CHAPTER IV

PRESENTATION OF RESULTS

Introduction

This Chapter deals with the results of the study of the interaction behavior between the teacher and students in the classroom and clinical practicum in the course of Fundamentals of Nursing and Nursing Care of adult. Flanders interaction analysis category was used. The interaction behavior from the classroom and clinical field of both the courses were summarized and compared to answer the primary questions. The secondary questions were answered using data on the procedure performance by the students, implementation of objectives in the field of educational instruction by the teachers and the formative evaluation results from two tests taken at 2 different time from the same group of students, in both courses. Data on procedure performance and test scores were obtained from the same group of students.

The following are the descriptive statistics presented. Interaction behavior in the classroom and clinical field, were computed in percentage of mean frequency using Lotus program. Bar graphs were presented.

For Fundamentals of Nursing classroom sessions, **Figure 1** indicated that, most of the educational processes were carried out by the teachers' talk (78% obtained by combining ^Flanders Category 1 to 7 in the graph). The students interaction behavior in the classroom was only 23% (Flanders Categories 8 and 9). The period of silence covered 4% only.

From the diagram it can be easily recognized that the teachers spent more than half of the time lecturing. Students were very passive. Category four indicated that the teachers had put the maximum efforts in asking questions but the students responded very rarely (Category 8 in the graph). The graph also shows that the teachers did not do much to initiate or encourage students during classroom interaction (No. 2 in the graph). This graph as a whole indicated that the teachers talk had been limited mostly to the lectures.

FiGuRE 1 Classroom Interaction of Fundornental

of Nursing Group
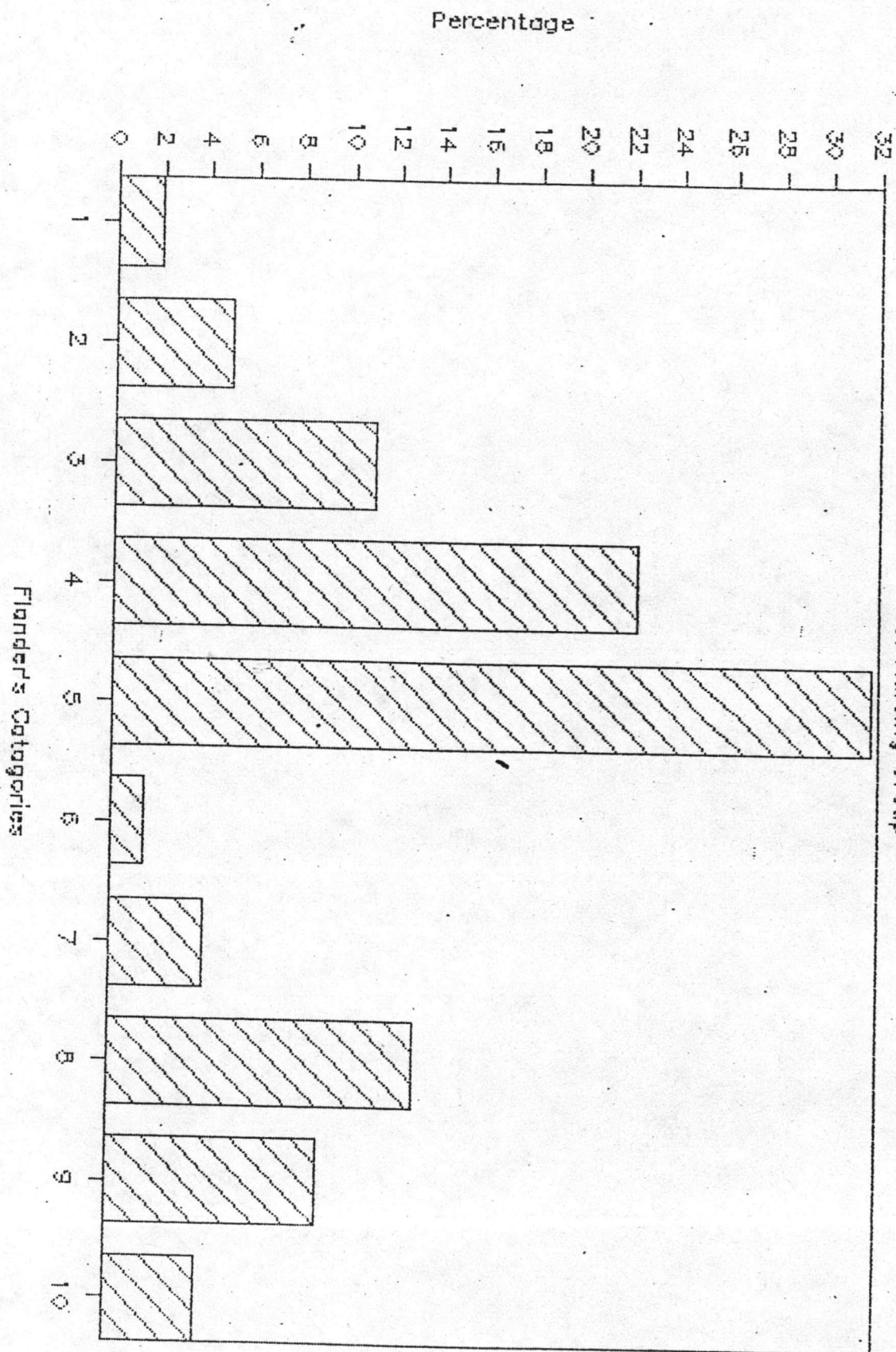
Percentage

Flander's Catagories

Figure no. 2 indicated the average percentage of all 10 categories recorded in the observation at clinical practicum in Fundamentals of Nursing. The graph shows that in the clinical field teachers had spend most of their time giving direction (24% according to Category 6) and asking questions (19% according to Category 4). Only 16.5 % of the time was given to lecturing (Category no. 5). However, in the clinical field, the percentage of teachers' talk was very high in comparison to students talk. A total percentage of 84% of time were used by teacher talk categories. The graph shows that the students talk was only 13% and confusion period was 6 percent. In the clinical, students seemed to be more passive than in the classroom.

FIGURE 2. Clinical Interaction of Fundamental

of Nursing group
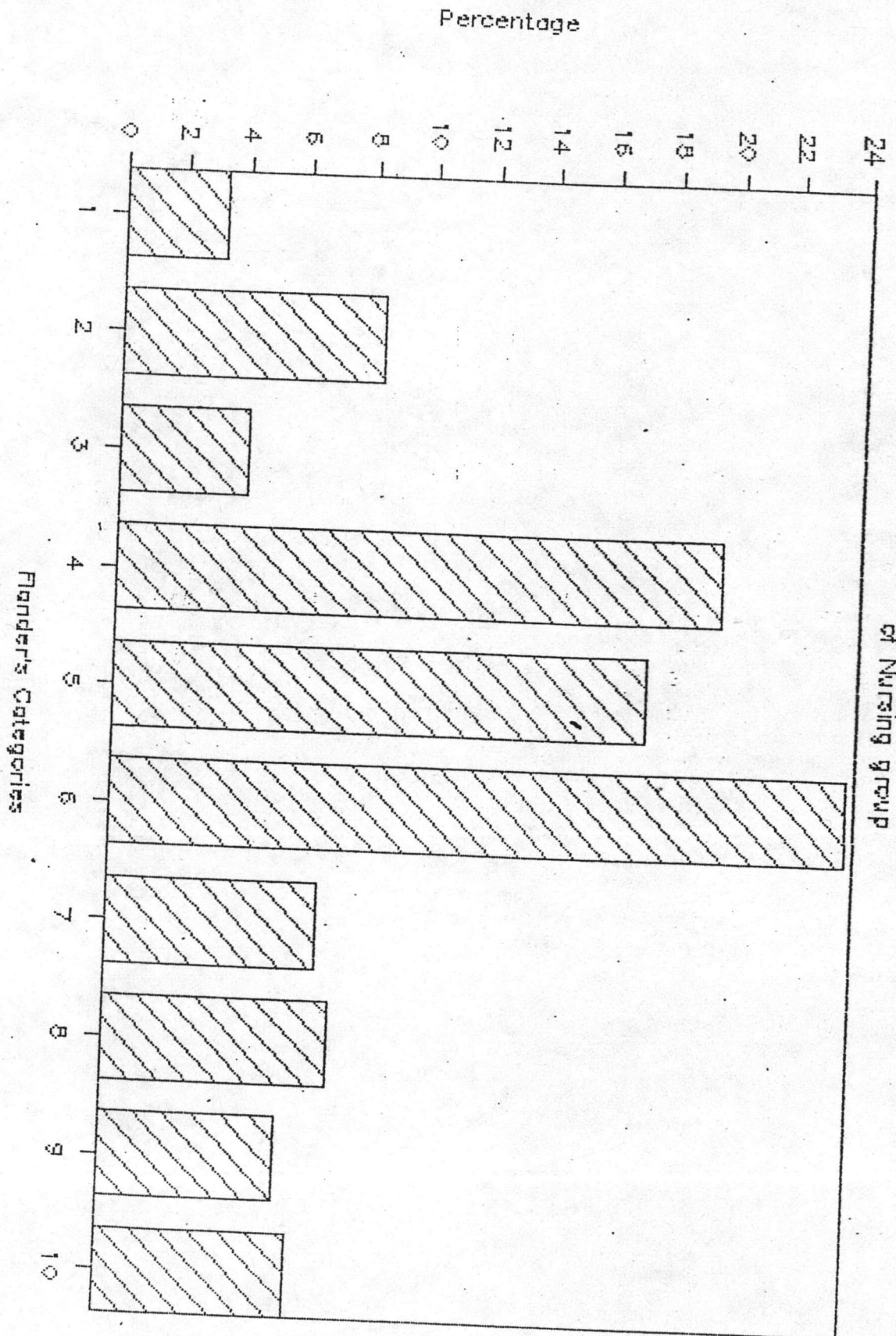
Regarding the classroom interaction in Adult Nursing Course, **Figure** no. 3 shows that approximately 84% of the time of instructional period was spent in teachers talk (lectures 29.25%, asking questions 21%. The students' responses were very limited. The total percentage of student talk was only 24 percentage.

According to the graph, it can be said that there was very little appreciable differences between the first and the third year of nursing education with respect to classroom interaction. The data shows that the instructional methods used in the different level of education was mainly teachers' talk. The teacher participation was 3 times higher than the students talk.

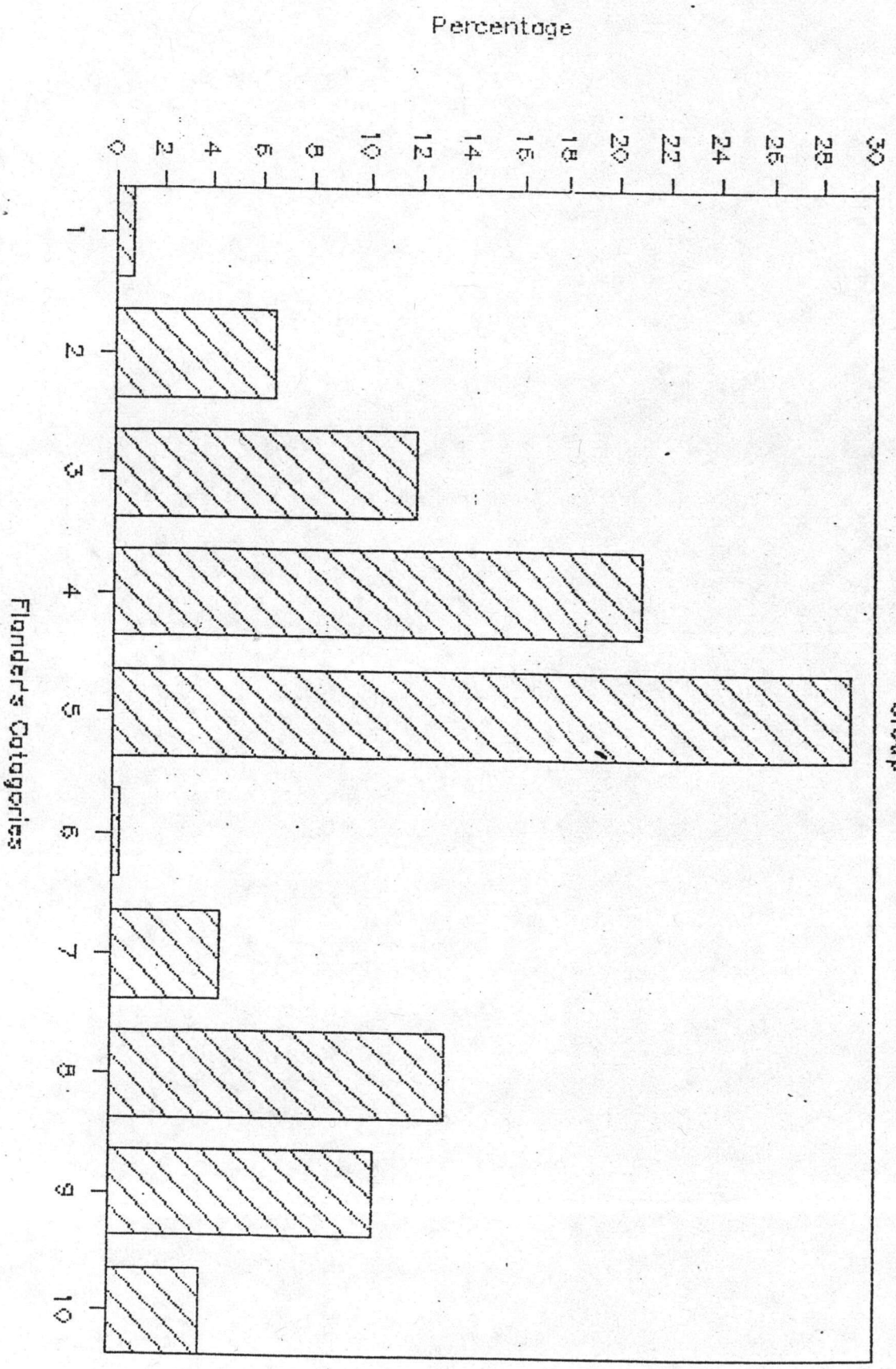Figure 3. Classroom Interaction of Adult Nursing.

Figure no.4 summarizes the average percentage of the clinical interactions in the "Nursing Care of Adult". The graph shows that the teachers talk was about 82.5% (giving direction 27%, questioning behavior 21%, and lecturing behavior 17.25%). The students participation in the interaction behavior was very low, about 15.75% according to the graph.

Since the questioning category also was relatively high, it might indicate that the teachers gave the students a lot of chances to express their feelings and opinions. It is surprising, however, that the students' responses were low. The students seemed to be unaccustomed to getting involved in clinical interactions. An optimal level of teacher-student interaction has to be determined to foster learning satisfaction and the achievement of learning objectives.

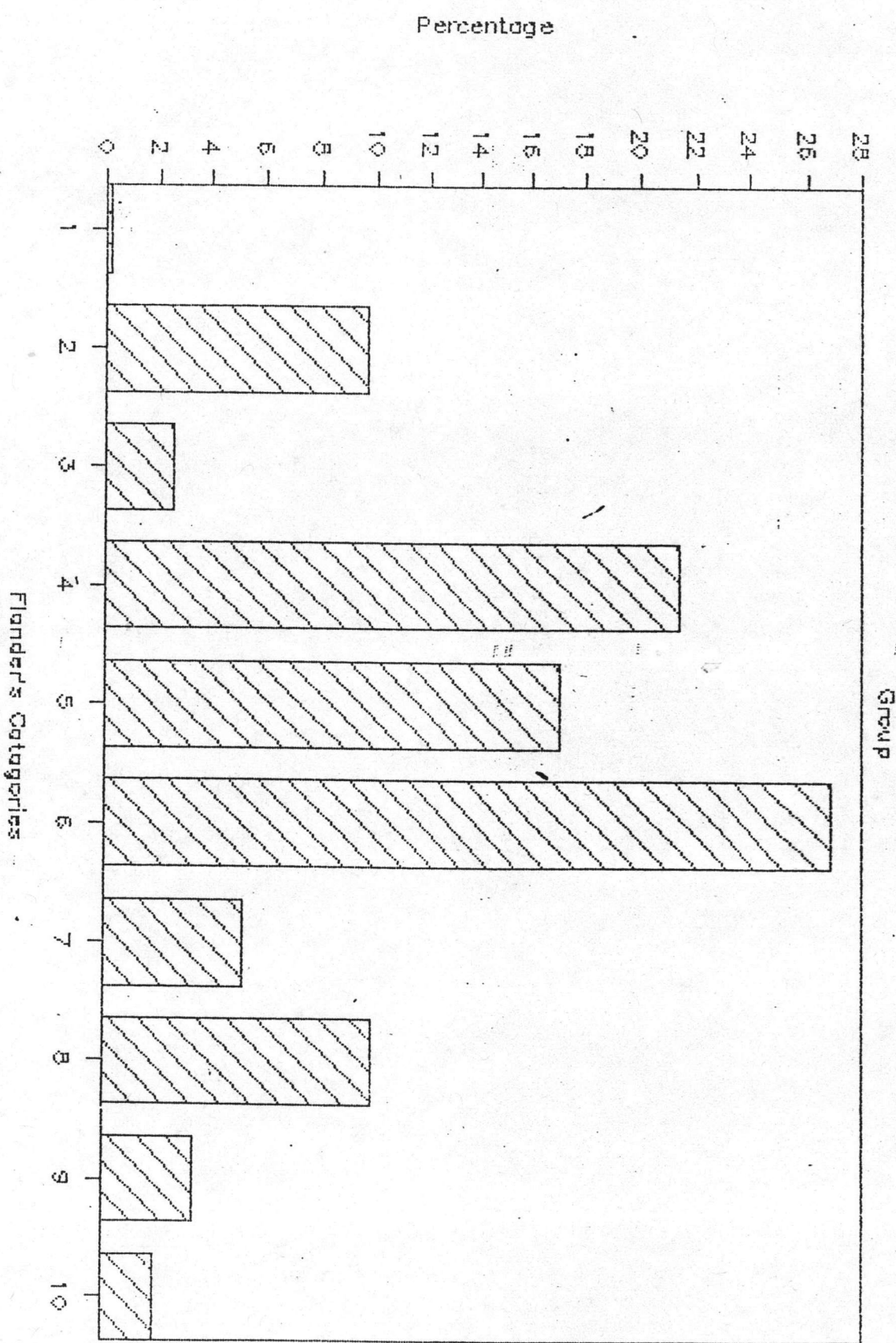FIGURE 4. Clinical Interaction of Adult Nursing

Table no.1 summarizes the classroom interaction behaviours between the junior and senior classes. The statistical test suggests that there is a real difference in the frequencies of the three categories of interaction behaviours (Chi-square = 6.889, P < .05*). However, the actual percentage of teachers´ talk, students´ talk and silence were of no appreciable importance between the junior and senior classes. The real differences observed might be due to large samples. The teachers talked 75.223% in fundamentals of Nursing and 78.566% in Nursing Care of adult. Students were given very little time to express their behavior, therefore the students were very passive.

Table no. 1 Statistical tests of Classroom interaction between
Fundamentals of Nursing and Nursing Care of Adult

INTERACTION	Teach. Talk		Std. Talk		Silence		Total.	
Course Title	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Fund. of Nursing	841	75.223	246	22.003	31	2.772	1118	49.446
Nsg. of Adult.	898	78.565	204	17.042	41	3.588	1143	50.522
Total.	1739	76.912	450	39.042	72	3.184	2261	100.000

X2 = 6.899   P < .05 *

Table no.2 shows the statistical test of interaction behaviours during clinical practicum between the junior and senior classes. A Chi-square value of 12.848 and the P value of less than 0.01 were obtained indicating that the frequencies of behaviors in all three category of FIAC were different in the period of teaching in both subjects in clinical practicum. Again, the differences observed were of no appreciable importance. Most of the time during clinical period the teachers talked. The percent of teachers talk was 81.064 for Fundamental of Nursing and 83.223% for Nursing Care of Adult. The students were very quiet and passive. The quiet period of the observational time was as expected.

Table no. 2 Statistics of Clinical interaction between the Fundamentals of Nursing and the Nursing care of Adult

Interaction	Teachers Talk		Std. Talk		Silence		Total.	
Course Title	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Fund. of Nursing	655	81.064	102	12.624	51	6.312	808	50.468
Nsg. Care of Adult.	660	83.223	112	14.124	21	2.648	793	49.532
Total.	1315	82,136	214	13.367	72	4.492	1601	100.000

X2 = 12.842   P < 0.01 **

Table no. 4. summarized the data on interaction behavior between classroom and clinical field. The statistical test between two places showed deference in frequencies of interaction behavior, chi-square =38.692 P< o.o5. The percentage of the classroom and clinical field showed alike in both courses.

Table   no. 4 Comparative tests between classroom and Clinical practicum in Nursing Care of Adult.

Interac. Place	Teach. talk Freq.	%	Std. Talk Freq.	%	Silence Freq.	%	Total Freq.	%
Class	898	78.56	204	17.04	41	3.59	1,143	59.04
Clinical	660	83.22	112	14.12	21	2.64	793	40.96
Total	1,558	80.48	316	16.32	62	3.20	1,936	100

X2 =6.536   P<0.05*

Table no.5 shows the means and standard deviations and t-value scores in procedure performance of Fundamentals of Nursing. The table indicated that the highest mean score achieved by the procedure performance was 74.33 (recording of Temperature, Pulse and Respiration). The lowest score obtained was 64.02% (the discharge of patients). The data indicated that the average students performed the procedures satisfactorily.

Table no. 5 Score obtained from procedure performance at clinical practicum in Fundamentals of Nursing of 30 Student.

	Procedure	Rg.of scr.	Mean Scr.	SD.	Interv.Conf.
1.	Bed Making (occup)	41 - 90	69.67	10.62	65.70 - 73.63
2.	Bed Bath	45 - 84	66.27	10.62	62.30 - 70.23
3.	Back Care	40 - 82	69.27	10.92	65.19 - 73.35
4.	Hair wash	44 - 84	68.37	10.64	64.39 - 72.34
5.	I.M Inj.	40 - 82	66.17	9.83	62.49 - 69.84
6.	T.P.R.	50 - 92	74.13	8.80	70.84 - 77.42
7.	Med.Distb.	50 - 78	67.80	7.59	64.97 - 70.63
8.	Adm.of pt.	40 - 80	65.87	9.74	62.22 - 79.50
9.	Disch.of pt.	42 - 80	63.77	9.16	60.34 - 67.18
10.	Blood Press.	48 - 82	70.73	8.98	67.38 - 74.09

Table no. 6 shows the average score obtained from different procedures performances in the Nursing Care of Adult. The procedures which scored the highest mean were Care of Unconscious Patient,Total Care of Patient and the Health Teaching. The scores obtained were 72.10% for three procedures. The lowest mean score was 70.27% in Care of I/V.Infusion and Surgical dressing.This data indicates that there were wide range of scores obtained by the students. Many students failed to reach the desired objectives. The data suggested that the students need more efforts to put in the clinical practicum.

Table no. 6   Score obtained from procedure performance at
             clinical practicum from Nursing Care of Adult of
             30 Students.

Procedures	Range of Score	Mean Score	S.D. Score	Interv.of Conf.
1. Care of unc.pt.	48 - 92	72.10	11.19	67.35 - 75.79
2. Care of IV.Trnf.	46 - 100	70.60	11.92	66.51 - 75.09
3. Surg. dressings	46 - 92	70.27	11.33	66.26 - 74.40
4. Total Care of pt.	50 - 94	72.57	11.05	68.44 - 76.69
5. Health Teachings	42 - 90	72.10	11.35	67.86 - 76.33

Table no. 7 summarizes the procedure performance between the junior and senior classes: the Fundamentals of Nursing and Nursing Care of Adult. The procedure performance scores were not different (t-test). Average mean scores between two courses were very similar. The average mean score was 68.136 in Fundamental of Nursing and 71.473 in Nursing Care of Adult. This implies that the two samples performed in a comparable fashion with respect to their clinical practicum. Both groups achieved the passing score according to organization criteria of clinical examination (50% is the pass mark for clinical practicum).

Table no. 7. Comparative average score of procedure performance in Fundamentals of Nursing and Nursing Care of Adult.

Name of Courses	Average mean score	Standard Deviation Score	t-value
1. Fundamentals of Nursing	68.136	7.648	
			1.672
2. Nursing Care of Adult	71.473	7.533	

(not significant)

With respect to the intended objectives expected to be
implemented by the teachers, **Table no. 8** shows that there was no
difference between the junior and senior classes with respect to
the proportions of the three categories of objectives: recall,
interpretation and problem solving. The Chi-square value was
5.58 and the p-value was non significant. This means the
behavioral objectives (recall, interpretation and problem
solving) were similar between the junior and the senior classes.
The total frequencies of intended behavioral objectives were also
similar.

Table no. 8. Frequency of Intended Objectives by behavior
objectives in Fundamentals of Nursing and Nursing
care of Adult.

Behavioral objective Subjects	Recall	Interpret	Prob. Solv.	Total
1. Fundamentals of nursing	206	185	58	449
2. Nursing Care of Adult.	241	161	47	449
Total	447	346	105	898

$$X2 = \frac{2\,(E-D)2}{E} = 5.56 \quad \text{(not Significant)}$$

Table no.9 shows the frequencies of the behavioral objectives actually implemented in the classroom for teaching the Fundamental of Nursing and Nursing Care of Adult. The data were computed in Chi-square, the value of the Chi-square was 6.88 and the level of $p < 0.05$ it means there were a differences in implementation of behavioral objectives between two courses of nursing educations.

Table no. 9   Frequency of objectives implemented in teaching on Fundamentals of Nursing and Nursing Care of Adult.

Behav. Object. Subject	Recall	Interpret	Problem solv.	Total
Fundamentals of Nursing.	140	128	26	294
Nursing Care of Adult	167	103	17	287
Total	307	231	43	581

X2 = 6.88   P. Value < 0.05 * Significant.

With respect to the proportions of the intended objectives actually implemented, Table no.10 shows that the frequencies of behavioral objectives implemented in the instructional period of both courses were only 60% of the the intended objectives. There was no statistical difference between the junior and senior classes. The data were computed using the proportion test which gave a Z value of 0.350. It means the implementation of behavioral objectives were similar in the two courses, ie approximately 60% of the objectives were implemented.

Table no. 10 Frequency of behavioral objectives implemented and intended in Fundamental of Nursing and Nursing Care of Adult.

Course Title	Total No. of Objectives	
	Implemented	Intended
Fundamental of Nursing	294	499
Nursing Care of Adult	287	499

$Z = 0.356$

Table no. 11. illustrates the mean, standard deviation t-value and correlation coefficient between the scores in test one and test two of Fundamental of Nursing. The second test has higher scores (t-value significant at P<0.05) and less variability but the two tests are highly correlated (P<0.01). It indicates that the two test performances in Fundamental of Nursing were different from one another. Nevertheless, students who performed well in the first test also performed well in the second test. It indicated that education did not change the relative standings of the students in the same class.

Table no. 11. Correlation between test I and test II Performed in two different times on Fundamentals of Nursing

Var. Between	Nos of Cases	Mean	S.D.	E.Error	t.Value	r	t-Value of r
Test I	30	67.666	11.615	2.121			
					2.16	0.851	8.726
					p<0.05*		p<0.01**
Test II	30	70.200	11.938	2.180			

Table no. 12 shows the mean, standard deviation t-value and correlation scores in test I comparing test II in the Nursing Care of Adult subject. Again, the second test had a higher scores (significant t-test with P<0.05) and less variability. In addition, the two tests were highly correlated with the P<0.01. It indicates that the performance of two test in Nursing Care of adult differs from one another. Nevertheless, students who performed well in the first test also performed well in the second test. It indicated that education did not change the relative standings of the students in the same class.

Table no. 12. Correlation between test I and test II Performed in different time on Nursing Care of Adult.

Var. Between	No. of Cases	Mean	S.D.	S.Error	t-Value	r	t-Value of r
Test I	30	69.933	14.142	2.582			
					2.44	0.894	10.558
					P<0.05*		P<0.01**
Test II	30	72.766	13.114	2.394			