.4
Independent	Research projects	23	22.1	81	77.9
	Journals	18	17.3	86	82.7
	Reports	26	25.0	78	75.0

Table 11: Observations of Teachers' Use of Various Teaching Methods 1/2

Teaching Methods	Yes		No	
	N	%	N	%
Lecture	46	80.7	11	19.3
Demonstration	23	40.4	34	59.6
Advance Organizer	0	0.0	57	100.0
Drill and practice	2	3.5	55	96.5
Structured overview	17	29.8	40	70.2
Discussion	11	19.3	46	80.7
Problem solving	0	0.0	57	100.0
Case studies	0	0.0	57	100.0
Inquiry	11	19.3	46	80.7
Concept mapping	0	0.0	57	100.0
Debates	0	0.0	57	100.0
Role playing	5	8.8	52	91.2
Brainstorming	0	0.0	57	100.0
Cooperative learning	11	19.3	46	80.7
Jig saw	11	19.3	46	80.7
Field trips	0	0.0	57	100.0
Simulations	4	7.0	53	93.0

Observations of Teachers' Use of Various Teaching Methods 2/2

Teaching Methods	Yes		No	
	N	%	N	%
Story telling	8	14.0	49	86.0
Model building	0	0.0	57	100.0
Research projects	0	0.0	57	100.0

Journals	0	0.0	57	100.0
Reports	0	0.0	57	100.0
Uses variety of teaching methods	37	64.9	20	35.1

Furthermore, a total of 57 participants were observed how they use teaching strategies and teaching methods while teaching; majority 46 (80.7%) of the participants used lecture, followed by demonstration teaching methods in class. Simulations teaching method was observed to be the least 4 (7.0%) teaching method used by teachers while teaching methods such as advanced organizers, problem solving, case studies, concept mapping, debates, brain storming and field trips were not used. It was observed that 37 (64.9%) of the participants used varieties of teaching methods but mostly in a particular teaching strategy (Table 11).

It was that majority 46 (80.7%) of the participants used the direct teaching strategy and the least 8 (14.0%) teaching strategy used was the experiential, while the independent teaching strategy was not used by any of the participants. Out of the 57 participants observed, majority 38 (66.7%) did not use a variety of teaching strategies (Table 12).

Table 12: Observations of Teachers' Use of Various Teaching Strategies

Teaching Strategies	Yes		No	
	N	%	N	%
Direct	46	80.7	11	19.3
Indirect	11	19.3	46	80.7
Interactive	11	19.3	46	80.7
Experiential	8	14.0	49	86.0
Independent	0	0.0	57	100.0
Uses variety of teaching strategies	19	33.3	38	66.7

The association between demographic data and the use of teaching strategies showed that there was a significant association between age group, qualification and years of experience of teachers with the use of teaching strategies (p values of 0.000, 0.028 and 0.000) respectively. While gender (p = 0.191) had no significant association with the use of teaching strategies (Table 13).

Table 13: Association of Demographic Data and Use of Teaching Strategy

Variables	Categories	N(%)	Yes n(%)	No n(%)	X ²	Df	P-value
Gender	Male	36(34.6)	23(63.9)	13(36.1)	7.325	5	0.198
	Female	68(65.4)	43(63.2)	23(36.8)			
Age group (Years)	24 – 30	26(25.0)	17(65.4)	9(34.6)	53.548	20	0.000
	31 – 40	27(26.0)	17(62.9)	10(37.1)			
	41 – 50	37(35.6)	24(64.9)	13(35.1)			
	51 – 60	12(11.5)	9(75.0)	3(25.0)			
	61 – 65	2(1.9)	2(100.0)	0(0.0)			
Qualification	B.Sc.	21(20.2)	14(66.7)	7(33.3)	27.112	15	0.028
	M.Sc.	61(58.7)	40(65.6)	21(34.4)			
	Doctorate	16(15.4)	11(68.8)	5(31.2)			
	Others	6(5.8)	2(33.3)	4(66.7)			
Experience (Years)	1 – 5	32(30.8)	15(46.9)	17(53.1)	54.400	20	0.000
	6 – 10	33(31.7)	27(81.8)	6(18.2)			
	11 – 15	28(26.9)	18(64.3)	10(35.7)			
	16 – 20	4(3.8)	2(50.0)	2(50.0)			
	26 – 30	1(1.0)	1(100.0)	0(0.0)			
31 – 35	6(5.8)	5(83.3)	1(16.7)				

A correlation association was done between the participants' responses on knowledge of teaching strategies and the use of teaching strategies to see if there was a relationship between the two variables. The result showed a significant (p-value = 0.000) association between the two variables and there was a direct relationship between the two variables (Table 14).

Table 14: Correlation between Teachers' Knowledge and Use of Teaching Strategy

		Knowledge	Use
Knowledge	Pearson Correlation	1	0.954**
	Sig. (2-tailed)		0.000
	N	206	206
Use	Pearson Correlation	0.954**	1
	Sig. (2-tailed)	0.000	
	N	206	304

Talking about the challenges or barriers to the use of teaching strategies; majority 72 (69.2%) of the respondents agreed that class size was the major barrier teachers faced to the use of teaching strategies while the minority 24 (23.1%) agreed that seating arrangement of students was a major barrier to the use of teaching strategies (Table 15).

Table 15: Barriers to Teaching Strategies

	Yes[n(%)]	No [n(%)]	Uncertain [n(%)]
Preparation time	66(63.5)	4(3.8)	34(32.7)
Size of the class	72(69.2)	11(10.6)	21(20.2)
Content to be taught	56(53.8)	9(8.7)	39(37.5)
Learning styles of students	54(51.9)	16(15.4)	34(32.7)
Individual teaching styles	38(36.5)	16(15.4)	50(48.1)
Time allocated to teach content	62(59.6)	8(7.7)	34(32.7)
Knowledge and skills of the teacher	48(46.2)	14(13.5)	42(40.4)
Seating arrangement of student	24(23.1)	39(37.5)	41(39.4)
Lack of equipment	67(64.4)	8(7.7)	29(27.9)
Lack of experience in education by the lecturer	64(61.5)	7(6.7)	33(31.7)
Lack of support given to new teachers	55(52.9)	11(10.6)	38(36.5)
Lack of in-service training on the use of teaching strategies	53(51.0)	8(7.7)	43(41.3)

When the participants were asked the teaching strategies and methods they would need further training, majority 54 (26.0%) of them said they need further training on the experiential teaching strategy while minority 26 (12.5%) said the interactive teaching strategy. Majority 50 (9.1%) of the participants said that they need further training in concept mapping teaching method while minority 11 (2.0%) said they need further training in discussion teaching method. Majority 89 (89.6%) of the respondents mentioned that novice teachers do receive mentoring from experienced teachers while a minority 15 (14.4%) of the respondents said junior teachers do not receive any mentoring from experienced teachers.

Table 16: Teaching Strategies and Methods that Teachers will need Further Training

Variables	Categories	Responses n(%)
Teaching strategies teachers need further training on	Direct Instruction	27(13.0)
	Indirect Instruction	41(19.7)
	Interactive instruction	26(12.5)
	Independent Instruction	45(21.6)
	Experiential Instruction	54(26.0)
	Uncertain	15(7.2)
Teaching Methods teachers need further training on	Lecture	26(4.7)
	Demonstration	25(4.5)
	Debates	15(2.7)
	Role playing	15(2.7)
	Discussion	11(2.0)
	Brainstorming	26(4.7)
	Cooperative learning	30(5.4)
	Problem solving	22(4.0)
	Case studies	14(2.5)
	Inquiry	38(6.9)
	Research projects	27(4.9)
	Field trips	29(5.3)
	Simulations	45(8.2)
	Story telling	12(2.2)
	Model building	40(7.2)
	Jig saw	32(5.8)
	Drill and practice	30(5.4)
	Journals	28(5.1)
	Concept mapping	50(9.1)
Reports	28(5.1)	
Uncertain	9(1.6)	
	MRS	552(100.0)

DISCUSSION

This study aimed at investigating teachers' knowledge and use of the different teaching strategies in the training of nursing students. It is worth stating that proper planning and delivery of information to learners by educators especially nurse educators will contribute greatly to the training of competent nurses. This will in turn reduce harmful practices and hence, safe patient care. In addition, findings from this study could paint a

clear picture of the realities and challenges of teaching in nursing schools, which might help curriculum designers in preparing and revising nursing curricula to incorporate all the different teaching strategies and methods.

According to the findings of this study majority of the participants knew the definition of direct teaching strategy while the least teaching strategy known was the independent teaching strategy. This indicates that most teachers teaching in nursing schools in Fako Division are more knowledgeable about the direct teaching strategy than any other teaching strategy. This finding is in accordance with findings of previous studies [16, 17] which stated that direct instruction is highly structured and teacher centered, which involves the direct transfer of knowledge from the teacher to a student, with the teacher doing most of the talking. Our study also showed that even though majority of the study participants knew that the direct teaching strategy involves mostly lectures, a good proportion of them instead knew but the different teaching methods in interactive teaching strategy. That is, debates, think-pair-share, jigsaw, brainstorming, cooperative learning, role playing, problem solving and discussion. This gives an impression that teachers teaching in nursing schools in Fako Division do not know the various teaching methods to be used in the different teaching strategies. Despite the fact that several factors determine a teacher's choice of a particular teaching strategy, a greater portion of the participants said the main factor that determined their choice of teaching strategy was the unit topic. This is in line with Abdulkhaliq [18] who maintained that the teaching strategies and methods used by a teacher will depend on the information the teacher would like to convey to their students.

Our findings revealed that majority of the participants had knowledge on the various teaching strategies. The teachers in nursing schools in Fako Division always select their teaching strategies base on the unit topic they plan to teach and the level of the students to be taught. Again, our study revealed that most of the respondents used direct teaching strategy while the least used teaching strategy was found to be the experiential teaching strategy. This finding indicates that teachers teaching in nursing schools in Fako Division use more of the direct teaching strategy. This is true because from observations, more than three quarter of the participants used the direct teaching strategy and the least teaching strategy observed was the experiential teaching strategy. The independent teaching strategy was not used by any of the participants observed. Furthermore, we found that a few of the participants used varieties of teaching strategies while the majority did not do so. These findings are similar to the study of Mbirimtengerenji and collaborators [3], which showed that direct teaching strategy is very common although nurse tutors prefer to combine this with other interactive instructions.

In addition, this study showed that teachers' ability to use different teaching strategies competently is still very limited thus, compromising quality of teaching and learning amongst nursing students. According to Yusri and Tiur [19] teaching strategies mostly used by instructors required active participation of the learners. These include formal/informal assignments, learner-led class presentation (group sessions; clinical case studies, role playing and clinical and ward rounds respectively).

The findings of this study revealed that almost all of the respondents said they used lecture as their main teaching method followed by demonstration while model building was said to be the least teaching method used. This finding is in line with the empirical study of Phumzile [20] who found that lecture method (direct teaching strategy) was the most utilised teaching method by lecturers. Also, our finding concurs with the finding of a related study carried out by Pagnucci [15] among teachers and nursing students in an Italian university which found that the frequently used teaching method was the traditional lecture. This means that the students' ability to develop critical thinking skills are limited, but the use of independent instruction would allow students to develop problem solving and critical thinking skills [21]. The issue may partly be due to the fact that teachers are not motivated to design or use existing teaching materials [22].

The findings from observation of teaching revealed that more than three quarter of the participants used lecture and demonstration teaching methods in class while simulations teaching method was observed to be the least teaching method used by teachers. Also, it was observed that more than half of the participants used varieties of teaching methods mostly in the direct teaching strategy. Teaching methods such as advanced organizers, problem solving, case studies, concept mapping, debates, brain storming and field trips were not used. These finding are similar to the study of Ezeddine et al [23] who reported that teaching strategies involving methods such as projects, research, case studies and debates are never utilised by some lecturers. Meanwhile these methods including demonstration and role play are very effective in enhancing comprehension [24]

The findings of our study revealed that there were several challenges or barriers teachers encountered in using the various teaching strategies in teaching nursing students. Majority of the respondents agreed that class size was the major challenge or barrier teachers faced in the use of a particular teaching strategy, lack of equipment was also mentioned while the least barrier teachers reported they faced were seating arrangement of students. These findings are in line with the study by Munje and Jita [25] who revealed that the lack of resources has a negative influence on the utilisation of various teaching strategies.

The findings of this study showed a significant association between qualification and years of experience of teachers and the knowledge of teaching strategy with p-values of 0.001 and 0.022 respectively. While gender $p = 0.191$ and age group $p = 0.106$ had no significant association with the knowledge of teaching strategy. Also, the findings of this study revealed a significant association between age group, qualification and years of experience of teachers and the use of teaching strategy with p values of 0.000, 0.028 and 0.000 respectively. While gender $p = 0.191$ had no significant association with the use of teaching strategy. Again, there was a

positive and significant correlation between teachers' knowledge of teaching strategies and teachers' use of teaching strategies ($r = 0.954$, $p = 0.000$) in nursing schools in Fako Division.

CONCLUSION

From the findings of the study, it can be concluded that most teachers teaching in nursing schools in Fako Division knew more of the direct teaching strategy than any other teaching strategy. Teachers have adequate knowledge of teaching strategies but do not know the various teaching methods that should be used under a particular teaching strategy. Teachers teaching in nursing schools in Fako Division select their teaching strategies based on the unit topic. The least criteria considered when choosing a teaching strategy by teachers was students' learning styles. Teachers do not use a variety of teaching strategies when teaching nursing students in Fako Division. Class size and lack of equipment were the major barriers teachers faced in the use of a particular teaching strategy.

The findings of this study will permit teachers to reflect on their personal teaching practices and consider options to upgrade their knowledge and skills in the use the different teaching strategies and methods in order to add value to their teaching.

Limitation of the Study

The study was carried out only in five institutions in Fako Division; however, these were the top nursing schools in the division hence, the findings could be generalised.

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AUTHORS' CONTRIBUTION

All authors participated in different steps of the study from its commencement to writing. That is, conception and design, acquisition of data, analysis and interpretation of data as well as drafting and or revising, editing and approving the final manuscript.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest

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