DIFFERENTIAL EFFECTIVENESS OF MODEL-REINFORCEMENT AND DESENSITIZATION TECHNIQUES IN IMPROVING ACADEMIC PERFORMANCE

BY

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DEDICATION

To my parents, who are responsible for my existence and started me learning.

To Monilade, my wife, who makes existence pleasurable and shares in my learning.

To, My Children, 'Teniola, 'Tomilola, and 'Temilola, and to all who will try to help them.

ABSTRACT

The present study was designed to investigate the relative effectiveness of Model-reinforcement and systematic desensitization group counselling techniques in fostering academic performance. The review of the literature is presented in the following sequence:

(i) Dimension of the problem of poor academic performance

(ii) Early and significant studies and writings on poor academic performance.

(iii) Studies on group counselling in relation to academic performance.

(iv) Some efforts and recommendations for the improvement of poor academic performance.

The subjects of the study were 144 Form four students (72 boys and 72 girls) randomly drawn from the population of low achieving students of two secondary schools in Ijebu-Ode, Ogun State of Nigeria. One school was for the model-reinforcement group counselling while the other school was for desensitization group counselling. Baseline and criterion data were collected on four variables; namely, pre and post test scores of Self - Appraisal of Academic Ability Scale (SAAAS), Progressive Matrices Test

(PMT), English Achievement Test (EAT) and Mathematics Achievement Test (MAT).

The treatment for the experimental subjects was once a week. The data collected were put into a 3 x 3 x 2 factorial design, where the independent variables included (a) model - reinforcement group counselling for subjects arranged in general, triadic and triadic and dyadic groups; (b) desensitization group counselling for subjects arranged in general, triadic and dyadic groups versus no treatment groups, and (c) male subjects versus female subjects. The main effects and interaction were tested in five null hypotheses stating that within reference to "a", "b" and "c", there is no significant difference in academic performance and degree of academic involvement of both the experimental and control groups.

The data collected before and after counselling were subjected to analysis of covariance. The results of the study lend support to the conclusions which follow. First, counselling in both model reinforcement and desensitization is more effective than no counselling in improving academic performance - English Achievement Test ($F = 68.619$, df 1/140, $P < .001$), Mathematics Achievement Test ($F = 62.538$, df 1/140, $P < .001$); and also in increasing the degree of academic involvement -

(F = 7.442, df 1/140, P <.001). Second, model - reinforcement group counselling is as effective as desensitization group counselling for improving academic performance - English Achievement Test (F = 0.496, df 2/138, P = NS); Mathematics Achievement Test (F = 2.962, df 2/138 P = NS); and also, no differential effectiveness was found among the two therapies in increasing the degree of academic involvement (F = 1.852, 2/138, P = NS). Third, that, The group dynamics had no significant effects on the degree of academic involvement of subjects treated under The two group counselling strategies (F = 2.257, 3/138, P = NS).

Based on the results and findings of the study, the major implications for counselling were discussed; directions for further research were presented.

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CERTIFICATION

This is to certify that this work was carried out by Mr. Victor Oluwole Adedipe in the Department of Guidance and Counselling, University of Ibadan, Ibadan, Nigeria.

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CHAPTER ONE

BACKGROUND TO THE STUDY

Introduction

Man is one of the most important agents of development in any nation. This is why man must be intellectually equiped through the educational process. Gesinde[1] pointed out that the quality and level of education acquired by an individual determines the quality and amount of his contribution to national development. To understand and promote change, one requires a certain level of education. Education, is generally considered all over the world as one of the catalysts for social, political and economic transformation. In any nation, education may be described as an agent that promotes human survival. This, of course, justifies the huge sum of amount allocated to education by the government.

In recent years, we have experienced an unprecedented growth in the number of students attending secondary and post secondary institutions. Within the last decade there has been students population explosion throughout the country. A look at table 1

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1. Gesinde, S. A., "Educational Counselling for adolescents and youth." Paper presented at the workshop on adolescents and youth counselling, 1982.

obviously shows the evidence to support this claim. In 1977, for example, 22 new secondary schools were opened in Ogun State of Nigeria, bringing the number of such schools in the State to 106, with a school population of 50,674. At that time, the government was aware that not all children who were qualified to enter secondary schools could be offered admission. The validity of this statement is established when in 1977, of the 106,000 pupils who sat for the common entrance examination into secondary schools in the State, only about 26,500 could be offered admission. The need for the establishment of new secondary schools and the expansion of the existing ones is therefore very clear.

Another example from table 1 to support this view, is Oyo State; where enrolment in primary schools rose to 1.3 million children at the beginning of the 1981 - 82 school year. At the beginning of the 1981 - 82 academic year, 135,000 primary school leavers were successfully placed in class one, of Oyo State Secondary Schools. This, of course, brought the population of pupils in the 715 secondary schools in the state to 354,400.

TABLE 1

STATISTICS OF SECONDARY EDUCATION IN NIGERIA

NUMBER OF SECONDARY GRAMMAR/COMMERCIAL SCHOOLS AND THEIR ENROLMENT, 1975-76 - 1980-81

		1975 - 76		1976 - 77		1977 - 78		1978 - 79		1979 - 80		1980 - 81	
No.	State	No of Schools	Enrolment	No of Schools	Enrolment	No of schools	Entrolment	No of schools	Enrolment	No of schools	Enrolment	No of schools	Enrolment
1.	Anambra	95	64,601	131	80,346	186	97,313	249	112,786	370	145,780	445	175,588
2.	Bauchi	10	4,225	10	4,697	12	5,132	25	8,407	48	13,359	48	1,924
3.	Bendel	149	82,407	147	95,330	167	107,011	197	122,662	267	185,216	467	255,366
4.	Benue	58	14,311	69	22,355	75	30,470	158	46,728	183	44,728	185	46,970
5.	Borno	17	5,282	17	6,240	23	8,231	23	10,381	59	14,000	59	14,700
6.	Cross River	91	40,213	98	50,362	134	66,341	178	87,506	210	105,417	440	126,495
7.	Gongola	18	6,405	22	8,068	27	10,025	35	15,233	44	19,983	44	20,982
8.	Imo	127	85,998	147	110,140	221	155,858	276	173,935	350	251,000	410	440,000
9.	Kaduna	29	18,606	34	23,680	40	32,440	42	35,318	74	34,738	74	44,837
10.	Kwara	70	27,856	78	31,806	80	38,243	75	47,725	105	60,657	161	74,739
11.	Kano	20	7,482	25	10,095	30	12,987	36	16,957	33	19,768	48	55,034
12.	Lagos	110	64,232	93	78,331	98	82,956	79	09,139	125	154,000	226	215,600
13.	Niger	13	4,342	14	5,048	17	6,312	17	7,640	27	10,770	27	11,308
14.	Ogun	99	43,012	97	46,938	106	50,674	119	54,000	151	73,071	326	125,326
15.	Ondo	233	72,081	261	78,468	261	81,87	252	85,589	252	139,258	419	203,815
16.	Oyo	261	113,287	300	128,136	293	147,786	320	165,476	378	204,318	687	262,229
17.	Plateau	38	11,330	43	12,534	49	16,67	51	20,914	75	26,638	75	27,970
18.	Rivers	52	32,08	52	33,027	87	49,53	95	48,829	97	74,606	137	81,644
19.	Sokoto	23	6,367	22	6,553	22	7,63	26	9,628	58	20,565	58	21,593
	Nigeria	1,513	704,917	1,560	832,154	1,928	1,007,902	2,259	1,159,40	2,908	1,557,877	4,334	2,226,124

A major problem faced by those who desire secondary school education, those who will bear the brunt of financing that education and those who will help others make such decisions, is the basic consideration of the possibility of academic success. This emphasises the necessity for research in many divergent areas relative to the improvement of academic performance. Each school teacher, no matter what title he bears, in talking with a pupil about school, formally or informally discusses the need for success. The parents are worried about the same issue, while the pupils themselves are interested in their chances of success or failure.

The concern, with the issue of improving academic performance has also increased in recent years. The reasons for this, can be attributed to the increase in student population and without corresponding increase in the expansion of facilities, the then automatic promotion in some states of the country, and attitude towards education generally by pupils and society. This concern is reflected in public opinions, newspapers, and general comments of the community at large, that the standard of education is falling. The government, the parents and even the teachers too are not left out as complainants about the falling standard of education.

The concern is equally justified by the fact that, the

West African School Certificate results of the past few years have not been encouraging. More than half of the candidates who took the West African School Certificate Examination (WASCE) between 1976 and 1983 failed according to figures of the West African Examinations Council (WAEC). The average percentage of failure was punctuated only in 1979 when 122,027 (69.5 percent) of the 175,431 candiates passed. The West African School Certificate, obtained after a successful five - year secondary education, is the stepping stone in life, for a white collar job or a studentship in the university or a higher education institution. The table 2 gives, a vivid picture of the figure and percentage failures in WASCE of the past few years.

Another evidence to support the downward trend in the quality of our education can also be obtained from the table 3, which gives a clear picture of the steady increase in school population and the percentage of failures in WASCE of the past years.

TABLE 2

WAEC 6 - YEAR FIGURES ON SCHOOL

CERTIFICATE EXAMINATION

YEAR	ENROLMENT	PASSES	FAILURES
1976	129,543	55,952 (43.19%)	69,614 (53.73%)
1977	89,993	34,852 (38.7%)	51,163 (56.8%)
1979	175,431	122,027 (69.5%)	51,404 (29.30%)
1980	193,767	81,576 (42%)	102,191 (52.7%)
1982	254,330	109,544 (42%)	145,786 (57.3%)
1983	367,640	173,894 (47%)	193,746 (43%)

* By the Courtesy of WAEC; Lagos.

TABLE 3.

WASCE RESULTS - SHOWING NUMBER SITTING AND PERCENTAGE OF FAILURES

YEAR	ENROLMENT	PERCENTAGE OF FAILURES
1959	5,125	29.5
1960	6,135	32.5
1961	7,734	30.2
1962	8,756	39.7
1963	10,575	45.3
1964	13,117	48.8
1968	14,503	46.9
1975	74,983	52.6

* By the Courtesy of WAEC, Lagos.

This notion about the falling standard of education, though apparent, is one of the most difficult facts to establish. To make a good case, one has to look into the various facets of the complaint. The government on her own part feels that the standard of education has fallen to that ridiculous level that, they hardly recognise the primary school leaving certificate any longer. Whereas, the holders of the first school leaving certificate in the past, were gainfully employed by the government functionnaries, no such job opportunity is open to such certificate holders these days. As of now, many of our secondary school leavers are deemed incompetent for the different types of job in both public and private sectors of our economy. The reason for this can be attributed to the poor performance of these students in WASCE, as percentage of failures increases from year to year (Table 3).

One other reason for the increased interest in improving the present academic performance of our students, is not unconnected with the financial committment of both the Federal and State governments in education. An examination of table 4

TABLE 4

CAPITAL EXPENDITURE BY GOVERNMENT ON EDUCATION (1981 - 85)

STATE	STATE GOVERNMENT ₦ MILLION	LOCAL GOVERNMENT ₦ MILLION.	TOTAL STATE L.G.A.'S ₦ MILLION.
Anambra	184,200	35,100	219,310
Bauchi	123,684	106,550	230,234
Bendel	300,000	128,208	428,208
Benue	112,040	51,279	163,310
Borno	264,100	68,940	323,040
Cross River	173,789	89,501	213,290
Gongola	209,574	68,067	277,641
Imo	121,520	46,000	167,520
Kaduna	255,224	129,550	384,774
Kano	408,300	168,811	577,111
Kwara	205,750	220,375	226,125
Lagos	97,724	8,198	105,922
Niger	193,650	38,790	232,440
Ogun	269,820	9,616	279,436
Ondo	241,117	33,128	274,245
Oyo	476,683	2,331	479,014
Plateau	191,245	14,205	205,405
Rivers	226,600	4,400	231,000
Sokoto	198,000	37,000	235,000
TOTAL GOVTS. (STATE & LOCAL)	4,253,020	1,000,059	5,253,079
FEDERAL	2,450,000	-	2,450,000
TOTAL ALL GOVERNMENTS	6,703,020	1,000,059	7,703,079

* By The Courtesy of Federal Ministry of Education - Lagos.

reveals that education has continued to consume a substantial portion of the resources of the governments. For instance in Oyo State, during the 1980 - 82 fiscal years, the government spent for primary school education alone, a sum of ₦21.3 million and a provision of ₦20 million was set aside for secondary education. Table 5 apparently reveals the financial committment of Oyo State, in education for the past few years.

TABLE 5

ALLOCATIONS EARMARKED FOR EDUCATION
BETWEEN 1978 - 82 FISCAL YEARS IN OYO STATE

FINANCIAL YEAR	ESTIMATE (₦)	PERCENT OF TOTAL (%)
1978 - 79	115,650,000	33.41
1979 - 80	106,308,420	37.35
[illegible]	137,929,990	34.35
1981	260,822,050	38.45
1982	283,525,690	36.76

* By the Courtesy of the State Ministry of Education - Ibadan.

Educational costs are therefore, continually stretching the government budgets, accounting for between 20% and 50% of the government recurrent expenditures. Educators are therefore concerned with how to improve the efficiency of the country's educational system, particularly how to minimise per capital costs and at the same time, maximise school enrolment, school retention and educational performance. Many researchers in the field of educational economics have often adopted enrolment and school retention factor as the criteria for the puprose of cost-benefit analysis, thus ignoring academic performance as a factor. In view of the huge sum of account invested on education by the government, poor academic performance will obviously lead to economic waste, in the sense that it could constitute a major threat to the man-power development of the nation. Unless the causes of poor academic performance among students are carefully identified and rectified, it will be difficult to improve the country's present educational standard.

In a success-oriented society, academic achievement, is a significant measure of success in life. The reason for this cannot be far fetched, it provides the singular index of intellectual ability and aptitude for an individual. In line with this, Akinboye[1]

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1. Akinboye, J.O.: How to study and pass important Examinations: A psychological approach, Ibadan Maritime, Printers, 1980.

rightly pointed out that, academic achievement serves as the only clear-cut measure of students and adequacy for a life career.

The problems of poor academic performance are numerous and may have many effects on the pupils, the family and the nation. This, of course, generates other consequences such as dropping out of the school system, truancy, examination malpractices, mass unemployment, maladjustment and a lot of other ills which are prevalent in the society. The effect of poor academic performance on the pupils can be noticed in a number of ways. It affects, the pupil's self-concept, social relationship and his motivation. The pupil sees himself as a failure and therefore could not succeed in life. All these, of course, could go on leading the pupil to take negative decisions against himself such as committing suicide.

There is also the tendency that an unachieving pupil will have no motivation toward life generally and to learning, which can make him adjust to the type of personalities he should identify with and this could cause poor academic performance. If such a pupil is a big boy, he may compensate for his low achievement by becoming a bully and sometimes he becomes withdrawn, aggressive and so develop a number of undesirable traits. He could even become deliquent and unable to get on properly in school as suggested by Bakare. Most developing countries, of which Nigeria is one, are

striving for mass and comprehensive education, so that the society's values, attitudes, behaviours and culture might be improved. Such objectives can only be achieved with good academic performance on the part of the pupils of such a nation. Poor academic performance, may keep a nation perpetually under-developed and thus unable to compete with other developing or developed countries, economically, socially and politically.

The issue of poor academic performance, is not taken lightly by the individual himself, his family, the teacher and the society at large. To date, teachers, students and the parents have kept on exploring new methods of helping pupils improve their academic performance. Furthermore, the various state governments continue to organise conferences, workshops as well as promoting in-service programmes for teacher and guidance counsellors. All these efforts are geared towards oiling the teaching-learning machinery, so as to improve school performance.

From all indications, it seems not many of these supportive measures have been able to yield any noticeable result. Although, attempts have been made in addition to improve school achievement, through a step-up programme in the training of qualified teachers and other personnels for our secondary schools yet it still appears that the quality of education that goes on in the school has much to be desired. It, therefore, becomes necessary to experimentally

try other forms of supportive programmes to improve the quality of our education.

Purpose of the study

The study is designed to determine how best the poor academic performers could be assisted through two of the group counselling strategies, in improving their levels of academic performance. The study is equally taking cognisance of the fact that, if emotional factors are involved in poor academic performance, then behavioural group counselling should be effective in increasing school achievement. This present study therefore, is an attempt to investigate the differential effectiveness of two different strategies of group counselling in fostering academic performance and involvement, as well as to reduce fear experiences associated with study.

Theoretical Focus of The Study

Behavioural counselling does not have a set of approved techniques. A variety of techniques are used to help clients achieve the desired behaviour changes. One of the outstanding observations of the literature on the improvement of academic performance is the plethora of interventions suggested for increasing academic achievement. In the long list of the reported treatment modalities, one finds procedures such as systematic desensitization and self-study

instructions, autogenic relaxation, cue-controlled relaxation, covert positive reinforcement, cognitive modification, rational-emotive treatment, implosive therapy, and modeling, to mention only a few.

The implications of the existence of this long and diversified list are not entirely clear. One possibility is that the diversity of the recommended treatements reflects a stage of uncertainty marked by the lack of consensus regarding the most effective forms of improving poor academic performance. On the other hand, it could also signify a positive trend of supplying a variety of treatment options to choose from, in rendering services. This may have a substantial appeal to practising counsellors who recognise that no single treatment can be equally effective for every client and who are frequently confronted with the task of adjusting treatment procedures to suit the needs of the individual case. In that respect, widening the range, of effective treatment options might be regarded as useful development.

Despite their diversity, however, the counselling approaches for poor academic performance seem to have one interesting characteristic in common. And that is nearly all of them stem from learning principles

and utilize psychological technologies associated with behaviour therapy. For the proponents of the behaviouristic approach, this represents an asset, an added validation for their orientation. But for those psychologists who adhere to other approaches, widening the range of treatment options within the traditional behaviouristic framework may have a rather limited appeal.

The main focus of this study is therefore the use of two techniques within the framework of behavioural group counselling in fostering academic performance. The two technique packages are briefly presented below.

(A) Model - reinforcement group Counselling

The use of models in counselling is based upon the social learning posited by Bandura[1, 2]. Group counselling has generally been used with a number of individuals sharing a common problem. However, the gathering of a group of people with similar problems may lead to a pool of ignorance about how to deal with the problem or to a peer reinforcement of socially inappropriate behaviours. If the group members are to learn more appropriate

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1. Bandura, A.: Principles of Behaviour Modification New York: Holt, Rinehart and Winston, 1969.

2. Bandura, A.: Social Learning Theory. Englewood Cliff: N. J. Prentice - Hall, 1977.

behaviours, it may be necessary to inject examples of the desired responses into their world. Models can be presented as examples of the desired behaviour or as examples of ways in which problems can be solved. The basic assumption of modeling is that most learning resulting from direct experience can also be learned through vicarious reinforcement or imitative learning. The use of models to help clients can be employed for three general client goals:-

(i) Learning of a new or novel behaviour. Observing a model perform a behaviour can help clients learn the necessary skills to perform the same behaviour.

(ii) Weakening (inhibiting) or strengthening (disinhibiting) a behaviour already learned. The client may already know how to perform the behaviour but may not be performing it at a desired level. The use of modeling in counselling, can therefore have the effect of increasing or decreasing the rate of performance of the behaviour by the client. Viewing the consequences as experienced by the model alters, the self - expectancies of the client. Client's self-expectancies are the thoughts that they have a probability of experiencing similar consequences if they perform the modeled behaviour.

(iii) Response facilitation. Viewing a model perform a desired behaviour affects the client's performance of a previously learned behaviour in situations where there are no constraints. Observing the model provides the client with cues to enact the learned behaviour.

The observation of a model, is used typically with a counsellor and provides needed attentional cues, feedback, and rehearsal guides. The act of learning through observation of a model has four major processes. As described by Bandura[1], these processes involve:-

(a) Attentional processes = Processes dependent upon the modeling stimuli (distinctiveness; complexity, functional value) and the characteristics of the observer (sensory capabilities, perceptual set, learning history) to regulate the sensory registration of the action modeled.

(b) Retention processes = Processes that govern how well the modeled actions are converted and stored cognitively by the client for use as future guides for behaviour (coding, cognitive organization, symbolic and motor rehearsal).

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1. Bandura, A. 1977 Op. Cit.

(c) Motor reproduction processes = Governing processes for the integration of the components of the modeled behaviours into patterns that are necessary for future performances of the behaviour by the client (physical capabilities, skills, feedback accuracy).

(d) Motivational processes = The processes of external, vicarious, and self - reinforcement which serve as motivators for the client to perform the modeled behaviour overtly.

The processes summarised above provide guides to the counsellor for the construction of the modeling aids to be used and for the manner in which they are to be used with clients. Following the establishment of a counselling goal, modeling can be used to help clients attain their goal. The four major processes of modeling are integrated into the utilization of model in counselling. While the specific choices of the modeling technique components vary for each client, the procedures employed typically include attentional of a model and guided practice.

(B) Desensitization group counselling

Systematic desensitization in groups, is a technique which counsellors are using to help clients who are experiencing unpleasant emotional reactions. Basically, this procedure consists of describing

situations which are increasingly anxiety producing ("an anxiety hierarchy") to a deeply relaxed client until he is able to visualize the most stressful scenes on the list without anxiety.

Desensitization can be conceptualized in terms of the psychological principle of counterconditioning. Extinction of the unpleasant emotional reactions occurs because the usual anxiety responses cannot take place, when the client is experiencing more pleasant stimuli (for example, deep relaxation). Since one can not be relaxed and anxious at the same time the anxiety can be systematically reduced by pairing the eliciting stimuli with deep relaxation.

Wolpe[1] was one of the first psychologists to use the systematic desensitization procedure in the therapeutic setting. He was the first to publish an account of the desensitization technique. Wolpe and Lazarus[2] applied this concept to counselling by proposing a variety of techniques for antagonistic responses selected by the client and counsellor to be the systematic behaviours in a manner that would prevent the symptoms from being expressed. Wolpe assumes that the client's symptoms are learned or are conditioned

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1. Wolpe, J.: Psychotherapy by reciprocal inhibition Stanford; Calif: Standford University Press 1958.

2. Wolpe, J. & Lazarus A. A.: Behaviour Therapy Techniques. New York: Pergamon Press. 1966.

habits and since the responses, the counsellor selects to suppress may be new habits that are learned or conditioned, it is appropriate this form of treatment as counter conditioning.

Wolpe[1] theorized that therapy by reciprocal inhibition suppressed anxiety by evoking a response physiologically antagonistic to anxiety in the presence of anxiety - producing ones. Required were:

(a) a strong response (e.g. muscular relaxation to compete with anxiety,

(b) a graduated hierarchy of anxiety-provoking stimuli and

(c) continuous pairing of the two stimuli (e.g. physical relaxation and anxiety).

But research over the past 15 years has demonstrated that desensitization does not depend on muscular relaxation, a hierarchical arrangement of anxiety provoking stimuli or pairing relaxation with hierarchy items. Wolpe's original reciprocal inhibition theory is no longer widely held, except perhaps by himself as an explanation for systematic desensitization.

Alternative explanations have included systematic desensitization as counter-conditioning, as extinction, as graduated exposure, and as training in coping skills as shown in table 6.

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1. Wolpe, J. 1958 Op. Cit.

TABLE 6

ALTERNATIVE EXPLANATIONS OF SYSTEMATIC DESENSITIZATION

Theory	Theoretical Explanations	Therapeutic Development
Reciprocal-Inhibition	Anxiety suppressed by simultaneously evoking a response physiologically antagonistic to anxiety in presence of anxiety - provoking cues.	Strong anxiety - competing response graduated hierarchy of anxiety - provoking stimuli continous pairing of stimuli with relaxation.
Counter-Conditioning	Anxiety is reduced by pairing anxiety - provoking stimuli with any non-anxiety response.	Relaxation and a graded hierarchy are not essential but facilitate fear reduction.
Extinction	Anxiety reduction results from presenting conditioned emotional stimuli not followed by aversive consequences.	Flooding: Client is introduced to phobic stimulus and maintained there anxiety subsides.
Exposure	Arousal reactions are reduced by graduated exposure (direct experience) to phobic stimuli	Operant shaping: Subjects contact with phobic stimulus increased through shaping and reinforcement. Social Modeling: behaviour displays plus gradual exposure and practice in approaching phobic stimulus and situations.

TABLE 6 (Cont.)

Theory	Theoretical Explanation	Therapeutic Development.
Coping - Skill	Anxiety reduction consciously mediated during in vivo exposure, using anxiety as cue to prompt non-anxious response (physical, cognitive).	Cue - controlled relaxation: person learns to perform relaxation response in the face of stress-provoking stimulus. Self - instructional training: person learns to direct self through stressful situation using self-talk and relaxation.

To all these alternatives, can be added another contender, - effects can be explained in terms of clients' differential expectancies for success in desensitization and comparison groups.

Extensive research reviews of systematic desensitization explained the efficacy of the procedure and provided a component analysis. Current controlled investigations involving the role of client expectancies as an important variable are being conducted. Additional variations of the basic procedure are being attempted and examined.

Explanations of the efficacy of systematic desensitization in terms of operant theories (extinction concepts) have been proposed, and will generate additional study of the basic procedure and classical conditioning paradigm. The basic procedure utilizes a variety of steps effectively to help clients eliminate or reduce anxiety.

Assumptions Underlying The Study

(1) The first assumption is that, there exists an identifiable group of students who may appropriately be called poor academic performers.

(2) The second assumption is that the objectives of instructional programmes for poor academic performance can be conceptualized. Whether the objectives are stated in terms of knowledge of subject matter, intellectual abilities and skills, psycho-motor abilities, work methods, attitudes, values creativity, personality integration, changes in behaviour or in any other terms, the development of instructional programmes and of related research designs requires that the goals be clearly delineated.

(3) A third assumption is that curriculum and instruction can be designed to achieve the posited objectives. If there is doubt that, this could be done, there would be no point identifying the poor academic performers and in developing objectives of

instruction, or in conducting research to ascertain which of the many possible arrangements might produce better results. The third assumption implies that questions regarding curriculum and instruction must be settled so that the poor academic performers can receive effective education.

(4) A fourth assumption is that programmes for the poor academic performers should be based upon evidence and that part of this evidence must come from good research. Evidence on educational methods is not the only evidence needed. We need to know far more than we do now about motivation, aptitudes and their development and the social forces which encourage youth to high achievement or discourage them from it.

(5) A fifth assumption is that suitable research arrangements in schools and appropriate tools and techniques of measurement and evaluation be developed for conducting research on poor academic performers.

In conclusion, it has been the conviction of this researcher, through his years of teaching and graduate study that the problem of poor achievment by secondary school students can best be met not by authoritarian control or robost bullying but through well planned counselling strategies, efficient teaching and research based ideas.

REVIEW OF RELATED LITERATURE

General Studies on Academic Performance In Relation to Other Variables

Academic performance is generally regarded as the display of knowledge attained or skills developed in the school subjects. Such achievements are indicated by test scores or by marks assigned by teachers. It is the school's evaluation of the pupil's classroom work as quantified on the basis of marks or grades. Academic performance is of two forms. There is the poor academic performance which results in academic failure, and good academic performance which means that the pupils have done well. The age old question of why some pupils perform well in an academic situation while other perform poorly is still with us.

The concept of poor academic performance has a long history in psycho-educational research. In the 1920s psychologists, generally assumed that the IQ was the major predictor of school achievement, but other factors such as family background, personality characteristics, attitudes and interests also contribute to academic success or failure.

Academic performance in schools therefore has been open to investigation and much research by educational psychologists. In surveying the literature on academic performance, one immediately

becomes cognizant of the multitude of studies done in this area, both on the foreign and local scenes. In general, however, most of these studies have concerned themselves with the relationships between secondary schools grades and such factors as special aptitudes and various achievement tests; Douglas[1], Doleys and Renzaglia[2]; Garret[3]; Henderson[4]; Read[5] and Scannel[6]. Some of these were based on factor analyses, other were th e

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1. Donglas, H. R.: "The relation of high school preparation and certain other factors to academic success" School Review, 1932, SL 174 - 75.

2. Doleys, E. J. & Renzaglia, G. A.: "Accuracy of students prediction of college grades "Personnel and Guidance Jol. XL 1963.

3. Garret, H. E.: "A review and interpretation of factors related to scholastic success in colleges of Arts and Sciences." Jol of Experimental Education XVIII

4. Henderson, H. L.: "Prediction of Freshmen grades in a long Island college Educational an d Psychological Measurement, 1957 XVII 623 - 627.

5. Read, C. G.: "Prediction of scholastic success in a municipal university" School and Society 1938 XLVIII.

6. Scannel, D. P.: "Prediction of college success from elementary and secondary school performance" Journal of Educational Psychology 1960 130 - 134.

results of surveys of literature some were doctoral dissertations and a few perhaps armchair speculations.

One method of examining the concept of academic performance, is to analyse pupils; achievement - related behaviour as determined by individual's causal perception of successes or failures. Weiner[1] introduced the basic principles of his model to educational researchers, the accumulation of new research has refined the model and presented new possibilities for its application to education. In particular, the model could be used to explain pupils' performance as learning tasks. Weiner and his associates[2,3,4] have suggested that individuals beliefs about causes of success and failure

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1. Weiner, B.: "Attribution theory, achievement motivation and the educational process" Review of Education Research, 1972, 42 203 - 215

2. Weiner, B., Frieze, I; Kikla, A; Reed, L; Rest, S; & Rosenbaum; R.M.: Perceiving the causes of success and failure. New York; General Learning Press 1971.

3. Weiner, B.: Achievement Motivation and Attribution theory. Morris - Town, N. Y. General Learning Press, 1974.

4. Weiner, B.: 1972 Ibid.

mediate between perception of an achievement task and the final performance. In another study by Falbo[1] individuals have been shown to view the causes of their successes and failures as principlally being due to their ability, their efforts, th e difficulty of the task and/or bad luck.

Other studies on academic performance include those of Bakare[2] who was interested in finding the relationship between anxiety and performance; he observed that it does not appear that test anxiety plays any role independent of general anxiety in the determination of academic performance. Durojaiye[3] studied, the differences in the cognitive abilities of students of African and European parentage and noted that there was no significant difference. Akinboye[4] on his own

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1. Falbo, T.: "The achievement attributions of kindergarteners". Developmental psychology 1975 11

2. Bakare, C. G. M.: Phenomenal self concept, anxiety and academic performance, Unpublished Ph.D. Thesis. Columbia University 1969.

3. Durojaiye, M.O.A.: A New introduction to educational psychology; Ibadan Evans 1970

4. Akinboye, J.O. Study Habit Modification: Study attitudes change and academic performance Unpublished Masters dissertation, University of Ibadan, 1974.

studied habit modification, attitude changes and academic performance. His inference was that, if study habits of individuals are correctly modified, then, the level of their academic performance would increase. In another separate study Morakinyo[1] investigated students' attitudes towards education and how these relate to their academic and psychosocial problems in the learning process. He was able to find that negative attitude towards education are related to poor academic performance and poor psychosocial adjustements in schools. Akinade[1] recently studied the influence of peer group on performance and observed that social acceptability, adjustment to school environment and self-acceptance affect academic performance. From these studies, one comes to the conclusion that several variables are related to academic performance.

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1. Morakinyo, A.: Students' attitudes towards education their problems in the learning process and academic performance. Unpublished M.Ed. dissertation, University of Ibadan, 1978.

2. Akinade, E. A.: A study of peer-group influence on self-acceptance, adjustment, and academic performance of some Nigerian secondary school students. Unpublished Master's dissertation University of Ibadan, 1982.

Empirical Studies on Academic Performance

The problem of poor academic performance has existed in schools for many years; and the problem has been open to investigation and much research has been conducted. Teacher's evaluation of pupil performance has long been a subject of interest to educators and those interested in academic achievement. Ideally, the marks assigned by teachers are solely a function of assessed performance in the classroom. In actual practice, however, teacher's assessments are influenced by a wide variety of variables other than the pupil's academic performance. According to Bloom and Peters[1] there are three sources of variation in academic grades:

(i) errors in judgment

(ii) differences among students in achievement motivation and

(iii) differences in standards from teacher to teacher and from school to school.

Errors in judgments of teachers provide a major difference in conceptualising marks. Thus, th e teacher assigns marks on the basis of her perception and evaluation of the child's performance

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1. Bloom, B. S. and Peters, F. R.: The use of academic prediction scales for counselling and selecting college entrants. New York: The free Press of Glencoe. 1961.

in the classroom. Such evaluations include not only the teacher's perception of the pupil's academic performance; but also his non-academic behaviour including such variables as personality characteristics, appearance, interpersonal interaction with peers and the teacher, classroom manners. etc.

Thus, one might expect some difference between teacher's assessments of grades and achievement test scores despite the fact that they both measure school achievement. A number of prior studies support this notion, finding relatively low correlations between achievement test scores and marks received.

In a study by Miner[1] the structure of achievement assessments has been studied empirically by subjecting twenty different achievement measures to a factor analysis; which yielded a clearly defined three - factor structure. From her analysis, it would appear that pupils are assessed relatively independently on each of these factors:

(a) objective achievement defined by all the intelligence measures and most of the standard achievement test scores.

(b) early citizenship defined by early measures of citizenship and marks,

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1. Minner, B. C.: "Three factors of school achievement" The Journal of Educational Research 1967 60, 370 - 376.

(c) high school achievement defined primarily by class marks.

A pupil in the classroom may fail or succeed on tests given by the teacher. It is assumed that the teacher searches for causes that explain the outcome achieved by the pupil. The causes that the teacher uses to explain the outcome may have an effect on his or her expectation concerning the pupil's future achievement, as pointed out by Bar-Tal[1] and Dweck[2]. In another study Rosenthal and Jacobson[3] noted that the teacher's expectations may in turn influence pupils' achievement behaviour.

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1. Bar-Tal, D.: "Interactions of teachers and pupils" in E. Frieze, D; Bar-Tal and J.S. Carol (Eds) New approaches to social problems; Applications of attribution theory. San Francisco

2. Dweck, C. S. and Gretz, T. E.: "Attribution and learned helplessness" in J.H. Harvey, W. Ickes and R. Kidd (Eds) New directions in attributions research 2 Hillsdale N. J. Lawrence Elbaum Associates 1978.

3. Rosenthal, R. and Jacobson, L.: Pygmalion in the Classroom. New York: Holt, Rinehort and Winston. 1968.

A number of studies have investigated the effects of a pupil's performance on the teacher's perception of causality. The results obtained in these studies were somewhat conflicting. While Johnson, et al[1]; Beckman[2] and Ross et al[3] found that the pupils' performance may lead teachers to somewhat biased causal perception of the pupils' success and failure; Beckman[4] Brandt et al[5] and Ames[6] did not find any bias in teachers' causal perceptions. The first three studies found that teachers tended to take credit when the pupils performed well and tended to attribute the responsibility to the pupil when the pupil performed poorly. The latter three studies showed that teachers tended to take the responsibility for pupils' failure and to give credit to

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1. Johnson, T., Feigenbaum, R. and Weiby, M.: "Some determinants and consequences of teacher's perception of causation" Journal of Educational Psychology 1964, 55, 237 - 246.

2. Beckman, L.: "Effects of Students' performance on teacher's and observers' attributions of causality", Journal of Educational Psychology, 1970, 61, 76 - 82.

3. Ross, L. Bierbraner, G. and Polly, S.: "Attribution of educational outcomes by professional and non professional instructors" Journal of Personality and Social Psychology 1974, 29 609 - 619

4. Beckman, L.: "Teacher's and observers' perception of causality for child's performance." Journal of Educational Psychology 1973 65 198 - 204.

5. Brandt, L., Hayden, M., & Brophy, J.: "Teachers' attitudes and ascription of causality" Journal of Educational Psychology 1975 52 61 - 70

6. Ames, R.: "Teachers' attribution of responsibility: Some unexpected non-defensive effects" Journal of Educational Psychology 1975 67 668 - 676

the pupil, if the pupil succeeded.

These studies have several common characteristics. All the studies created artificial situations in a laboratory to teach one or two children for a short period of time (a maximum of thirty minutes). In studies conducted separately by Johnson et al[1] Beckman[2] and Brandt et al[3] the pupils were fictitous and the subjects did not even see them. In other studies, the subjects could see the pupils but did not interact with them. In addition, the studies by Ames[4] and Brandt et al[5] the subjects were college students who did not have any teaching experience.

Another area where extensive studies had been done with respect to academic performance is the prediction of academic success. In general however, most of these studies have concerned themselves with the relationships between college grades and such factors

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1. Johnson, T. et al: "Some determinants and consequences of teacher's perception of causation" Journal of Educational Psychology 1964 55 237 - 246.
2. Beckman, L. 1973 Op Cit.
3. Brandt et al 1975 Op Cit.
4. Ames, R. 1975 Op Cit.
5. Brandt et al Ibid.

as high school grades, special aptitudes, various achievement tests and academic aptitude test scores. Cobb[1] employed a correlational design with behavioural categories serving as predictors and standardised achievement test scores as criteria. Separate correlational and regression analyses were performed for:

(a) the total group of subjects

(b) male and female subsamples, and

(c) high and low socio-economic status subsamples.

The study conducted by Hall et al[2] included a set of regression analysis in which a measure of attention was included as a predictor of standardised achievement test scores. Separate analyses were done for mathematics and reading achievement and for data collected in the fall and spring. No significant relations were reported for the attention measure.

With the work of Mckinney et al[3] a set of 12 composite behavioural categories was formed from 27 discrete categories served as predictors within regression analysis.

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1. Cobb, J.: "Relationship of discrete classroom behaviours to fourth-grade academic achievement" Journal of Educational Psychology, 1972 63 74 - 80.

2. Hall, V. et al.: "Attention and achievement exhibited by black and white school boys" Journal of Educational Psychology 1977 69 115 - 120.

3. Mckinney et al.: "Relationship between classroom behaviour and academic achievement" Journal of Educational Psychology, 1975 67 198 - 203.

A composite achievement index based on standardised test scores served as criterion. Three separate regression equations were calculated; one using behaviour collected in the fall to predict fall achievement, one using behaviour collected in the spring to predict spring achievement, and one using behaviour collected in the fall to predict spring achievement.

On the other hand Perkins[1] used frequencies within 12 behaviour categories as depended variables within a set of t - tests. This involved the following comparisons for each of the 12 categories; underachieving with achieving boys, underachieving with achieving girls and underachieving with achieving pupils (male and female combined). The achievement groups were formed on the basis of teachers grades and IQ scores.

The relationship between pupil attention scores and reading achievement were examined by Samuels and Turnure[2] using analysis of variance and correlational analysis. Reading achievement was measured in terms of performance on a word recognition task. In the

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1. Perkins, H.: "Classroom behaviour and underachievement" American Educational Research Journal. 1965 2 1 - 12.

2. Samuels, S. & Turnure, J.: "Attention and reading achievement in first grade boys and girls" Journal of Educational Psychology, 1974 66 29 - 32

study of Soli and Devine[1] a set of behavioural categories served as predictors of standardised achievement test scores within correlational and regression analyses.

A survey of these studies reveals some patterns with respect to behaviour-achievement relations. Positive relations between measures of pupil attention and pupil performance appear with some consistency, while generally negative relations appear between measures of pupil inattention (e.g. inattention, looking around, distractible behaviour) and performance measures. Further, teacher-pupil interaction measures reflecting level of academic activity (e.g. pupil-initiated work contacts, volunteering) relate positively to performance. Those teacher-pupil interaction variables which reflect teacher attention to the pupil show rather more complex relations with achievement. While negative teacher contacts (e.g. criticisms, behavioural warnings) generally relate negatively to achievement, positive types of attention (e.g. teacher initiated work interactions) show more variable relations with achievement.

All of these studies were descriptive intent, that is, they were designed to generate data on the degree of association between

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1. Soli, S. & Devine, V.: "Behavioural correlates of achievement - A look at high and low achievers"; Journal of Educational Psychology 1976 68

behavioural categories and achievement. Unfortunately, the researchers did not go far enough in the sense that no efforts were made to directly assess the behaviour - achievement links. Factors other than behavioural change could have produced the achievement gains observed in the experimental subjects. The survey of these studies reveals that, at best, only moderate degrees of association have been established between classroom behaviours and academic achievement. Further, there remains considerable uncertainty regarding factors which mediate the behaviour - achievement relations and considerable uncertainty regarding the nature of these relations. It is therefore necessary to generate studies with respect to behaviour which are associated with achievement and also to factors mediating the behaviour - achievement relations.

Not only that different researchers have reported different degrees of correlation between measures of ability and those of academic performance but most often the reported degree of correlation is also, so unstable that no genuine inference can be based on it. For instance, Gupta (1971)[1] reported that ability and performance are related to the degree of only 0.38 (N = 50).

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1. Gupta, V.: "The relations of neuroticism extraversion intelligence and persistence to educational attaintment". Journal of Psychological Researches 1971 15 86 - 87.

When interpreted with the help of its S. Er (0.143) this degree of correlation has a range from minus 0.04 to plus 0.80.

The following causes of disagreement among researchers on the issue of academic performance stand out from previous researches.

(1) Different researchers differed in the issue of measures of academic performance. Some based their measures of performance on the scores obtained on the standardised tests of academic achievement, others used grade-point average and in most of the studies, examination marks based on essay-type of tests were used.

(2) Different researchers have differed in using different kinds of statistical and theoretical assumptions. Some statisticians like Bloomers and Lindquist[1] are of the view that measures of academic performance pertaining to different subjects of curriculum are additive when coverted into standard scores, whereas some psychometricians like Gulford[2] held that only those measures which are perfeclty correlated with each other are additive.

From the studies reviewed so far, individual differences among pupils in terms of measured abilities, educational background,

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1. Bloomers, P. & Lindquist, E.: Elementary Statistical Methods in Psychology and Education. Oxford Book Co. Calcutta 1960.

2. Guilford, J. P.: Psychometric Methods; McGraw Hill Book Co. Inc. New York 1954.

socio-economic and family characteristics, goals and aspirations, attitudes towards learning etc. exist and influence differentially students' grades. And, as long as the school reward system is based on grades in subjects and courses, the continued study of student characteristics as they relate to performance is necessary. It follows that anything which can be done to improve poor academic performance will contribute to individual and social accomplishment and well being. The present study, therefore, is an attempt to improve poor academic performance in a group of Nigerian secondary school pupils using two group counselling strategies which will be compared with each other and with a control situation.

A Conceptual Scheme for Poor Academic Performance In Schools

Until now, attention has been focussed upon the specification of the conditions under which poor academic performance occurs and upon the delineation of the individual charactersitics, especially those involving educational and institutional commitments that are needed to account for the variation of differing types of low achiever, a behaviour among differing individuals. One can now turn to the specification of the longitudinal process of interactions by which difering individuals came to perform poorly in a school.

This theoretical model of poor academic performance diagrammed in Figure 1 argues that the process of poor academic performance can be viewed as a longitudinal process of interactions between the individual and the academic and social systems of the institution during which a person's experiences in those systems (as measured by his normative and structural integration) continually modify his goal, and institutional commitments in ways which lead to in persistence poor academic performance.

Individuals enter institutions with a variety of attributes (e.g. sex, ability), pre-school experiendes (e.g. academic and social attainments) and family backgrounds (e.g. social status

attributes, value climates, expectational climates), each of which has direct and indirect impacts upon performance in schools. More importantly, these backgrounds, characteristics and individual attributes also influence the development of the educational expectations and commitments the individual brings with him into the school environment. It is these goals and institutional commitments that are both important predictors of and reflections of the person's experiences, his disappointments and satisfaction in that institutional environment.

Given individual characteristics, prior experiences and commitments, the model argues that it is the individual's integration into the academic and social systems of the school that most directly relates to his performance in a school. Given prior levels of goal and institutional commitment, it is the person's normative and structural integration into the academic and social systems, that lead to new levels of commitment. Other things being equal, the higher the degree of integration of the individual into the school systems, the greater will be his commitment to the specific institution and to the goal of school completion.

A CONCEPTUAL SCHEMA FOR POOR ACADEMIC PERFORMANCE

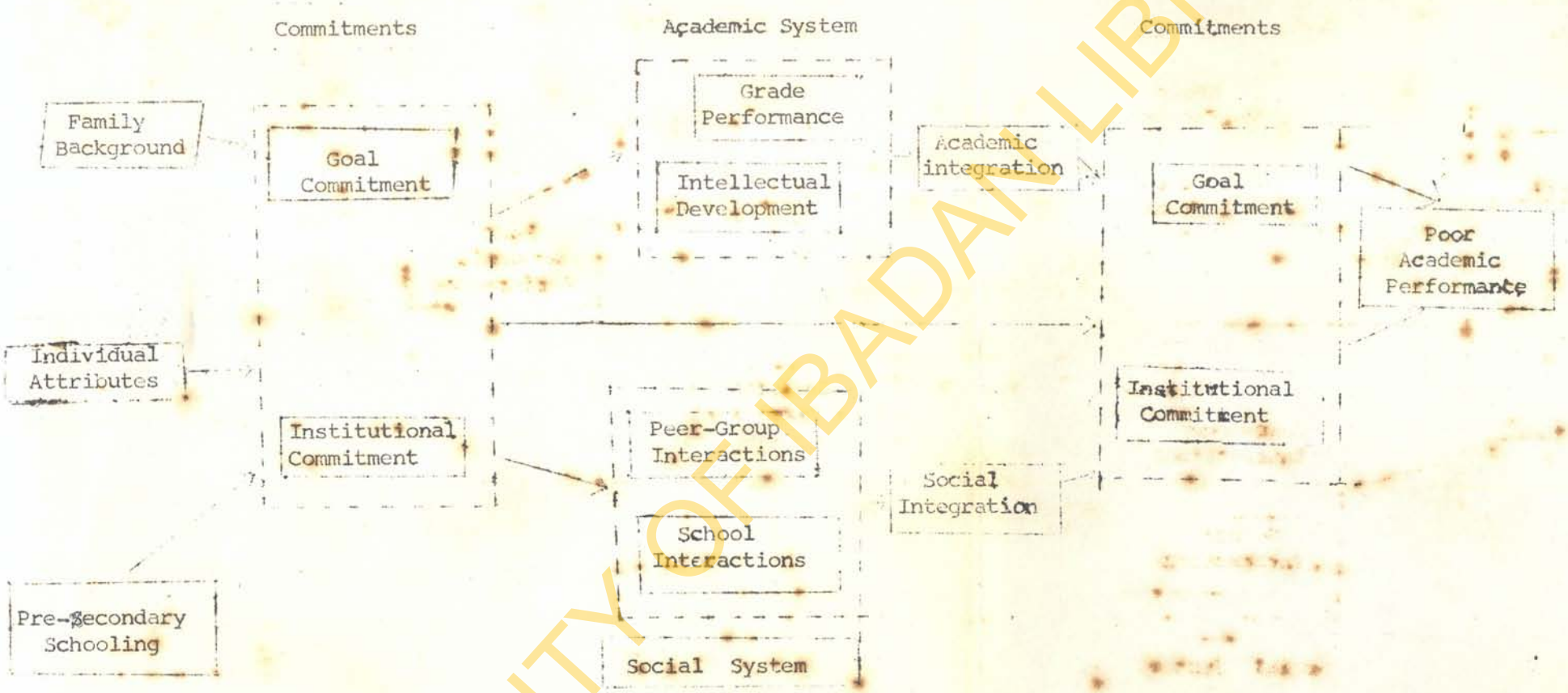

Figure 1.

In the final analysis, it is the interplay between the individual's commitments to the goal of school completion and his commitment to the institution that determines whether or not the individual performs poorly. Presumably either low goal commitment or low institutional commitment can lead to poor academic performance. Largely, The result of the pupils experience in the academic domain may lead to low performance.

Intellectual Factors As Predictors of Academic Performance

Before turning to the literature on the relationship between intellectual ability and academic performance, one needs, first to discuss the meaning of intelligence. The issues surrounding this question are quite complex and have been subject to controversy for a long time. It would require a very extended treatment to explore them adequately. For this, reason, a summary of the few of the main points shall only be done.

Most people would agree that intelligence and ability tests measure dimensions of problem-solving capacity. However, there is much less agreement regarding the sourdes of this capacity. Theoretical positions on this topic can be summarised under three headings:- First is the position that the intelligence test score

is an index of inherited ability; second is the environmentalist view that intelligence is largely a product of cultural factors, and finally, there is the opinion that intelligence level is determined by the interaction of hereditary and environmental factors. The last position now has the support of most social scientists, although this orientation includes two factions, one maintaining that environment is relatively more important and the other, that hereditary is more significant.

While the question is not fully resolved at present, it is clear that inherited ability is only one factor determining an intelligence test score. The various factors that may be influential have been described by Goslin[1].

> "A person's test score reflects a number of different factors .... The major variables are the individuals inherited potential both in terms of (1) general intelligence and (2) specific capacities for training plus the environment in which the organism has developed. With the general category of environmental influences are the effects of (3) the individual's cultural background (4) his formal training experience (school and the like) (5) his experiences with similar tests and (6) his general health".

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1. Goslin, D.: The search for Ability: Standardised testing in social Perspective. Russel Sage Foundation; New York 1963 151 - 152.

Whatever may be the relative importance of these factors in determining ability scores, success in school requires, in part certain cognitive skills. Moreover, these skills are measured, to a significant degree by intelligence tests. For this reason, these tests are moderately successful in predicting academic performance.

Studies that use ability measures to predict academic performance exhibit considerable variation. A major respect in which studies vary, is in their concern with global as against multidimensional prediction. This distinction is applicable to the criteria of academic performance as well as to the predictors. By global predictors or criteria what is referred to, is the use of a single, overall measure of ability and/or academic performance; while multi-dimensional predictors or criteria refer to the use of a number of specific dimensions of ability and/or performance.

Another kind of variation in the research involves sex composition of study samples. Some studies use all male samples; some use all females; others are mixed. Within the last group, some control this factor by reporting findings separately for each sex and others do not.

The research shows that the best predictions are obtained from multiple correlations in which a battery of intellective variables is used to predict the overall grade-point average. Studies using a global ability measure to predict overall school performance obtain somewhat lower correlation. In both types of studies, the single best predictor of performance at the post secondary school level is the secondary school academic record. However, this is due in part to the fact that secondary school grades are determined by many factors in addition to measured intellectual ability. The results of studies using differential prediction approach are not consistent primarily because much of the research is not comparable.

Of all educational levels, the highest correlations are obtained for the secondary school level; the post secondary school level ranks next, and the graduate level is lowest. Data for elementary school pupils are too scarce to allow a meaningful generalisation. The greater association between ability and performance in secondary school as compared with other levels is probably the result of the wider ability distribution at the level.

Cronbach[1] reported one study in which correlations between intelligence and grades were 0.55. Travers[2] found that correlations between intelligence and grades ran between 0.50 and 0.75 at the primary school levels. Gough[3] obtained correlations of from 0.62 to 0.80 with three samples of secondary school seniors Carter[4] found correlations of about 0.60 for three samples.

These studies suggest that for the post-secondary school level, ability and grades are correlated at about 0.60. This is somewhat higher than the findings for the post secondary school level where the average correlation is about 0.50. In all probability this difference is due primarily to the wider range of ability at the secondary school level. At the post secondary

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1. Cronbach, L. J.: Essentials of Psychological Testing, Harper and Brothers, New York, 1949.

2. Travers, R. W.: "Significant research on the prediction of academic success"; The Measurement of Student Adjustment and Achievement Univ. of Michigan Press 1949.

3. Gough, H.: "What determines the academic achievement of high school students?"; Journal of Educational Research 1953 46 321 - 331.

4. Carter, H.: "Improving the prediction of school achievement by use of the California Study Methods Survey"; Educational Administration and Supervision 1959 45 255 - 260

school level, admission procedures tend to eliminate those of low ability. As the ability ranges become narrower, correlations with performance are likely to decrease.

While many studies do not present data separately for males and females those that do find that correlations between ability and performance are higher for females. This finding holds mainly for the secondary school and post secondary school levels. At other levels the data are too few to allow on assessment of sex difference.

Some of the issues described here are pertinent to this study. In the first place insufficient research has been done in this area in this country; and because of this, findings on these levels are less definite. Second, the failure of many studies to analyse data separately for males and females hinders comparability among investigations. More research, therefore is needed in which sex differences are assessed and in which the reasons for these differences are examined.

Non-intellective Factors As Predictors of Academic Performance

Although ability measures are presently the best single type of predictor, they account for less than half of the variations in academic performance. Thus, one is led to a consideration of non-intellective factors. In this connection many investigators study academic performance by focusing upon personality characteristics as explanatory variables. The review is organised around a listing of specific personality variables. In the literature these are usually selected through common sense or a hunch that they might be related to academic performance rather than on the basis of a systematic personality theory.

Some variables seem to refer to motivational stages; these include anxiety, achievement motivation, level of interest in different content areas, and the like. A second type involves what might be termed personality "style". Illustrative factors are factors such as degree of independence, impulse control and introversion. A third factor, which involves the cognitive level, is the self-concept. Still, other factors, such as measures of study habits, seem to point more directly to the behavioural level. Finally some studies focus upon manifestation of pathology to

account for achievement. Examples are inventories of adjustment, such as "Minnesota Multiphasic Personality Inventory" and clinical instruments such as "Rorschach". Because the emphases in the literature are so eclectic, it is difficult to organise this review in terms of a systematic classification of personality factors. In fact to do so would create a misleading sense of orderliness in the literature.

Two basic methods of analysis are used in the studies of personality variables. First, the correlational method is used to assess the degree of relationship between the personality factor and academic performance. In studies using this method, ability is controlled either by means of partial correlational analysis or by multiple correlation in which the contribution of a personality variable to a battery of intellective factors is assessed. By the second technique, performance is studied by comparing groups of high and low achievers and assessing possible personality differences between such groups. Most of the studies surveyed assess the relationship between a single personality variable and academic performance.

Measurement of Academic Performance

The value of any measurement of academic performance must be judged ultimately in terms of the extent to which the measurement reveals information leading to a more intelligent prediction or control of the behaviour of students. Commonly, however, teachers neither apply this criterion directly to their instruments nor to their measuring acitivity. Instead, in measuring academic performance, they either consciously or unconsciously accept a chain of assumptions which stem from and presumably, may be justified either logically or experimentally, as supporting this ultimate purpose. The soundness of academic performance measurement and its usefulness to education is, therefore, contigent on the validity of a set of assumptions which are implicit in testing These are:-

(1) Current measurement of academic performance assumes that, the value of a learning experience is indicated by increased ability (skill or knowledge) to cope with some situations or class situations.

(2) Current measurement of academic performance assumes that the value of a learning experience is indicated by growth in those directions toward which the learning (or teaching) activities are specifically pointed.

It seems fairly obvious that this assumption does underlie the measurement of academic performance. Typically the teachers test the value of drill in spelling by measuring the indrease in ability to spell, the value of instruction in health by measuring the increase in knowledge and understanding relating to matters of healthful living, the value of a method of science instruction by measuring the increased ability to apply student's growth and mark him on the achievement of the specific objectives which are set up for the course.

(3) Current measurement of academic performance assumes that the value of a learning experience may be inferred from measures of the outcomes evident at some particular moment after learning, typically at the conclusion of a learning experience. The test-teach-test formula describes the accepted procedure for evaluating the outcomes of learning. In practical classroom situations and in educational experimentation, we test the value of method and the growth of students in such terms. Progress is assumed to be measured by noting the difference between initial and terminal test scores. Furthermore, in cases where there has been no previous formal training, the first testing is commonly

dispensed with, and the terminal test score becomes the measure of learning.

(4) Current measurement of academic performance, assumes that only sound interpretations of measures of achievement is through comparison with norms of some sort. Educational measurement, as it has developed, is a "normative" science; that is, it attempts to develop norms of performance for groups of known (and described) status from which one may by comparison interpret measures of other groups or individuals. In teacher testing, the emphasis, as the testing experts would have it, certainly is in this direction.

Ohuche and Akeju[1] identified two principal methods of measuring academic performance in Africa, namely: (a) teacher-made achievement tests and (b) standardised tests.

(a) Teacher-made achievement tests.

Teacher-made achievement tests are frequently the major basis for evaluating the pupils' progress in school. Teachers have an obligation to provide their pupils with the best instructions possible. This implies that they must have some procedures whereby they can reliably and validly evaluate how effectively their students have been taught. The classroom achievement test is one such tool.

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1. Ohuche, R. & Akeju, S.: Testing and Evaluation in Education African Educational Resources, Lagos, 1977.

Any test that measures the attainments or accomplishments of an individual after a period of training or learning is called an achievement test. One would have great difficulty in conceptualising an educational system where the student is not exposed to teacher-made tests. Although the specific purposes of the tests and the intended use of the results may vary from one school to another or from one teacher to another, it is essential that we recognise the value that test results can play in the life of the pupil, parent, teacher, counsellor and other educators.

(b) Standardised Tests.

A test designed to provide a systematic sample of individual performance administered according to prescribed directions scored in conformance with definite rules, and interpreted in reference to certain normative information. Some would further restrict the usage of the term "standardised" to those tests for which the items have been chosen on the basis of experimental evaluation and for which data on reliability and validity are provided. The term "standardised" does not connote that the test necessarily measures what should be taught or at what level pupils should be achieving.

Many standardised tests have been used in predicting achievement

tests in Nigeria by scholars like Yoloye[1,2], Obemeata[3], Cooper[4], Olatunde and Bajah[5]. Yet, very few studies have recorded the predictive validity of teacher-made achievement tests. Bakare[6] employed two indices of academic performance namely, the grade-point average and specifically devised academic tasks.

(i) The grade-point average (GPA)

Several studies have shown that high school grade-point average is a good, perhaps the best predictor of success in college.

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1. Yoloye, E.: The Predictive validity of Large-Thorndike intelligence tests for achievement in Nigerian grammar schools" West African Journal of Educational and Vocational Measurement 1978 1

2. Yoloye, E.: The Performance of Bilingual Nigerian Students on Verbal and Non-Verbal Test of Intelligence. Unpublished Ph.D. Thesis. New York. Columbia University 1965.

3. Obemeata, J.: Some Problems of Intelligence testing in Nigeria Unpublished, M.A. Dissertation, University of London 1970.

4. Cooper, W.: "Usability of American Tests with African Students" West African Journal of Education 1961 5

5. Olatunde, O. and Bajah, T. "Predictive validity of Nurse Examination in The University College Hospital"; Unpublished Paper, 1976.

6. Bakare, C. G. M. Phenomenal Self Concept, Anxiety and Academic Performance; Unpublished Ph.D. Thesis; Columbia University 1969.

Scannell[1] found correlations of 0.67 between high school GPA and freshman college GPA and 0.59 between high school GPA and four-year college GPA. This means that college success can be partially predicted from knowledge of secondary school achievement as reflected in secondary school grades. Secondary school GPA in Scannell's study, accounted for approximately 35 percent of the variance of four-year college grades.

Methods of calculating the GPA varied from school to school. In conducting his study, Bakare[2] obtained the GPA for each subject, by simply getting the average of all tests and examinations during the three months nursing training.

(b) Specifically devised Academic Tasks.

This index of academic performance is obtained from scores on any set of academic tasks. In a study by Akinboye[3] two tests were designed to measure academic performance. These were (1) a reading passage, at the end of which objective question items were asked, was given before and after the experimental manipulation to measure change in academic performance in reading.

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1. Scannell, D. P. 1960 Op. Cit.
2. Bakare, C. G. M. 1969 Op. Cit.
3. Akinboye, J. O. 1974 Op. Cit.

(ii) A test which accompanied a specifically prepared set of Mathematics programmed instruction was administered before and after the experimental sessions as a measure of academic performance in Mathematics.

Academic attainment surely implies that pupils have been assessed in terms of their performance on the courses they have actually taken in school. Similarly objective tests of English and Mathematics provide only two components of school attainment. Even in primary schools, many other mental skills are important e.g. there is an increasing emphasis on individual expression in, social studies, art and science. It seems improbable that, tests in these two components of school attaintment will adequately describe success in such different forms of intellectual activity. Again standardised tests, used on their own, may not correspond at all closely to the teacher's view of school attainment. With a large number of subjects included in the curriculum perhaps, the most valid measure of overall achievement will be a sum or an average of marks taken from the whole range of subjects.

Many of the studies reviewed so far, have discussed a number of questions regarding the definition and measurement of academic performance. What should be pointed out from these studies is that

there is much uncontrolled variation in performance criteria. Research is hindered because the grades of different pupils are often deficiencies in the operational definitions of the performance criteria. The result is that performance groups (high and low achievers) are not equated for intellectual ability. The failure of some of the studies to examine performance within ability levels may sometimes mask the operation of predictive factors that are related to performance in different ways depending on the ability level.

It is evident, that the improvement of classroom performance has long been of interest to teachers and researchers. A plethora of texts, all with suggestions for improving academic performance are available to teachers and counsellors. Researchers have begun to develop a tested technology for improving classroom performance. This technology often involves the use of certain contingencies applied by the teacher. However, at least three obstacles to the implementation of some of these procedures have been noted: (a) they may require extensive data collection (b) they may require extensive teacher time or training or (c) they may require tailoring for

individual students. Already overworked teachers may be reluctant to employ such procedures that demand additional efforts from them. This current work is therefore to extend the use of model-reinforcement and desensitization group counselling strategies for study habits by getting subjects explicitly reinforced for their self-monitoring of study activities.

Studies on Group Counselling Techniques in Relation to Academic Performance

Many school administrators and teachers expect the school counselling services to provide a service which results in improved academic performance on the part of its clients. The appropriateness of professional counselling for pupils with academic problems is further implied by investigations suggesting that poor academic performance is related to emotional immaturity, Blackham[1], Morgan[2], Powell and Jourard[3]; impulsivity and negativism toward authority,

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1. Blackham, G.: "A clinical study of the personality structures of pupils' Underachievement and overachievement" Dissertation Abstract 1955

2. Morgan, H.: "Psychometric comparison of achieving and non-achieving college students of high ability" Journal of Consulting Psychology 1952, 16, 292 - 298.

3. Powell, W. & Jourard, S.: "Some objective evidence of immaturity in underachieving college students", Journal of Counselling Psychology, 1963 10 276 - 282.

Hopkins et al[1] Horall[2], Shawand Brawn[3] Shaw and Grubb[4] as well as other more obvious factors such as limited reading skills, poor study habits and poor curriculum choice.

While these considerations suggest that professional counselling may be one of the preferred methods for correcting poor academic performance, the research results, evaluating the effects of counselling on academic performance are contradictory and ambiguous because of high frequency of positive and negative findings. Now, is the time to ask a more refined question of the research literature. Rather than ask, "does counselling contribute to improve academic performance?" It is time to ask, "what dimensions of counselling treatment programmes are associated with improved academic performance?" In brief, what seems to work?

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1. Hopkins, J. et al: "Some non-intellectual correlates of success and failure among University students" British Journal of Educational Psychology 1950 28 25 - 36

2. Horrall, B. "Academic Performance and Personality Adjustment of highly intelligent college students" Genetic Psychology Monograph, 1957, 55, 3 - 83.

3. Shaw, M. & Brown, D. "Scholastic Underachievement of bright college students" Personnel and Guidance Journal 1957 36 195 - 199.

4. Shaw, M. & Grubb, J. "hostility and able high school underachievers;" Journal of Counselling Psychology 1958 5 263 - 266

To answer this, simply means that emphasis would be shifted on a review of research literature in which a counselling treatment was employed in an attempt to improve measurably and significantly the academic performance of poor academic achievers. Such a review would provide a basis for identifying dimensions of counselling treatment programmes that are associated in some consistent fashion with improved academic performance.

In selecting this literature, it was felt that it would be better to be inclusive rather than exclusive. For this reason, the literature dealing with methods for improving the academic performance of low ability students was also included. This resulted in the identification of twenty three outcome studies, all of which used student GPA as a dependent variable and a specific treatment programme intended to improve student academic performance as the independent variable.

A survey of literature indicates that a broad range of treatment programmes designed to aid poor academic performance and low-ability students are represented in the various independent variable investigated. The following treatement programmes were studied.

(a) individual counselling

(b) group counselling

(c) counselling in conjuction with remedial instructions

(d) study skill courses and

(e) guidance programmes in conjuction with study skills courses.

Even though, over one-half of these investigations were successful in improving the academic performance of its clients, the contradictory findings among different investigations studying similar variables make it difficult to isolate dimensions of the counselling treatment programmes contributing to success. To help identify more specific factors that may account for the success of some programmes, replication of such therapeutic programmes, is necessary.

These findings of the studies reviewed so far, coupled with the recommendations for further research by the authors of previously cited studies moved this researcher to test the differential efficacy of model-reinforcement and desensitization group counselling strategies in fostering academic performance and academic involvement, as well as reduce fear associated with study.

Studies on Model-Reinforcement Group Counselling In Relation to Academic Performance

Numerous authors, Bernard and Fullmer[1]; Gottingham[2]; Faust[3]; Patonillet[4] and Randolph[5] have advocated increasing attention to the consultant function of model-reinforcement group counselling. Also, researchers and practitioners have expressed, an increasing interest in the application of behaviour modification principles in the school setting via consultant function. A behaviour modification approach to classroom behaviour management that is appropriate for pupil personnel specialists (such as counsellors and psychologists) who desire to serve as consultants to teachers has been described by Randolf[6]

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1. Bernard, H. & Fullmer, D.: The School Counsellor - Consultant, Houghton - Mifflin, Boston, 1972.
2. Cottingham, H.: "The status of Guidance in the Elementary School" in Adams, J. (ed.) Counselling and Guidance.: "A Summary View, Macmillan, New York, 1965, 340 - 349.
3. Faust, V.: The Counsellor - Consultant in the Elementary School Houghton - Mifflin, Boston, MA, 1968.
4. Patouillet, R.: "Organizing for Guidance in the elementary school" Teachers College Record 1957 58
5. Randolph, D. L., "Behavioural Consultation as a means of improving the quality of a counselling programme" The school Counsellor 1972, 20 30 - 35.
6. Randolph, D. L.: Ibid.

A number of researches, for example, Leckerman and Lynch[1] and Warner[2] have interpreted their findings as demonstrating the effectiveness of model-reinforcement approach. Although model-reinforcement groups and classroom behaviour management via behavioural consultation have been separately researched by a number of authors, it seems as though no investigations have been addressed to examining their comparative and combined effects. The need for the present investigation appears to have been succinctly summarized by Bandura[3] who stated:-

> ".... by careful selection of both the real-life situations in which the client enacts new modes of behaviour and the manner in which they are expressed, the likely consequences of modeled behaviour can be controlled to a considerable extent rather than left to fortuitious circumstances".

Traditional counselling techniques with students have emphasized either a didactic approach or client-centred approach with broad goals such as improving self understanding, self-acceptance and interpersonal relation. Although such studies in group

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1. Leckerman, L. & Lynch, D.: "The effects of Model-reinforcement on emotionally disturbed adolescent boys" Journal of Counselling Psychology 1970, 26 545-547

2. Warner, R.: "Model-reinforcement group counselling with elementary school children" Elementary School Guidance and Counselling 1971 5 248-255

3. Bandura, A.: "Principles of Behaviour Modification; Holt Rinehart; and Winston, New York, 1969.

counselling at the secondary level have demonstrated moderate success, the lack of objectively defined criteria for change, the lack of standardised procedures in counselling and the vague definition of independent and dependent variables make such research difficult to replicate. Little research based on model-reinforcement paradigms have been done in the area of secondary school counselling, particularly in group counselling in this country. Since the secondary school is a social environment, there is a need to understand the parameters of reinforcement in a group situation. Therefore, it seems particularly important to clarify and specify the importance and results of a model-reinforcement theory approach and the conditions under which such techniques are appropriate in counselling secondary school students.

According to Havighurst and Neugarten[1] and Berdie[2] information and encouragement provided by the secondary school counsellor can be the single most crucial factor in influencing capable students to continue in post-secondary school education. Studies have shown that reinforcement and social

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1. Hayighurst, R. and Neugarten, B.: Society and Education Boston: Allyn and Bacon. 1962.

2. Berdie, R.: After High School - What? Minneapolis: The University of Minnesota Press 1954.

modeling reinforcement counselling procedures effectively help students learn how to collect and use information before making important decision; Krumboltz and Schroeder[1] Krumboltz and Thoresen[2] Thoresen, Krumboltz and Varenhort[3].

While the findings cited above are not clear cut, the general trend suggests that combinations of study attitudes and study habits items, within the framework of model-reinforcement, group counselling will be useful in improving academic performance. In the present investigation therefore, a somewhat more systematic attempt, is to be made to assess the effects of reinforcement in increasing achievement of poor academic performancers.

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1. Krumboltz, J. and Schroeder, W.: "Promoting Career exploration through reinforcement" Personnel and Guidance Journal 1965 44 19 - 25

2. Krumboltz, J. and Thoresen, C.: "The effect of behavioural counselling in group and individual, settings on information - seeking behaviour" Journal of Counselling Psychology 1964 11 324 - 333

3. Thoresen, C.; Krumboltz, J.; and Varenhorst: "The sex factor in model-reinforcement counselling" American Psychologist 1965 20 494

Studies on Desensitization Group Counselling in Relation to Academic Performance

In his 1958 book Wolpe [1] enuciates principles and procedures which will here be taken as paradigmatic for behaviour therapy. With stark simplicity he states - "since neurotic behaviour demonstrably originates in learning, it is only to be expected that its elimination will be a matter of unlearning." Therefore, rational therapy according to Wolpe will involve the elimination of these "unadaptive conditioned anxiety reactions", either by means of extinction or by counter-conditioning procedures which Wolpe lumps together under the rubric of desensitization.

It has been consistently demonstrated that systematic desensitization is an effective trreatment for test anxiety. The evidence regarding the effects of systematic desensitization of test anxiety on academic achievement is less clear. Improved grades were found in some studies that compared desensitization to a no-treatment control group; Allen[2] Donner and Gnerney[3] Johnson and Sechrest[4]

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1. Wolpe, J.: Psychotherapy By Reciprocal Inhibition, Stanford (Calif: Stanford University Press 1958.

2. Allen, G.: "Effectiveness of Study Counselling and Desensitization in alleviating test anxiety in college students "Journal of Abnormal Psychology 1971, 77 282 - 289.

3. Donner, Land Gnerney, B.: "Automated group desensitization for test anxiety" Behav. Research and Therapy 1969 7 1 - 13.

4. Johnson, S. & Sechrest, L.: "Comparison of desensitization and progressive relaxation in treating text Anxiety "Journal of Consulting and Clinical Psychology 1968 32 280 - 286.

Katahn, et al[1], McManns[2] Mitchell and Ng[3] but no differences were found in some other studies; Aponte and Aponte[4] Cohen[5] Cornish and Dilley[6] Doctor et al[7] Emery and Krumboltz[8] Lomont and Sherman[9].

A closer look at the first group of studies in which improvement in grades was found revealed that four of these, employed some form of counselling in addition to or in combination with desensitization;

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1. Katahn, M. et al: Group Counselling and behaviour therapy with test anxious college students, Journal of Counselling Psychology 1966 30 544 - 549

2. McManns, M.: "Group desensitization of test anxiety", Behaviour, Research and Therapy 1971 9 51 - 56

3. Mitchell, K. & Ng., K. "Effects of group counselling and behaviour therapy on the academic achievement of test anxious student", Journal of Counselling Psychology 1972, 19 491 - 492.

4. Aponte, J. & Aponte, C. "Group programmed systematic desensitization without the simultaneous presentation of aversive scenes with relaxation training" Behaviour, Res. & Therapy 1971 9 337 - 346

5. Cohen, R.: "The effects of group interaction and progressive hierarchy presentation in desensitization of test anxiety" Behaviour, Res. and Therapy 1969, 9 15 - 26

6. Cornish, R. and Dilley, J.: "Comparison of three methods of reducing test anxiety. "Journal of Counselling Psychology 1973 20 499 - 503.

7. Doctor, et al,: "Group Counselling Versus behaviour therapy in treatment of college underachievers "Behaviour, Resh. and Therapy 1970 8 87 - 90

8. Emery, J. & Krumboltz, J. "Standard Versus individualized hierarchies in desensitization to reduce test anxiety" Journal Counselling Psychology 1967 14 204 - 209.

9. Lomont, J. and Sherman, L. "Group systematic desensitization and group insight therapies for test anxiety", Behaviour, Resh. & Therapy 1971 2 511 - 518

Allen[1] Katahn et al[2]; McManus[3]; Mitchell and Ng.[4].

It is interesting to note that in the second group of studies that failed to find any improvement in grades, the treatment consisted of desensitization only, unagumented by other treatment techniques. Only two studies that used desensitization without study - or test - related counselling found any improvement in grades; Donner and Gnerney[5], Johnson and Sechrest[6]. Paradoxically, these were the only two studies in which no reduction in test anxiety was found as a function of desensitization. Furthermore, there was considerable subject attrition in both studies and Johnson and Sechrest used non-equivalent controls. Thus in the research literature the evidence of the effects of desensitization on grades is equivocal.

While desensitization of test anxiety in combination with study, and test - related counselling appears to facilitate academic achievements, it is not clear whether desensitization or study skills counselling is the more important component. The major goal of the present study is therefore to compare the differential effectiveness of group desensitization and model-

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1. Allen, G. 1971 Op Cit.
2. Katahn, M. et al 1966 Op Cit.
3. McManus, M. 1971 Op Cit.
4. Mitchell, K. and Ng. K. 1972 Op Cit.
5. Donner, L. and Gnerney, B. 1969 Op. Cit.
6. Johnson, S. and Sechrest, L. 1968 Op Cit.

reinforcement group counselling in forstering academic performance.

HYPOTHESES FOR THE STUDY

This study seeks to test the following null hypotheses:-

(1) There will be no significant difference in the academic performance of subjects in the experimental group and those subjects in the control group

(2) There will be no significant difference in the degree of academic involvement of subjects in the experimental group and those in the control group.

(3) There will be no significant difference in the academic performance of subjects treated under model-reinforcement group counselling and those subjects treated under desensitization group counselling.

(4) There will be no significant difference in the degree of academic involvement of subjects treated under model-reinforcement group counselling and those subjects treated under desensitization group counselling.

(5) There will be no significant difference in the degree of academic involvement of those subjects treated in general groups, triads and dyads.

All hypotheses to be tested at .05 level.

SIGNIFICANCE OF THE STUDY

A knowledge of the effects of group counselling on academic performance, obviously has potential value from a number of view points. One can expect on a very general level, that teachers and counsellors would benefit from an increased understanding of the dynamics of group counselling strategy. From this study, it is hoped that the findings will equip teachers, educational psychologists and guidance counsellors with some of the therapeutic packages that could assist students in increasing the degree of their academic involvement, thereby improving their academic performance.

CHAPTER TWO

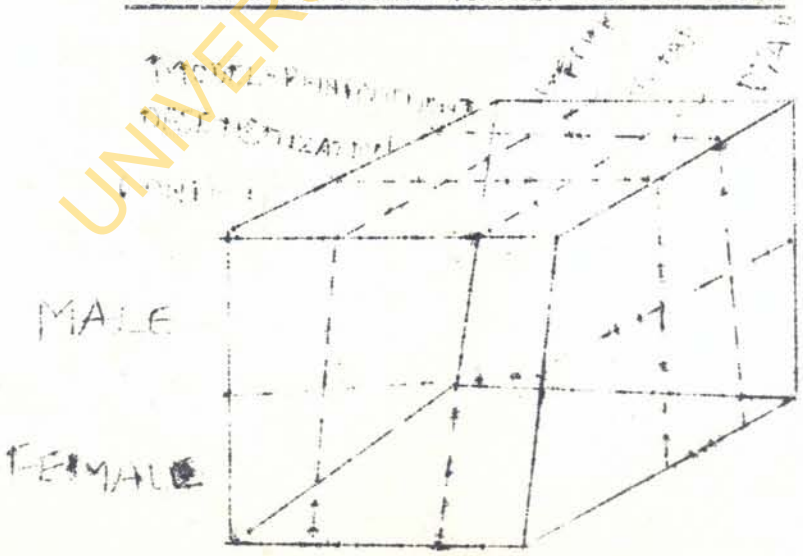
METHODOLOGY

DESIGN

The study is a 3x3x2 factorial design consisting of three levels of treatment modality - model-reinforcement group counselling, systematic desensitization group counselling and the control, used on three forms of group dynamics — general groups, triadic group and dyadic group, arranged on the basis of sex — male and female (Figure 2). The design, theoretically gave rise to eighteen cells, however, with a collapsible control, there were twelve treatment groups and four control groups to work with.

FIGURE 2

EXPERIMENTAL DESIGN (3x3x2) FOR THE STUDY



SAMPLE

Subjects = To have a wide and representative sample, the school records from classes one to four students from two co-educational secondary schools of grade one status, in Ijebu-Ode a town in Ogun State of Nigeria, were examined. The total percentage marks in the last sessional examinations were converted into standard scores. The standard scores were later arranged in a descending order; the top students up to 0.82 standard score were taken as high achievers and bottom students with less than - 0.82 standard scores were considered as low achievers. From this group of low achievers, the final sample thus arrived at, for convenience of the study consisted of randomly selected 72 male and 72 female class four students. Their age ranged from 13 to 17 years with a mean and standard deviation of 14.90 and 1.92 years respectively.

INSTRUMENTS

The measuring instruments used in conducting the study are:-

(1) Self Appraisal of Academic Ability Scale.

(2) English Achievement Test

(3) Mathematics Achievement Test

(4) Progressive Matrices Test.

This study was conducted in two parts. The first part consisted a preliminary validation and standardization of the instruments for measuring the degree of academic involvement and teacher made achievement tests. The second part formed the major study.

The Pilot Study

The preliminary study attempted to explore some of those personality and environmental factors influencing academic performance and thus used such information to standardize and validate the instrument for obtaining the degree of academic involvment, the academic image and the environmental press on achieving and low - achieving students. The instrument is called "the Self Appraisal of Academic Ability Scale" (SAAAS).

The long search for correlates of the unaccounted for variance in academic performance, has more recently led to consideration of the interaction between students and teachers as one source of such variance. Teacher's comments in report cards are one index of student - teacher interaction which may be related to variance in academic performance not accounted for by ability tests alone. One other factor in academic performance deserves attention. The attitude which the individual has toward himself as a student and toward

education as an activity is important.

Strang et al[1] indicate that they find:-

> "Many poor academic performers are held back by fear ..... A vague anxiety may give rise to feelings of inadequacy, help lessness and hopelessness. Their idea of themselves is permeated with lack of self confidence and self esteem."

Fernald[2] has emphasised the need for self-confidence and feelings of success as a necessary component of academic improvement and involvement.

Changes of attitude in students who have undergone educational group counselling session are detectable. Students indicate effective changes through statements as:-

> "I never cared much for reading before, now I find that is stimulating"
> "I never read to prepare for a t st or examination but now I know the importance of preparation for examination."
> "The counselling session really helped me, I'm now getting much more out of school".

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1. Strang, R. et al.: Problems in the Improvement of Reading New York; McGraw Hill 1955.

2. Fernald, G.: Remedial Techniques in Basic School Subjects; New York, McGraw Hill 1943.

Such statements as these are gratifying to the counsellor and suggest a favourable change in attitude toward educational endeavour; but are they valid measures of change in feeling? Are the changes significant? In which areas specifically do students change their attitudes as a consequence of counselling?

This preliminary study attempts to answer these questions through an explanatory study of those personality traits of passing and failing students; and also using such information to develop, standardize and validate a new instrument in obtaining the degree of academic involvement of achieving and non-achieving students. The instrument, of course, will be an inventory to measure certain non-intellectual factors associated with academic success.

During the pilot study, an open ended questionnaire was administered to one hundred class four students of a co-educational secondary school, in Abeokuta, Ogun State of Nigeria, after they were handed back a graded test in Mathematics and English. They were asked to list all the reasons responsible for their grades. Over three hundred statements were received. The researcher then prepared a frequency distribution of the

distinct statements and edited items suggested by at least sixty students (i.e. having at least 33% frequency). These reasons were analysed to have centred around three main factors namely:-

(i) persistence

(ii) independence

(iii) interest (i.e. attitude to school)

A total of thirty statements were thus classified into three categories of personality traits - persistence, independence, and interest. Each of these categories consists of a set of ten statements relating to each of the personality trait used in the final scale called "Self Appraisal of Academic Ability Scale" (SAAAS).

The SAAAS consists of two parts (A) and (B). Part "A" deals with the respondents' particulars (name, sex, class, school and age). Part "B" is a 30 - item questionnaire. What the respondent does, is simply to indicate how far he thinks, each statement applies to himself by putting a circle round the number in front of each statement (Appendix A). The final score for each trait will now be the algebraic total of all the ten statements.

The Psychometric Properties of SAAAS

The 30 - item questionnaire had a test retest reliability of 0.78 within one month apart. This, apparently shows, that the students' responses were tolerably stable over time.

The nature of the scale makes it impossible to arrive at a definite conclusion about its validity. Validity, Mooney[1] said must be determined in terms of the particular purpose and the particular situation. While it is probably true that conventional measures of validity are difficult to obtain for an instrument of this kind, it appears nevertheless that the SAAAS should at least satisfy three minimum requirements:-

(1) students recognise their own personality traits,

(2) students find these traits listed on the scale

(3) students are willing to record them.

This study assumes that if these three conditions are met, it should be possible for students to assess themselves within the frame work of their academic ability. Hence for the validation of this instrument the following assumption was made. The low achieving students would have low academic assessment of themselves than achieving students.

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1. Mooney, R. L.: "Exploratory research on students' problems" Journal of Educational Research, 1948, 37 218 - 224.

Validation of SAAAS

In validating the SAAAS, the subjects used, consisted of 407 secondary students in Classes four and five of a - co-educational institution in Abeokuta, Ogun State of Nigeria. The school which they attended is one of the largest co-educational secondary school in Abeokuta municipality. The city population is highly heterogeneous in terms of tribe, religion, and local government origins, and this heterogeneity is reflected in the school population.

Approximately, one - fourth of the school pupulation was sampled. The questionnaires were administered by the researcher during the school break time. This period was chosen for the administration of the questionnaires, because that is the only time, students are free within the school period. In this way, it was possible to secure a reasonably representative sample while retaining the administrative convenience of the school.

In questionnaire of this kind the problem of a student's honesty is a serious one, particularly when there is a chance, as here, that somebody else may check his responses. As an example, Olson[1] using the "Woodworth - Mathews Personal

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1. Olson, W.: "The waiver of signatures in personal data reports". Journal of Applied Psychology 1936 20 442 - 450.

Data Sheet" found that more symptoms were reported when the questionnare was left unsigned. Therefore, in this pilot study, a supplementary instruction sheet was attached to the questionnaire explaining that the study was being conducted to gather information on how students perceive their academic abilities and instructing them not to put their names on the questionnaire. They were, however, to put their names on the instruction sheets and this handed in for attendance record. A system of discrete pinholes picked through both the instruction sheet and the questionnaire made it possible to later, match the two and identify the questionnaire.

Information on the relevant variables were abstracted from the students' records in the school. Only two of these variables require further definition. These are:

(1) low achieving students and

(2) achieving students.

The measurement of school achievement itself is a difficult problem, since standardized tests of attainment are not available in the country. Consequently, end-of-session examination results for each of the first three years in the secondary school were used. The low achieving students are those in lowest or fourth

quartile of the class with a scholastic average of 25% or less. On the other hand, the achieving students are those in upper or second quartile of the class with a scholastic average of 75% and above.

The final score for each trait was the algebraic total of all the ten statements in each of the three categories i.e. persistence, independence and interest. The mean socre was computed for each of the variables and personality traits which was relevant with respect to assumption earlier stated. The assumption was tested by computing the t-test of the difference between the means of low-achieving and achieving students:

(i) Persistence - t value is 2.14 .05
Achieving ($\bar{x}$ = 3.3 SD = .05)
Low Achieving ($\bar{x}$ = 2.6, SD = .04)

(ii) Independence - t value is 3.39 .05
Achieving ($\bar{x}$ = 3.5, SD = 0.7)
Low-Achieving ($\bar{x}$ = 2.4, SD = 0.4)

(iii) Interest - t value is 2.11 .05
Achieving ($\bar{x}$ = 3.5, SD = 0.8)
Low - Achieving ($\bar{x}$ = 2.8, SD = .03)

The assumption for the validation of the SAAAS was confirmed, since the differences between these means were

significant at 0.5 level of confidence. It is therefore concluded that these findings present prima facie evidence for the construct validity of the scale.

CONSTRUCTION AND VALIDATION OF ACHIEVEMENT TESTS IN ENGLISH AND MATHEMATICS

Academic achievement is measured in a variety of ways. Some of the differences in findings may be attributable to these variations. In some studies, achievement is measured by objective tests of English and Mathematics, in others, verbal reasoning tests are used. A few studies have reported analyses based on performance in programmed learning tasks, in which the time allowed for these tasks may be an important consideration in itself. External and/or internal examination marks are found frequently in the literature.

While all these measures may well show fairly high inter-correlations, they still represent alternative definitions of achievement, which could have rather different personality correlates. Academic achievement, surely implies that students have been assessed in terms of their performance on the courses they have actually taken in school. Thus, tests of verbal

reasoning, though correlated with academic achievement, are not direct measures of success in school. Similarly, Objective tests of English and Mathematics provide only two components of school achievement, but then, the two contribute substantially in determining the academic attainment of any student. Passes in these two subjects are needed in pursuing any course, at the post secondary school level, hence tests in the two subjects are taken as measures of academic achievement.

In standardizing the achievement tests in English and Mathematics, thirty class four students of a co-educational secondary school Abeokuta, Ogun State of Nigeria, were used in the study. Since marks in the school examinations are based on the question papers which differ from school to school, the subjective evaluation may differ from teacher to teacher; the researcher employed the use of multiple choice objective questions based on five - response type of the cognitive content of the instruction activity in Mathematics and English, to be respectively called Mathematics achievement test (MAT) and English achievement test (EAT).

The test items of MAT and EAT were developed by a team of qualified and practising teachers of Mathematics and English respectively. The questions were based on the specific instructional objectives used to teach these subjects in classes one to four in the secondary school, so as to ensure the content validity of the tests. A panel of assessers, in addition, established a face validity for these tests by simply inspecting their contents before and after the tests were taken. They made sure that the contents of the achievement tests reflected those in the West African Secondary School leaving certificate syllabus.

The procedure of standardization involved the administration of the achievement tests in English and Mathematics to the thirty class four students randomly selected for the study. Using the test-retest method of determine the reliability of the achievement tests, the same tests were administered again to the subjects, a month later, without notifying them about the repeated tests.

The subjects' marks in the tests were compiled for the two attempts. Their mean scores were computed and their

scores on the two attempts were subjected to correlational analysis to give the following results:-

(1) English Achievement Test

Male Students - $\bar{X}_1 = 61.0$; $\bar{X}_2 = 65.0$; $r = .970$; $< .05$

Female Students - $\bar{X}_1 = 70.0$; $\bar{X}_2 = 71.0$; $r = .860$; $< .05$

Mixed - $\bar{X}_1 = 64.0$; $\bar{X}_2 = 67.0$; $r = .865$; $< .05$

(2) Mathematics Achievement Test.

Male Students - $\bar{X}_1 = 62.0$; $\bar{X}_2 = 64.0$; $r = .820$; $< .05$

Female Students - $\bar{X}_1 = 64.0$; $\bar{X}_2 = 68.0$; $r = .920$; $< .05$

Mixed - $\bar{X}_1 = 63.0$; $\bar{X}_1 = 63.0$; $\bar{X}_2 = 65.0$; $r = .870$; $< .05$

The statistical package of Pearson correlation was used, and the correlation statistical significance of .05 level was chosen. The data were controlled for the sex of the subjects. That is, the results obtained for the males and females were compared to see whether or not sex contributes to the observed degree of correlations. The obtained correlation coefficients for each subject is high and significant, indicating that there is significant correlation between the performance of the subjects in the teacher made achievement tests in English and Mathematics; administered in the first week and their performance in the same tests, a month later. The reliability of the achievement tests

is therefore confirmed.

The EAT consisted of 50 multiple choice items, which were divided into three main types to be scored separately — reading comprehension, vocabulary and work knowledge, usage, inculding spelling, punctuation and rhymes (Appendix B). The MAT covered both traditional mathematics and modern mathematics. All 50 items in the test were intercorrelated and subject to principal component analysis (Appendix C). The first five components were rotated by varimax technique and two of them were found not to differentiate rather clearly between the traditional and modern types. One should therefore not regard "traditional" and "modern" as two distinct branches of Mathematics. Indeed, the correlation within the types of items were mostly positive

Progressive Matrices Test (PMT)

As studies had shown that intelligence is known to contribute substantially to academic performance, it thus follows that, for one to know the true effect of any therapeutic package, on academic performance, one needs to control for mental ability. For this reason, the use of "Raven Progressive

Matrices Test" in this study is to act as moderating variable.

Progressive Matrices Test (PMT) developed by J. C. Raven[1], in England is made up of maxtrix items presenting to the subjects many two-dimensional analogies problems of increasing complexity. These problems require analytical and intergrating operations of the kind called "insight through visual survey"; Raven, following Spearman's theory, desired to measure the ability to perceive relationships. Factorial studies of the test suggest that it is a measure largely of a "general factor" which is interpreted by Raven as "Spearman's education of relations and education of correlates".

Since its publication in 1938, the test has been very widely used in England as well as other countries with a wide variety of groups - children, adolescents and adults, both normal and abnormal. Freeman[2] holds that the test appears to be among the most promising of the non-verbal tests and according to Anastasi[3], this test is regarded by most British psychologists as the best available

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1. Raven, J. C. - Guide to Progressive Matrices: Set A, B. C, D, E H and K Lewis and Co. London 1960

2. Freeman, F. S.: Theory and Practice of Psychological Testing Holt; Rinehart and Winston Inc. 1965.

3. Anastasi, A.: Psychological Testing (3rd.). New York: Macmillan 1968. 261 - 263.

measure of "g".

In Nigeria, while some attempts were made to adapt this test, a number of researchers used it, as it is, and widely different views have been expressed by them about the validity of this test. In a preliminary study by this researcher an attempt was therefore made at estimating the validity of the PMT. The validity of the PMT has been assessed by using two criteria - (a) age and (b) school examination marks, and the reliability has been determined by spilt-half technique; using a sample of Nigerian students. The sample consisted of 100 boys and 100 girls from two different schools (Age 12 - 16 years). Students in each age group were selected randomly from the sch ol population but the schools were selected incidentally.

Means were very low compared to Raven's 50th percentile norm for British pupils but they increased with increase in age, and compared well with those obtained by other Nigerian investigators for the same ages. The correlation between PMT scores and age, and marks, were significant in all cases. That is, the validity co-efficients do speak very high of the test.

The validity of the items was determined by comparing the percentages of success on each item by two, high and low-achieving, groups (selected on the basis of marks). Most of the items made successful discrimination between the two groups. The reliability coefficients computed separately for the different ages, and also for the group as a whole, were very high varying between .95 and .89. That is, PMT has high internal consistency when applied to a Nigerian sample.

For convenience, in identifying the variables in the study, labels have been adopted and given specific meanings. The terminology implies no more that is stated in the definitions.

Academic Performance.

The term "academic performance" refers to the method of expressing a student's scholastic standing. Usually this is a grade for a course, an average for all courses expressed on a zero to one hundred or other quantitative scale. For this study, academic performance is based on the student's score in English achievement test and Mathematics achievement test.

Degree of Academic Involvement.

The total amount of rating given to those attributes, under persistence, independence and interest categories of Self

Appraisal of Academic Ability Scale.

Dyad.

A group of two clients. A dyad is the smallest number of subjects who can engage in interpersonal communication.

Triad.

A small group of three clients, engaged in interpersonal communication.

General Group

An assemblage of six clients forming a unit, talking with one another in order to achieve a mutually satisfactory understanding of each others images or beliefs or a solution to a problem.

Poor Achievers

For this study, poor achiever is defined as students in lowest or fourth quartile of the same class with a scholastic average of 25% or less.

PROCEDURE

The study was conducted on a randomly drawn sample of 72 male and 72 female students from two co-educational secondary schools.

These two schools were also randomly assigned to the two experimental treatements, thus resulting to school "A" earmarked for model-reinforcement group counselling and school "B" for desensitization group counselling.

The selection of the subjects in each of the two schools was done amongst class four, low-achieving students. At the first instance, the low achievers were assembled in a classroom where the following instructions were read to them:

> "Previous experience with reading and study skills programme has suggested that group sessions for one hour, once or twice a week can be a useful complement to the normal class periods. From now on until the end of term, groups of two to six will meet with me in order to help members perform more effective study behaviours. Attention will be focussed on
>
> -- (a) independent study behaviour
> -- (b) active intra class participation
> -- (c) active extra class participation
> -- (d) effective examination behaviour.
>
> Those of you who wish to participate must be willing to attend all six or eight sessions and to take two or three tests which will be given before and after the series of group sessions. I would like all groups to remain intact throughout the series. I shall distribute a sheet on which, I would like each of you to respond whether or not you are interested. You are not compelled to participate in the group session but it is my strong belief that you will not receive the full benefit of this total programme unless you take time for this project."

The written statement signed by subjects participating in the study went thus:-

> "I agree to participate in all the twice-a-week small group sessions that will be scheduled from now till the end of the term. I understand that these groups will concentrate on aspects of study behaviour other than speed reading; also I agree to take the tests which will be given before and after this series of sessions."

The statement above was to serve as a written "contract" between the subjects and the counsellor, as a means of ensuring commitment on their part.

The final random selection of the subjects to participate in the study came from those who signed the written "contract" in each of the experimental schools. Upon signing up for the programme, the selected subjects in each school were given the following as pretests —

1. Self Appraisal of Academic Ability Scale
2. Progressive Matrices Test
3. English Achievement Test
4. Mathematics Achievement Test

The testing situations were conducted in a condusive environment.

School "A"

72 subjects made up of 36 male and 36 female students were

randomly selected from the group of low-achieving students. 18 of the male subjects were in turn randomly assigned to the experimental groups while the remaining 18 male subjects were left as control. Similarly 18 of the female subjects were randomly assigned to the experimental groups, while the other 18 female subjects were left as control. In the experimental groups, of both male and female subjects, 6 of the subjects were to work in a general group, 6 others to work in triads, and another set of 6 subjects to work in dyads. The allocation to the various groupings was based on randomization.

School "B"

72 subjects, comprising of 36 male and 36 female students, were selected on the basis of randomization from the group of low-achieving students. 18 of the male subjects were randomly assigned to experimental groups, while the other 18 male subjects are left as control group. Like, it was done in school "A", the 18 female subjects were randomly assigned to experimental groups; while the remaining 18 female subjects stood in for the control group. In each of the experimental groups, selection of 6 subjects to work as general groups, 6 others to work in triads, and another 6 subjects to work in dyads was done randomly.

Equivalence of Groups

The subjects in both the experimental and control groups were matched on the dependent variables. Apart from the initial equivalence of the groups obtained by random selection and assignment of subjects into experimental and control groups, it was still necessary to ensure the statistical equation of the two groups, because of probable organismic variables, such as mental age, ability measures, personality measures and past education, which could not have been absolutely controlled by randomization. The use of analysis of covariance in analysing the data, was therefore, an additional method to correct for these confounding organismic variables; since analysis of covariance is a valuable, robust, tool, for improving the power of experimental designs where subjects are randomly assigned to treatments.

In order to determine whether the groups were equal at the pre-counselling stage, mean GPA, SAAS, and PMT scores were subjected to t - tests analysis. The equivalence of the groups can be observed from the sample independent t-tests performed on all pre-treatment measures, which revealed no significant differences between the groups in the two different conditions prior to beginning the therapeutic programme (Table 7). The

TABLE 7

T-Tests Of The Pre-Treatment Measures

GROUPS	N	$\bar{X}$	SD	t	Df	P
Academic Performance (GPA)						
Experimental	72	26.69	4.57	0.85	142	NS.
Control	72	26.93	6.69			
Academic Involvement (SAAAS Scores)						
Experimental	72	89.59	9.88	1.19	142	NS.
Control	72	90.26	9.36			
Variates (PMT Scores)						
Experimental	72	32.25	6.20	0.97	142	NS.
Control	72	31.82	5.89			

results of the analysis show that, for both experimental and control subjects at the pre-treatment level, there were no significant differences for the various groups, therefore the researcher assumed that subjects of both the experimental and control groups were assigned on a random basis and that the groups were initially equated on the dependent variables. The implication of this, is that any significant difference observed later is probably due to experimental treatment.

The Treatments

After the pretest measures the control subjects were informed that, there were no more openings in the treatment groups and that they would have to wait for their turn in about three months time. Later, all the experimental subjects received individual notices advising them of their group's number meeting place, time and date. The name "club" was given to each of the groups. Counselling was conducted in the classrooms, once a week between 4 p.m. and 6 p.m., since this was the time most convenient for the subjects. The length of the study was 12 weeks; treatment conditions were provided for 10 weeks of the 12 weeks. Two kinds of counselling treatments were included in the study. These are:-

1. model - reinforcement group counselling

2. desensitization group counselling.

The Therapeutic Programme

The experimental groups in school "A" were to undergo model-reinforcement group counselling. This mode of therapy is based on the use of models originated by Bandura[1]. The therapy was rendered in small groups of two, three and six clients; each group had an introductory session, one practice session and seven treatment meetings followed by a summary session. The first session allowed the clients to introduce themselves to each other, share their study anxiety experiences, academic difficulties and receive information about the procedure. The next session was devoted to the practice of the model-reinforcement group counselling techniques. The last fifteen minutes of every session was devoted to a brief discussion of the subjects' experiences. The final session included a summary and evaluation of the entire treatment.

Treatment was presented in the form of a two-page handout. The symbolic model offered concrete suggestions on such topics as the proper setting for studying, how to behave in examination situations and how to study (Appendix D). The model served as the focus for all the eight sessions. In the first session the counsellor

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1. Bandura, A. 1969 Op. Cit.

and the subjects overviewed the model which was presented in the form of how a hypothetical student would approach studying. The counsellor, then explained the model in details, encouraging subjects to suggest any relevant points, errors, or omission. The discussion was individualised by having each subject identify which parts of the model were especially significant to him or her.

The major task of the practise session was for each group to create a comprehensive model from the written handout, which they as a group could then seek to emulate. By the end of this practice session, each subject selected one detail from their written group model that he or she was going to practise during the week. To help each subject remember and to generate commitment before the session ended, each subject was to make a written note of what he or she planned to practise. In addition, each subject was asked to keep a written record of what he or she actually did day by day concerning her performance of what he or she was practising.

All subsequent sessions had the following agenda:

1. The counsellor asked all subjects outline what they had performed during the previous week in respect to approximating the model. Had they been successful in carrying out their expected reeponses? The group was encouraged to decide whether

or not each member's weekly performance was an improvement over his or her previous record.

2. Another section of the written model should be reviewed.

3. Each subject selected another relevant studying response which he or she liked to accomplish during the forthcoming week. Group evaluation was encouraged, i.e. do group members think his or her expectations were feasible? Too conservative? At the same time, each subject was asked to make a written reminder of the expected response, to keep a record of his or her weekly performance and to continue emitting all previously selected behaviours. The counsellor also kept a record of all selected response.

4. By the final session, all aspects of the written model were covered. This session was devoted to some type of "accounting" during which each subject evaluated the progress that he or she had or had not made over the series of meetings. At this final session, ways of maintaining improved study behaviour were discussed.

During each session, the counsellor verbally and non-verbally reinforced subjects who practiced an activity from the written

model or who stated their intention to practice a particular response. The role of the counsellor therefore, was that of discussion - catalyst and dispenser of positive reinforcement for the responses which were to be shaped. Verbal assent and approval, as well as supportive facial expressions and body gestures were used as social reinforcers. No attempt was made to keep the reinforcement at a subtle level — explicit recognition was given to subjects who performed model — relevant study behaviours. All the subjects were encouraged to practice overtly the desired form of responding.

The counsellor used the social reinforcers which were believed to be most effectively relay impressions of assent, approval and support. At the same time attempts were made to individualize selection of reinforcers as much as possible. As group cohesiveness developed and as reinforcement contigencies became recognised, group members socially reinforced each other's responses as these approximated the model. The counsellor at this stage, attempted to withdraw his reinforcement efforts at a place which insured that there was no decrement in the subjects' response rate.

The concept of successive approximations was invoked as the counsellor --- and probably the group --- differentially reinforced responses that resembled, and were dissimilar from the model. Dissimilar responses were ignored rather than punished (for example, social rebuke). At first, the counsellor used frequent social reinforcement (individualising the selection of reinforcers), but later, intermittent reinforcement principles were adopted. As the group members found themselves approximating model behaviours closer and closer, their responses became self-reinforcing or self-controlled (i.e. automatic reinforcement) and therefore be less independent on external (inter-personal) reinforcement.

One important part of each session was the determination of discriminative cues which were presented before group members emitted certain response patterns. The group decided which cues were most important, then they were positively reinforced for emitting model responses when these cues were present. Inappropriate responses were ignored or the counsellor asked the subjects to specify what the appropriate response should have been.

The experimental groups in school "B" were to be treated under desensitization group counselling. The initial session for the desensitization was scheduled approximately one week after pre-treatment testing. The treatment procedure followed the desensitization method advocated by Wolpe[1] with the exception that it was rendered in small groups of two, three, and six clients each, rather than on an individual basis. It began with an introductory session to familiarize the subjects with each other, share and discuss their test - anxiety experiences, academic problems and receive information about the nature of the procedure. The next two sessions were devoted to muscular relaxation training. The relaxation training and desensitization sessions took place in a large, dimmly-illuminated room with some reclining chairs.

The relaxation training sessions consisted of instructions, tension - reduction cycles, undisturbed relaxation and training in deep muscle relaxation. Detailed instructions (10 minutes) were given at the beginning of the first relaxation training session. Briefer instructions (5 minutes) were presented at the beginning of the second relaxation training session. Following each

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1. Wolpe, J. 1966 Op. Cit.

relaxation training session, the subjects were instructed to practice the techniques they had learned for at least 15 minutes each day (Appendix E).

The desensitization sessions followed the relaxation training sessions. After approximately 20 minutes of relaxation at the beginning of each session, the subjects were presented one at a time with the description of scenes corresponding to the 18 - test anxiety hierarchy items. The subjects were told to visualize each scene as though the events depicted were actually happening to them. Desensitization lasted approximately 30 minutes followed by 30 minutes of undisturbed relaxation.

This procedure involved systematic desensitization. A standardized group hierarchy was developed and modified by suggestions from subjects. The items were chosen for the common hierarchy progressing from the least anxiety-provoking to the most anxiety provoking (Appendix E). All subjects in this second treatment also received copies of the written model and also reviewed the details of the model. Again, as in the first treatment, also indicated specifically what they planned to practice during the forthcoming week.

Following presentation of the model, the outline below was used by the counsellor during the desensitization process.

1. Each scene was presented for 10, 20 and 30 second intervals, preceded by instructions such as "Now imagine as vividly as possible that you ...." and followed by instructions such as "Leave that scene and continue to concentrate on total relaxation." The item content was repeated only for the 10 and 30 second interval.

2. Each session began by re-presentation of the final scene, visualised by the group during the previous session. Each session ended only with the successful presentation of a scene. If subjects could not handle a scene without anxiety, and the time was almost up, then, the subject would have to go back to a scene lower on the hierarchy and presented this one. No new item was introduced within the last four minutes of a session.

3. Between presentations of the same scene, the counsellor allowed about 20 seconds of continued relaxation. Instructions about relaxation, letting go, or counting up

to six with subjects breathing in on the odd numbers and out on the even ones, or all of these were used in order to help the group members attain more relaxed conditions.

4. Group members were asked to raise their left index fingers, if they felt themselves becoming less relaxed or becoming afraid. The counsellor reminded them of this, each session, as well as to remind them to try to imagine each scene for as long as they had time.

5. About 45 seconds were taken between the presentation of different hierarchy items.

6. Whenever a group member demonstrated any sign of anxiety, the whole group was asked to "stop imagining that scene." The counsellor helped the members get relaxed again either by relaxation instructions or by having them imagine a scene which they found very relaxing. Then he said "Just signal by raising your right index finger when you have returned to a relaxed state". Once they had all relaxed again, the counsellor made them think only about staying in that state.

7. After the first anxiety signal on an item, the counsellor continued with that same item for the same time interval.

If the anxiety recurred, he asked the group to leave that scene and relax. Then the counsellor went back to re-present the last scene which they all successfully handled. He later, worked back up to the anxiety - eliciting scene.

During the third through the seventh sessions, the groups worked through the items on the group hierarchy. The underlisted agenda for each session was followed.

(a) (5 - 10 minutes)

Open discussion of points from previous sessions and subjects' comments regarding study-related experiences which had occurred during the interim between recent sessions.

(b) (10 minutes)

Muscular relaxation procedures using selected exercises plus relaxation deepening instructions through counting -- to -- 20 while deep breathing on odd numbers.

(c) (25 minutes)

Visualisation of scenes from specified hierarchy of items.

(d) (5 - 10 minutes)

Bring group members back to a normal, i.e. no tension, state by reversing the relaxation deepening instructions and omitting the deep breathing. The counsellor finally conducted any summary discussion which seemed necessary including study problems they might wish to discuss.

At the end of the 12 - week period, a post-treatment assessment session was held, one week after the last group meeting. During this period, both the experimental and control groups were assessed on SAAA Scale, PMT, EAT and MAT respectively. The subjects in the treatment groups were also asked for their subjective evaluation of their gains. The whole therapeutic programme was designed so that the last treatment session fell during the examination period. At that point, the subjects had already the opportunity to test their gains in vivo and provide realistic feedback.

Control of Extraneous Variable.

The study was designed in line with certain strategies that reduced most of contamination - by extraneous factors. One of such strategies is the use of separate schools in the experiment for

different therapeutic programme. The factorial design adopted, made it possible to control the variations in subjects' pretest academic achievement simply by incorporating the pretest measures into the design. The selection of subjects for the study on the basis of randomisation was a way of controlling extraneous variables. Sex differences was controlled for, simply by representing each sex group, in itself, in the factorial design. Testing conditions were uniform for all subjects.

Administration of Therapy, is another area in which there was control with this, all subjects received therapy under the same environmental conditions and the experimenter himself was the only therapist that administered the treatment programmes. Finally, any variation that remained would have been taken care off by the elegant statistical method of manipulating the variables in the study.

Methods of Analysing Data

In order to determine the effects of the independent variables on the dependent variables, upon completion of the SAAA Scale, PMT, EAT, and MAT by both the experimental and control groups, the test were scored and mean scores were calculated for each group. The experimenter wished to discover if the groups made any significant

progress from the pre-counselling to post-counselling stage, the data obtained in the study were subjected to statistical analysis at the 5% level of confidence.

A statistical tool of considerable value known as analysis of covariance (ANCOVA) was employed at the first instance, in dealing with extraneous variables. This technique, an extension of the analysis of variance model combined with certain features of regression analysis, provided a useful statistical device for comparing the pretest and post - test measures.

The use of ANCOVA was to remove the means of the treatment groups, those differences which could be linearly correlated with the covariate and also to adjust the post test means for differences between the groups. All these analyses were carried out with the aid of the eletronic computer at the computing centre of the university of Ibadan.

CHAPTER THREE

RESULTS

This chapter presents the results of testing the five phypotheses proposed for this study. Since numerous studies have demonstrated sex differential in cognitive and achievement tests, the data were collected separately for each sex. However, to estimate the degree of this differential, both male and female are pooled together in the analyses to test the hypotheses. The data were collected on a pretreatment - post - treatment basis. The grade point average (GPA) were obtained through achievement tests in English and Mathematics; while the degree of academic involvement was obtained through the self-rating of SAAA scale.

A factorial analysis of covariance was carried out on the data obtained from the study. For each hypothesis, one or more analysis of covariance as deemed necessary is/are computed. In some cases, where the obtained F - ratio in respect of the hypothesis is significant, then post - hoc - t tests were computed to determine where the differences are found. If however, the F - ratio fails to reach any significance level, no further action was taken. All tests of significance are conducted at .05 level.

Hypothesis 1

Effect of Model-reinforcement and Desensitization Group Counselling Strategies on Academic Performance.

The first hypothesis states that, there will be no significant difference in the academic performance of subjects in the experimental groups and those subjects in the control groups. To test this hypothesis, analysis of covariance was conducted on the raw scores obtained from EAT and MAT, administered pre-treatment and post-treatment. Group means rather than individual group member's scores were used as unit of analysis. The PMT scores served as covariates. The resultant F-ratio was significant at the .001 level. The statistical results obtained from conducting analysis of covariance on the scores are reported on Tables 8 and 10 - EAT ($F = 68.619$, df 1/40, $P < .001$); MAT ($F = 62.558$, df 1/140, $P < .001$) Tables 9 and 11 show the means that the main effects of the two group counselling strategies (model-reinforcement and desensitization group counselling) are significant on academic performance. The examination of pre-counselling and post-counselling means in tables 9 and 11 reveals that, the experimental groups made significant increases

TABLE 8

Analysis of Covariance for English Achievement Test of All The Subjects (PMT = COVARIATE)

SOURCE OF VARIATION	SSQ	DF	MSQ	F	P
COVARIATES (Mental Ability)	1532.009	1	1532.009	16.812	<.001
MAIN EFFECTS	6252.836	1	6252.836	68.619	<.001
(EXPTAL & Control)	6252.840	1	6252.840	68.619	<.001
BETWEEN	7784.848	2	3892.424	42.716	<.001
WITHIN	12757.406	140	91.124		
TOTAL	20542.254	142	144.664		

TABLE 9

Means Showing Effects of Model-reinforcement and Desensitization on English Achievement Test

Variable + Category	N	UNADJUSTED $\bar{X}$	ADJUSTED $\bar{X}$
1 Experimental	72	46.75	42.48
2 Control	72	28.89	29.17

TABLE 10

Analysis of Covariance for Mathematics Achievement Test of All The Subjects (PMT = COVARIATE)

SOURCE OF VARIATION	SSQ	DF	MSQ	F	P
COVARIATES (Mental Ability)	210.819	1	210.819	2.090	NS
MAIN EFFECTS	6309.656	1	6309.656	62.558	<.001
(EXPTAL & CONTROL)	6309.660	1	6309.660	62.558	<.001
BETWEEN	6520.477	2	3250.238	32.324	<.001
WITHIN	14120.551	140	100.861		
TOTAL	20641.027	142	145.359		

TABLE 11

Means Showing Effects of Model-reinforcement and Desensitization on Mathematics Achievement Test

Variable + Category	N	UNADJUSTED $\bar{X}$	ADJUSTED $\bar{X}$
1 Experimental	72	36.53	36.48
2 Control	72	23.06	23.11

in their EAT and MAT scores over the control groups. These findings apparently rejected the null hypothesis I and supported the conclusion that group counselling in intervention procedures would be effective in increasing academic achievement for the experimental group.

Hypothesis 2

Effect of Group Counselling Strategies on Academic Involvement

In testing the second hypothesis of the study which proposes that, there will be no significant difference in the degree of academic involvement of subjects in the experimental groups and those in the control groups, the analysis of covariance was performed on SAAA data using the SAAA pre-test scores as covariates. This analysis resulted in an F-ratio that was significant at the .001 level (Table 12) - F = 7.442, df 1/140, P < .001. An examination of table 13 shows the means of effects of model-reinforcement and desensitization group counselling strategies on academic involvement. The table indicates that the experimental groups did show increment in their degree of academic involvement over and above the control groups. These findings, do not align with null hypothesis II.

TABLE 12

Analysis of Covariance for Academic Involvement
(Pre SAAA = COVARIATE)

SOURCE OF VARIATION	SSQ	DF	MSQ	F	P
COVARIATES (PRE- SAAA Scores)	921.154	1	921.154	0.255	NS
MAIN EFFECTS (Exptal & Control)	26866.797	1	26866.797	7.442	<.001
BETWEEN	27788.00	2	13894.000	3.849	<.001
WITHIN	505392.438	140	3609.946		
TOTAL	533180.438	142	3754.702		

TABLE 13

Means Showing Effects of Model-reinforcement and Desensitization On Academic Involvement

Variable + Category	N	UNADJUSTED $\bar{X}$	ADJUSTED $\bar{X}$
1 Experimental	72	127.21	127.42
2 Control	72	100.17	99.95

Hypothesis 3.

Relative Effectiveness of Model-Reinforcement and Desensitization Group Counselling Strategies In Fostering Academic Performance

The third hypothesis proposes that, there will be no significant difference in the academic performance of subjects treated with model-reinforcement group counselling and those subjects treated with desensitization group counselling. To test this hypothesis, the data on English Achievement Test and Mathematics Achievement Test were subjected to analysis of covariance, using the Progressive Matrices Test (PMT) scores as covariates. The statistical results from the analysis are presented in tables 14, 15, 16 and 17.

Tables 14 and 16 show that the main effects of the two group counselling strategies, when compared, are not significant on academic performance, for both sexes, as measured by EAT ($F = 0.496$, df 2/138, P = NS) and MAT ($F = 2.962$, df 2/138 P = NS). The analysis revealed no significant main effect for grouping counselling strategies on the criterion variable on both English Achievement Test and Mathematics Achievement Test. In light of data contained in tables 14, 15, 16 and 17, hypothesis III can not be rejected.

TABLE 14

Analysis of Covariance for English Achievement Test of All Subjects Using Model-Reinforcement and Desensitization Group Counselling Strategies

(COVARIATES = PMT)

SOURCE OF VARIATION	SSQ	DF	MSQ	F	P
COVARIATES (Mental Ability)	1475.208	1	1475.208	10.794	<.001
MAIN EFFECTS	135.644	2	67.822	0.496	NS
Male Vs. Female	81.173	1	81.173	0.594	NS
Mod-Reinf. Vs. Desen.	53.184	1	53.184	0.389	NS
2-WAY INTERACTIONS (Sex Vs. Type of Treatment)	0.937	1	0.007	0.999	NS
BETWEEN	1611.793	4	402.948	2.948	NS
WITHIN	18860.816	138	136.673		
TOTAL	20472.609	142	144.173		

TABLE 15

Means Showing Relative Effects of Model-Reinforcement and Desensitization on English Achievement Test

Variable + Category	N	UNADJUSTED $\bar{X}$	ADJUSTED $\bar{X}$
Male	72	37.37	36.57
Female	72	34.21	35.00
Model-reinf.	72	36.36	36.39
Desensitization	72	35.19	35.17

TABLE 16

Analysis of Covariance for Mathematics Achievement Test of All Subjects Using Model-Reinforcement and Desensitization Group Counselling Strategies

(COVARIATE = PMT)

SOURCE OF VARIATION	SSQ	DF	MSQ	F	P
COVARIATES (Mental Ability)	213.383	1	213.383	1.500	NS
MAIN EFFECTS	842.585	2	421.292	2.962	NS
Male Vs. Female	30.329	1	30.329	0.213	NS
Mod. - Reinf. Vs. Desen.	809.139	1	809.139	5.689	NS
2-WAY INTERACTIONS (Sex Vs. Type of Treatment)	176.023	1	176.023	1.238	NS
BETWEEN	1231.992	4	307.998	2.166	NS
WITHIN	19627.176	138	142.226		
TOTAL	20859.168	142	146.896		

TABLE 17

Means Showing Relative Effects of Model-Reinforcement and Desensitization on Mathematics Achievement Test

Variable + Category	N	UNADJUSTED $\bar{X}$	ADJUSTED $\bar{X}$
Male	72	30.53	30.22
Female	72	28.96	29.27
Model-reinf.	72	32.10	32.10
Desensitization	72	27.35	27.34

Hypothesis 4

Differential Effectiveness of Model-Reinforcement and Desensitization Group Counselling Strategies In Increasing Academic Involvement

To test the fourth hypothesis which states that, there will be no significant difference in the degree of academic involvement of subjects treated with model-reinforcement group counselling and those subjects treated with desensitization group counselling; the data obtained from the self rating scores on SAAA scale were subjected to analysis of covariance; using PMT scores as covariates. The results from the statistical analysis are presented in Tables 18 and 19. From the results, it was revealed that, the main effects of the two group counselling strategies, when compared are not significant on degree of academic involvement for both sexes, as measured by SAAA Scale ($F = 1.852$, 2/138; $P = NS$). The interpretation of these results is that there is no statistical gain difference between the post treatment scores in the degree of academic involvement of the subjects treated under model-reinforcement and desensitization group counselling strategies. For this reason, the null hypothesis IV can not be rejected.

TABLE 18

Analysis of Covariance for Academic Involvement of All Subjects Using Model-Reinforcement and Desensitization Group Counselling Strategies

(COVARIATES = PMT)

SOURCE OF VARIATION	SSQ	DF	MSQ	F	P
COVARIATES (Mental Ability)	10751.547	1	10751.574	2.927	NS
MAIN EFFECTS	13609.602	2	6804.801	1.852	NS
Male Vs. Female	5653.320	1	5653.320	1.539	NS
Mod-Reinf Vs. Desen	7826.004	1	7826.004	2.130	NS
2-WAY INTERACTIONS (Sex Vs Type of Treatment)	2724.770	1	2724.770	0.742	NS
BETWEEN	27086.000	4	6771.500	1.843	NS
WITHIN	506933.938	138	3673.434		
TOTAL	534019.938	142	3760.704		

TABLE 19

Means Showing Relative Effects of Model-Reinforcement and Desensitization on Academic Involvement

Variable + Category	N	UNADJUSTED $\bar{X}$	ADJUSTED $\bar{X}$
Male	72	117.41	120.09
Female	72	109.71	107.06
Model-reinf.	72	121.01	120.88
Desensitization	72	105.94	106.08

Hypothesis 5

Relative Effectiveness of General Grouping, Dyadic and Triadic Groupings on Academic Involvement

The role of group dynamics, in promoting classroom achievement has been recurring subject of research study. The fifth hypothesis was to investigate the effects of different modes of grouping, i.e. general group, triadic group and dyadic group, upon certain non-intellectual factors associated with student academic involvement, as measured by the SAAA scale. The influence of the three modes of grouping upon the criterion measures (SAAA post tests) was analyzed by the analysis of covariance technique.

In table 20, the covariance analysis for the influence of the techniques of grouping upon final SAAA scale is presented. In this analysis the pretest SAAA scores served as covariates. The F value obtained through this analysis was not significant. SAAA = (F = 2.257, 3/138, P = NS).

On obtaining the F value, the adjusted criterion means were computed. The unadjusted and adjusted SAAA means for the three groups, treated under model-reinforcement and desensitization group counselling strategies are presented in Table 21. It appears that, insofar as group difference in initial SAAA performance potential were controlled by the SAAA pretest, and no uncontrolled factors related to SAAA performance contribute to

TABLE 20

Analysis of Covariance for Academic Involvement Between General Group, Triadic group and Dyadic group.

(COVARIATE = PRE SAAA)

SOURCE OF VARIATION	SSQ	DF	MSQ	F	P
COVARIATES (Pre-SAAA)	741.731	1	741.731	0.205	NS
MAIN EFFECTS	24459.316	3	8153.105	2.257	NS
Mod-reinf. Vs. Desen	7417.816	1	7417.816	2.053	NS
Group x Triad x Dyad	16970.578	2	8485.289	2.349	NS
2-WAY INTERACTIONS (Type of Treatment Vs. Type of Group)	13878.250	2	6939.125	1.921	NS
BETWEEN	39079.313	6	6513.219	1.803	NS
WITHIN	494982.188	138	3613.009		
TOTAL	534061.500	144	3734.696		

TABLE 21

Means Showing The Relative Effects of Grouping Methods on Academic Involvement

Variable + Category	N	UNADJUSTED $\bar{X}$	ADJUSTED $\bar{X}$
Model-reinforcement	72	121.02	120.81
Desensitization	72	106.14	106.35
General Group	48	128.09	128.86
Triadic Group	48	106.13	109.99
Dyadic Group	48	106.07	106.42

a bias, evidence has thus been found that, no significant difference exists between the different modes of grouping in increasing the degree of academic involvement.

SUMMARY OF FINDINGS AND CONCLUSIONS

In presenting the findings of this study, which is basically on the effect of two group counselling strategies in increasing academic achievement and the degree of academic involvement; a number of results and conclusions were arrived at. The summary of these results and conclusions are presented as follows:-

1. At the pretreatment level, the results show that for both experimental and control groups, there were no significant differences between mean scores of the experimental group and control group. This indicates that any post test significant differences observed should be due to treatment effects.
2. When the achievement test scores were subjected to analysis of covariance, it shows significant F - ratios for the main effect of academic performance and interaction. The tests of statistical differences, reveal that under the experimental conditions the group scored significantly higher than the control group

3. As for the effect of treatments on the degree of academic involvement, the SAAA scores were also subjected to analysis of covariance. The resultant F - ratios were significant, indicating the treatment effects on academic involvement.

4. No significant differences were observed as to the differential effectiveness of the two group counselling methods on both academic performance and the degree of academic involvement.

5. Another problem for investigation was to determine the relative effectiveness of the different groupings on academic involvement. The results of this investigation show that, there was no significant difference in the degreee of academic involvement of students counselled in general group, triadic group and dyadic group.

6. The results of this study lend support to the conclusions which follow. First, group counselling will generally improve and increase academic achievement and academic involvement respectively. Second,

the two group counselling methods will be effective in dealing with academic problems. Third, model-reinforcement group counselling strategy is as effective as desensitization group counselling in improving academic performance. Similarly, neither of these two group counselling methods is significantly more effective in increasing the degree of academic involvement of low achievers. Lastly, the results from the fifth hypothesis show that, when counselled, the student's academic involvement, does not necessarily depend on the grouping pattern of students.

CHAPTER FOUR
DISCUSSION

In this chapter, the results of the study and the conclusions drawn from it are discussed. In addition, the possible implications of the study and recommendations for further research are presented.

Hypothesis 1

On the basis of the analyses undertaken, the first hypothesis which states that "There will be no significant difference in the academic performance of subjects in the experimental group and those subjects in the control group" is rejected; the rejection of this hypothesis thus leads to the first conclusion which suggests that group counselling intervention procedures would be effective in improving and increasing academic achievement, which therefore corroborates the aforementioned research. For example, Havighurst and Neugaten,[1] Berdie[2] and Krumboltz and Thonvesen[3] found, similar overall main effects in comparison to the present study. The results from the present study give evidence which indicate that when a student's study habits are

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1. Havighurst, R. and Neugaten, B. 1962, Op Cit.
2. Berdie, R. 1954 Op. Cit.
3. Krumboltz, J. and Thoresen, C. 1964 Op. Cit.

improved and enjoyable, his academic performance is also chanelled in a more positive direction. The fact that both modalities i.e. model - reinforcement group counselling and the systematic desensitization procedures proved to be equally successful, gives credence to the value of the former mode of treatment.

As a result of participation in a group counselling, the experimental group's GPA became comparable to that of the baseline group's GPA and significantly higher than the GPA of the control group. It might be interesting to note that the experimental group did not begin its improvement until the third session of the treatment procedures. Evidently, it takes some time before the results of the newly gained insights as a result of the two group counselling strategies are translated into action. This is one of the important reasons for the use of long range, rather than immediate criterion measures. Though some students do exhibit a "transference cure" and exhibit immediate marked behaviour changes; most of them seem to do better in the "long pull" as a result of the counselling experience.

The improvement of scholastic behaviour on the part of the inappropriately performing experimental groups can not logically be accounted for by the natural tendency to regress towards the mean. The control groups do not indicate this phenomenon. Therefore, the change in behaviour on the part of the experimental groups can only be accounted for in terms of the treatment variables. Further findings lend support to the effectiveness of these two group counselling strategies used in treating poor academic achievers.

In light of these findings, one can state with a high degree of certainity that, in the findings of an investigation which concerned itself, with long-range results and which concerned controlled ability and motivational variables, indicated that students of comparable ability who began their scholastic career with inappropriate lower grades, who recognised and expressed their need for help and participated in group counselling were indeed aided to perform in a manner more consistent with their ability. In contrast, those subjects who were in the same circumstance but were refused help continued to perform in a consistently inappropriate manner, i.e. they did not improve their grades.

The outcome of this investigation supports the results of many studies concerning the effectiveness of group counselling procedures in academic settings. The critical issue to which this research was addressed, was the establishment of controls and the manipulation of variables in a manner which was consistent with conclusions of an unequivocal nature -- an aim, which former studies accomplished only in small part. The study dealt, with at once, a group procedure which focused on personality variables and scholastic skills simultaneously. It also provided control for motivational variables and used an objective criterion for measurement over a period of time. In the light of the design, the findings indicated that such group counselling procedures which take into account the whole person are effective in changing scholastic behaviour in a positive direction.

Hypothesis 2

In discussing the second hypothesis which states that "There will be no significant difference in the degree of academic involvement of subjects in the experimental group and those in the control group," the results of this investigation

rejected the null hypothesis II, thus demonstrating that both model-reinforcement and systematic desensitization group counselling strategies can be effective in increasing the degree of academic involvement. The experimental subjects improved more on the total SAAA scale than those subjects who received no counselling. The study is thus supporting the view that behavioural counselling techniques may be effective even when the problem under consideration does not concern specific and well defined behaviours.

In order to adduce possible reasons for this finding, it is necessary to examine the construct of academic ability itself. That satisfaction in academic ability is related to congruent concepts of self and ideal self is construed as in keeping with findings of previous studies. These have indicated that as an individual becomes better adjusted his concept of self and self ideal are brought into closer accord, that congruity of concepts is associated with general satisfaction, and that this congruence may be indicative of a sense of self acceptance. Why this association was found to be less clear in the two methods, may

be that academic ability itself holds more values which exist independently of their own feelings of satisfaction with self within the experimental subjects. A student who is disconted with self because of his performance in academic tasks may find that, just he has been treated to overcome his academic difficulties, he is more satisfied with his lot in life, irrespective of the methods used in group counselling.

The indication of these findings, is that behavioural counselling techniques derived from social learning theory, can be used by counsellors in increasing the degree of academic involvement. If it is assumed that counsellors ought to help students learn the processes involved in personal and educational making, this finding has considerable relevance for counsellors. Group counselling has gained support from many counsellors and counsellor educators, yet little experimental evidence demonstrates the value of group counselling. This study is therefore, an experimental efidence to show that group counselling methods are effective in increasing student's academic involvement.

Another possible explanation for these findings, may be that, under the conditions of this study, the findings support the

conclusions that specific behaviours can be modified using a learning theory approach in counselling with small groups. This conclusion is supported in other counselling studies using the learning theory approaches. Such studies include those of Akinboye[1], Krumboltz and Thoresen[2] and Ryan and Krumboltz[3]. As Skinner[4] pointed out, it is an over simplification not to evaluate others which affect the spread of effect, since it is a known fact that other variables in the environment may dilute behavioural changes achieved during counselling. Difficulties in trying to effect changes in student behaviour within the classroom through reinforcement have been noted in some studies, like those of Krumboltz and Thoresen. The implication of this for counselling is that before a marked and lasting change in behaviours in other situations can be expected, the reinforcing aspects of significant others (teachers and peers) must also be evaluated and regulated. One of the goals of

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1. Akinboye, J. 1974 Op Cit.
2. Krumboltz, J. and Thoresen, C. 1964 Op. Cit.
3. Ryan, T. and Krumboltz, J. 1964 Op. Cit.
4. Skinner, B. F.: Science and Human Behaviour. New York: Macmillan: 1953.

this study was to maximise conditions for reinforcement during counselling.

In Nigeria today, group counselling is a relatively new technique for many school counsellors. One of the greatest advantages of group counselling is that it serves as a microlab for learning new behaviours. With appropriate reinforcers for motivation, sequencing of learning and specific objectives, a student can be re-educated in behavioural patterns. Students in the experimental situations learn to effectively discriminate between appropriate new behaviours and inappropriate old behaviours. As each group member plays an appropriate role in the group situation, he receives reinforcement from the counsellor. In addition, the presence and behaviours of peers provide important modeling cues as well as additional reinforcement. By providing the students with a model, for the desired behaviour, he is able to imitate and this greatly increases the likelihood of receiving positive social reinforcement. The results of this study support the findings of other research demonstrating that the degree of student's commitment in academic activities can be quickly influenced by group counselling methods.

It is fairly clear from these data, that, there seems to be a possibility that a cycle of interaction takes place in counselling that affects one's perception of individual academic ability in different ways at different points in counselling. Perhaps it is possible that after an early identification with the group members and their problems, the identification of their academic ability begins to dissipate and the student begins to differentiate more clearly between himself and others. The openness of the group allows him to see their academic abilities and others in a way heretofore unknown. Ohlsen (1963)[1] said "he learns that others have problems too". Identification with other group members reveals not only previously unknown similarities but also unique differences. If such a cycle occurs, it would seem that if a client was evaluated on the SAAA scale after three or four sessions he probably would have a higher SAAA scores. However, after

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1. Ohlsen, M.: Group Counselling, Holt, Rinehart and Winston. 1963.

several more sessions, he would possibly see himself as different from others and be satisfied with this difference. Therefore, in group counselling, they are able to work through their feelings of being different.

The consistency and comparative of the two therapies on self appraisal of academic ability in the present study can be seen most clearly in the experimental results (Tables 12 and 13). One possible explanation of the therapeutic effect is that subjects became sensitized to new ways of coping with their academic problems and evaluating themselves. The result of such a sensitization to new ways labeling his perceptions possibly accounts for the change in the mean SAAA scale scores among the experimental subjects.

Hypothesis 3

Another matter for concern is the confirmation of the third hypothesis that "There will be no significant difference in the academic performance of subjects treated under model-reinforcement group counselling and those subjects treated under desensitization group counselling". The hypothesis demonstrated that model-reinforcement group counselling can

reduce study habit problem due to anxiety as effectively as the systematic desensitization group counselling, which has been one of the most recommended methods to deal with study anxiety; Allen,[1]; Johnson and Sechrest,[2] Aponte and Aponte[3], Emery and Krumboltz[4], and Lomont and Sherman[5]. The practical advantages of having model-reinforcement as a competitive form of treatment are, first, that it provides counsellors with wider range of treatments to choose from and second, that this choice may also accommodate practitioners of a wider range of counselling orientations.

An important implication of the results of this hypothesis concerns the use of desensitization as a target by the structured model-reinforcement method. The extinction of anxiety reactions associated with the desensitization procedures is an innovation introduced by the behaviourstic approach. In fact, a comparison of the theoretical principles underlying these two treatment

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1. Allen, G. 1971 Op. Cit.
2. Johnson, S. and Sechrest, L. 1968 Op. Cit.
3. Aponte, J. and Aponte, C. 1971 Op. Cit.
4. Emery, J. and Krumboltz, J. 1967 Op. Cit.
5. Lomont, J. and Sherman, L. 1971 Op. Cit.

modalities show some incompatible differences. Despite, the theoretical differences, in practice, some similarities are also evident. These can be illustrated in the case of the procedures used for desensitizing test anxiety. In both forms of treatment, the clients are given a substantial degree of control over the performance. Thus, the model-reinforcement, although traditionally, considered a dynamic form of treatment, in the present case can be regarded as a variant of in vivo, desensitization or rather a simulated in vivo desensitization.

The fact that both group counselling strategies showed a significant effect on academic performance is an additional support for Doctor et al[1] who obtained similar results in comparing systematic desensitization with model-reinforcement group counselling, in which subjects were encouraged to discuss attitudes and feelings associated with study habits and test situations. Similar finding was by Allen[2], when he showed a model-reinforcement approach to be effective in reducing test anxiety relative to a no-treatment control group. It should be noted that Allen used study counselling in addition

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1. Doctor, R. et al. 1970 Op. Cit.
2. Allen, G. 1971 Op. Cit.

to the test-related counselling that was employed in this study and by Doctor et al.

While there is little evidence that systematic desensitization of test anxiety alone leads to improvement in grades, desensitization in combination with some type of counselling has resulted in improvement in academic performance, in almost every study which these approaches were combined; Allen,[1] Katachn et al.[2]; McManus,[3]; Mitchell and Ng.[4].

The confirmation of this hypothesis is an indication that students' study behaviours can be modified by a combination of study skills advice and certain behavioural self-control techniques. This obviously shows that model reinforcement is an effective treatment in addition to group desensitization. From the data on this hypothesis, all of the treatment groups combined were superior to the controls which were equivalent. Treatment effects were equivalent for both male and female subjects and most subjects felt that the treatment had helped

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1. Allen, G. 1971 Op Cit.
2. Katachn, M. et al. 1966 Op. Cit.
3. McManus, M. 1971, Op. Cit.
4. Mitchell, K. and Ng. K. 1972 Op Cit.

their study habits. That model-reinforcement can dramatically change behaviours has been shown before Thoresen and Mahoney[1]. Kazdin[2] has written that unambigous demonstrations of the efficacy of model-reinforcement should be the foremost research goal in this area, and the results of this experiment are one step towards meeting that goal.

Most of the model-reinforcement studies utilizing rewards, have either, had smoking or eating as target behaviours and there is evidence that model-reinforcement has therapeutic potential for these behaviours; Harris[3]; and Mahoney and Thoresen[4]. One of the most interesting findings is that treatment implemented primarily, via handout was efficacious, even though the students had personal contact with the therapist.

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1. Thoresen, C. & Mahoney, M.: Behavioural Self-control New York: Holt, Rinehart & Winston 1974

2. Kazdin, A.: "Model-reinforcement and behaviour change" M. Mahoney and Thoresen (Eds.) Self-Control: Power to The Person, Montery Calif.: Brooks/Cole 1972.

3. Harris; M.: "Self-directed programme for weight Control: A pilot Study" Journal of Abnormal Psychology 1969 74 263 - 270

4. Mahoney, M. and Thoresen, C. 1974 Op. Cit.

Beneke and Harris[1] found that handout worked as well as group therapy sessions for modifying study behaviour. This combination of model-reinforcement and a system of treatment delivery that is not entirely dependent on extensive therapist contact or time, offers considerable potential for making positive behaviour modification available to large number of people in diverse environment.

The fact that, no significant differences in the outcome of this study were found between the model-reinforcement and group desensitization, shows that, the study provides no evidence leading to the preference of one type of treatment over the other. A similar conclusion was reached in Dixon's[2] study and evidence for the effectiveness of each treatment is cited in the review of literature.

Hypothesis 4

The fourth hypothesis of this study which states "There will be no significant difference in the degree of academic involvement of subjects treated under model-reinforcement group counselling and those subjects treated under

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1. Beneke, W. & Harris, M. "Teaching Self-control of Study behaviours." Behaviours Research and Therapy 1972 10 35 - 41.

2. Dixon, F.: "Systematic desensitization of test anxiety" Dissertation Abstract 1966 27 4 - 13.

desensitization group counselling", investigates the differential effectiveness of the two counselling treatments on the degree of academic involvement. The variable of over-generalization revealed no differences between the treatment conditions. The null hypothesis, that, there will be no difference in the two modes of treatment in increasing the degree of academic involvement was demonstrated.

One of the goals of this study was to ascertain the effect of the two modes of group counselling on academic involvement of the students and also to compare the effectiveness of the modes of the therapy on academic involvement. The results on this hypothesis, supported the relative effectiveness of therapy on the experimental groups over non specific treatment group. On the contrary, the data on this fourth hypothesis, did not support the differential effectiveness of the two modes of therapy on academic involvement. The data indicated that the experimental subjects' scores on the SAAA scale was significantly more effective in increasing the degree of academic involvement than the control subjects. These significant results were consistent

for groups treated with the two therapies.

The findings of the two methods in increasing academic involvement raise some interesting issues about the manifestations of change due to model-reinforcement and desensitizing in groups. One interpretation of the data suggests that model-reinforcement in group can bring about the same magnitude of self-perceived behaviour change as desensitizing in group. An additional explanation of the similar results for both therapies on SAAA scale, is the learning due to repeated testing. This is quite possible, since the SAAA scale was given at pre-treatment, eight weeks later, at post - treatment.

The insignificant difference observed for the two therapies on academic involvement, may be explained by the fact, that, using model-reinforcement therapy as one of the treatment, tends to motivating subjects in improving their study habits, just like the desensitization group counselling. Put simply, almost all people tend to consider positive reinforcement as accurate, desirable and impactful. Learning theorists have long known this to be true, since positive reinforcement has been consistently found to be a much stronger motivator of humans than negative reinforcement or punishment.

The results on this fourth hypothesis, tend to support this point of view; that active training procedures such as systematic desensitization, modeling and positive reinforcement, feedback are the critical treatment components in educational counselling programmes.

Previous research on academic involvement would have led one to predict differential increases between the experimental groups. It is possible that behaviour change tactics of systematic desensitization type appended to a self-evaluation and model-reinforcement sequence are duplicative and superfluous. In other words, the contribution of explicit systematic desensitization and recording to behaviour change may be accounted for within model-reinforcement operations.

Implication of these findings point to the feasibility of training students in self-management skills that subsume and extend self-instructional practices. It is evident that sufficient knowledge and expertise has been generated so as to arrange learning experiences allowing students to regulate their own instructional environments. Within the programmes such as these, relevant entering behaviours should be examined in light of treatment alternatives so as to optimize change.

The question should be asked, what aspects of student's study repertoire should be exposed to what type of group counselling strategy?

Hypothesis 5

The final hypothesis of this study which states that "There will be no significant difference in the degree of academic involvement of those subjects treated in general groups, triads and dyads"; looks at the possible combined effects of model-reinforcement and systematic desensitization with group dynamics on the degree of academic involvement of low-achieving students, shows no significant effects and the interaction was equally not significant. This finding suggests a basic similarity in the mode of interaction between members within the general group, triadic group and dyadic group. One possible explanation for this result may be attributed to the nature and size of the experimental groups. The general group (comprising of only six subjects), triadic groups and dyadic groups are all referred to in the field of group dynamics as "small groups". The implication of this, is that, whatever the nuances of motivation underlying group formation, however, many "types" of groups we may be able to identify, there

remains the central fact that small group members come together or are brought together, on account of some kind of common purposes, interests or needs.

The notion of common purpose has a number of important implications. It provides a reason for the members' investment in the group, a motivation for interacting and for encouraging each other and it increases the sense of unity. This "we" feeling or group bond operates inevitably in all the groups, irrespective of the number of group members, and it is an important basis of the personal relationships which develop between group members. Accepting the small group as the locus of maximum intimacy and the best means is therefore axiomatic that the therapeutic atmosphere, characterized by acceptance, trust, safety and a sense of belonging is dependent upon the size of the group encounter. These parameters of the therapeutic field are emotionalized attitudes that are communicated interpersonally by a small group of people in psychological contact with one another.

Another possible reason for the no difference result among the various groups may be seen in terms of interaction which is a common phenomenon in small groups. Interaction in

groups, refers to the mutual influence of people who are in contact with each other. By "influence", it does not only mean modification of behaviour but also includes both modification and reinforcement and not only of behaviour but also of attitudes and self-concept. All of these group processes are dependent upon the occurrence of interaction. It is the very nucleus of the small group work process. There is no reason for bringing together a group clients unless it is genuinely believed that they have something to give each other, that can in some way help each other. And to do this, they must interact.

One other explanation for this kind of result, may be seen in terms of cooperation which is another basic attribute of small groups. The fundamental goals of cooperative learning in small groups, are to promote process of learning which are intellectually more complex and richer than larger group and to stimulate students to function on a higher level of affective, cognitive, and social involvement. This study presented some evidence that these goals can be achieved. All the group members' attitudes toward their school work revealed considerable involvement, even pleasure as well as concern for their academic work. To illustrate, each group member from any of the groupings,

trust the group as an entity because each person has achieved a trust relationship with the other partner on an individual and sequential basis. The dynamics of the small group unit are the heart and soul of group process. To increase commitments in academic work, counsellors should therefore embrace all the various groups.

The findings of this and other similar studies have highlighted the considerable variability in increasing the degree of academic involvement. From this study, two interesting sidelights are worth noting:

(a) certain subjects might impede or inhibit the therapeutic process for others and still profit from counselling themselves and

(b) group counselling in contrast to individual counselling, affords an opportunity for non-verbalizers to participate vicariously through the verbalizations of others and thereby achieve significant performance.

The increase in academic involvement accompanied by improvement of academic performance in all the groups, deserves special consideration. Initial retardation in academic performance may have been a result of lack of committment in

school work and because of this, the poor achievers new sense of well-being after counselling may have been directed to areas more important to them. These, perhaps caused them to focus more of their energy on interpersonal relationships, which had not been satisfactory to them in the past, to such an extent that they gave less attention to their academic work.

Finally, it is of importance to give clinical explanations of what, the researcher thought happened to the experimental subjects, resulting to no significant difference in the degree academic involvement among the various groups. With varying degrees of depth, each client within the experimental groups discovered:-

(i) that expressing his own recall feelings about people, things and ideas helped him to understand himself and the forces that disturbed him,

(ii) that at least, one adult could accept him and that this adult i.e. the counsellor, wanted to understand him,

(iii) that his peers had problems too,

(iv) that in spite of his faults which his peers wanted him to correct, his peers could accept him

(v) that he was capable of understanding, accepting and

helping others and

(v) that he could learn to trust others.

When a client discovered that others accepted him, he found that he could better accept others, and eventually that he could better accept himself. After he began to accept himself, then, and only then, could he accept the fact that he was gifted and make plans which required him to use his great potentialities. All of this takes time - these changes come over so gradually - yet they must precede substantial improvement in grades. What is more, each client must learn to live with his new self, communicate this new self to important others, and teach these important others to understand, to accept and to live with new self.

These findings support the usefulness of these two group counselling strategies in increasing achievement, as well as increase the degree of academic involvement in school work. It does not, however, resolve the question of which active treatment is superior. The practical implication of these findings is that counsellors can be effective in improving academic achievement and that counsellors have two equally effective group procedures from which to choose - model-reinforcement group counselling or desensitization group counselling.

Implication of The Findings

Counselling is still best justified as an immediate help to the student bewildered by the increasingly complex maze of educational and occupational opportunities. In this maze, most institutions will recognise their responsibility to help the student explore his potentials and possibilities in an orderly manner. The provision of professional people in counselling services is one way to achieve that. And it is comforting that this method was supported by the analyses in this study, certainly over the short academic term period and in a milder way over the lengthier span of time.

The present study therefore represents an important first step in the determination of the most effective ingredients, in educational counselling, a therapeutic format sometimes characterized by a myraid of techniques drawn from varying theoretical backgrounds. The isolation of the most effective treatment components in the programmes typically employed in educational settings would seem to be of paramount importance. Further studies should isolate therapuetic ingredients in educational setting, such as the impact of homework assignments by including subject groups that control for the treatment ingredients under

investigation as well as waiting - list control group that receives no treatment.

Improvement of academic performance has received a small deal of attention in Nigeria, this has been rather discouraging. The results of this study suggest new approach to the problem. Study method courses are usually based on organising, but is that of any avail to a student lacking high n-achievement and thus the ruthless kind of motivation necessary for the success of the organising strategy? Counsellors, and more particularly academics, would be loth to recommend minimax reproductive strategies, yet to the student who is afraid of failing, such an anxiety - allaying strategy is very probably just what he needs.

Limitations of The Study

Certain circumstances created by the design of the study are identified as limitations in that they have affected various aspects of the internal and external validity of the investigation. It is therefore important that the limitations of this investigation be made explicit.

1. A completely adequate evaluation of therapeutic effectiveness would take into account not only the degree and rapidity with which therapeutic changes are brought about

but also the persistence of these changes after termination of therapy. The present study deals only with the degree of change over the course of therapy.

2. A degree of internal validity may have been jeopardized in that subjects were randomly assigned to treatment. Consequently, one cannot be absolutely certain of the equivalence of the experimental groups. Although a statistical check was conducted to determine equivalence in terms of academic ability, there still exists a possibility of biases resulting from the differential selection of subjects for comparison.

3. Despite an effort to control for other internal validity factors such as, maturation, testing, instrumentation, and statistical regression, there is the possibility of interaction effects among these variables which might have been mistaken for the effects of the experimental treatment variables.

4. The generalizability of the findings in the experiment may have been limited by the school status of the sample.

5. The total study also is limited by the fact that only English and Mathematics Achievement Tests among others in

the classroom were involved in the experiment. Generalizability of results to other subjects therefore, may be tennous.

6. The findings are limited to voluntary students with study habit problems. They should be generalized without further evidence to involuntary students with study habit problems.

Interpreting the present results as a confirmation of the effectiveness of the employed treatments could be challenged on the ground of demand characteristics. It could be argued that the obtained difference between the treated groups, and the control group was due to the counsellors expectation for the treated subjects to get well. Or it could be that the treated groups received special attention, irrespective of content or procedure while the controls did not. According to this a firmer conclusion regarding the effectiveness of the treatments employed could have been reached had the study included a placebo treatment control group. Obviously, the lack of a placebo control group is a limitation of studies such as the present one. Unfortunately however, there are practical as well as ethical problems which make the inclusion of this

kind of control difficult. Within these limitations, the findings of the present investigation permit the inference that group counselling procedures are very effective in improving and increasing academic achievement.

Suggestions for Further Research

For further study in this area, it is important to have replications of this study carried out, in order to confirm the effectiveness of these two group counselling strategies in fostering academic performance. Against this background, the following interrelated observations are offered:

1. There is need for more factorial and sophisticated experimental designs and statistical techniques; so as to probe more the main treatment effects of the group dynamics and group counselling strategies in fostering academic performance.

2. There is a need for investigation of specific cognitive characteristic. Whatever other qualities a counsellor may wish to promote, the production of academic abilities would seem of paramount importance. Previous investigations of cognitive characteristics

have tended to use global measures of intelligence. It is possible that the failure of such measures to explain how academic performance can be fostered, could be explained in similar terms, that is, as resulting from the use of invalid criterion variables. The exploration of different types of cognitive functioning together with the attitudinal and behavioural correlates of cognitive ability may be a more fruitful approach than that of employing a general intelligence measure.

3. There is need to explore the relationships between group development and interaction characteristics of group counselling strategies and the academic achievement of students.

In sum, the accumulation of research over several years is pointing to the fact that group counselling models mediate between personological and environmental or treatment variables on the one hand and academic achievement on the other. Many important aspects of these models obviously require further research, but it is suggested that these models might constitute a fruitful guide to teachers, counsellors, and students in controlling learning processes in the academic domain.

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APPENDIX A

SELF - APPRAISAL OF ACADEMIC ABILITY (SAAA)

PART A

Name:.....

Sex:..... Class: ..... Age: .....

School:.....

PART B

Below are some statements about school work, with which some pupils would agree and others would disagree. Please put a circle round the number which best indicates your opinion. Remember, there are no right or wrong answers.

1 = Very much applicable to me.

2 = Applicable to me.

3 = Cannot say

4 = Not applicable to me.

5 = Not applicable to me at all.

I

I can work on academic assignment for a long time without getting tired of it. 1 2 3 4 5

I take a pleasure in overcoming my academic difficulties 1 2 3 4 5

I can keep on at a difficult subject without someone urging me on 1 2 3 4 5

I usually finish most of my learning activities which I begin	1	2	3	4	5
I can enjoy a long spell of continuous learning activity	1	2	3	4	5
I stick at studying even though it seems that I'm not getting quick results	1	2	3	4	5
I usually return to an academic task which has stumped me with determination to solve it	1	2	3	4	5
I usually refuse to admit that I am tired of reading when indeed I am ...	1	2	3	4	5
I usually refuse to admit defeat at any given academic assignment	1	2	3	4	5
I will go to any length rather than be called a quitter of a given piece of academic work	1	2	3	4	5

II.

I would rather work out my plans than carry out the programme of someone else even of a person whom I respect	1	2	3	4	5
I become stubborn and resistant when others try to force me to do things	1	2	3	4	5
I try to work out things for myself if I am in trouble	1	2	3	4	5

I argue reasonably against people who attempt to assert their authority over me	1	2	3	4	5
I prefer to do my own planning alone rather than with others	1	2	3	4	5
I go my own way, regardless of the opinion of others	1	2	3	4	5
I prefer to work on my own ...	1	2	3	4	5
I would rather go without something than ask for a favour	1	2	3	4	5
If necessary, I could get along quite well without friends	1	2	3	4	5
I occasionally say "No" when others offer to help me	1	2	3	4	5

III

I get on very well at school with teachers and fellow students	1	2	3	4	5
I think that the subjects we study at school are very interesting ...	1	2	3	4	5
I believe that students who can stay on at school are lucky	1	2	3	4	5
I think that what is taught at school is very important	1	2	3	4	5

I shall stay on at school as long as I can	1	2	3	4	5
I like some school subjects enough to read about them in my spare time ...	1	2	3	4	5
I am happy when I am learning about school subjects	1	2	3	4	5
I would rather work out things involving thinking	1	2	3	4	5
If I could choose, I would rather come to school than go to work ...	1	2	3	4	5
The day passes very quickly when I am at school	1	2	3	4	5

APPENDIX B

ENGLISH ACHIEVEMENT TEST (EAT)

ENGLISH LANGUAGE

Instructions should be carefully read.

INSTRUCTIONS

1. Use pencil throughout.

2. Write clearly; your name

At the beginning of each Section, there is an instruction as to what you should do, make sure you go through the instruction before you start answering the questions.

Attempt All Questions

If you wish to change an answer, erase your first answer completely and shade the appropriate space for the new answer.

SECTION A

ESSAY AND LETTER WRITING

I

1. Your teacher asked you to write an essay on your best friend; this type of writing would be:

   (a) An expository essay

   (b) A narrative essay

   (c) A descriptive essay

   (d) An argumentative essay

2. To which type of essay will you group the following title:-

   "Should soldiers be drafted to schools?"

   (a) Narrative (c) Argumentative

   (b) Descriptive (d) Question

3. Which of the following statements is correct?

   (a) A good essay has an outline, paragraphs sequential order of ideas and mechanical accuracy.

   (b) A good essay requires ability to use big words and paragraphs.

   (c) A good essay requires formal language registers of words and jargons.

   (d) A good essay requires a well layout only

4. Which of the following is correct?

(a) An essay is a piece of writing in prose from which may be used to argue, to narrate a story, describe a scene or inform a reader.

(b) An essay is any type of writing which may be used to argue, narrate describe or explain something to a reader.

(c) An essay is a sequential order of telling a story, describing a place, convincing a person or explaining an idea to a reader.

(d) An essay is a piece of writing.

5. Which of the following should be the first in outlining an essay?

(a) Organizing the main ideas and details into paragraph units.

(b) Arranging paragraph units in logical order for eassy.

(c) Listing details of general ideas.

(d) Identifying general ideas.

II

6. A formal letter differs from an informal letter in that formal letter requires the use of:-

(a) Formal language

(b) Abbreviated language

(c) Jargon language

(d) Informal language.

7. Dear Sir,

I have received your letter of 24th June and in reply to your query I should like to inform you that .....

A letter that begins in this way would most likely be written by:

a - a student

b - a worker in an establishment

c - a house wife

d - a gardener

An idiom is underlined in each of the sentences below; find under each sentence the group of words that gives the meaning nearest to that of the idom:

8. Tola gave Ade cold comfort

a. wet comfort

b. little comfort

c. no comfort at all

d. affectionate comfort

9. He escaped the accident by a hair's breadth

a. by a wide margin b. by jumping

c. by holding on to a person's hair

d. by a narrow margin.

10. The old woman kicked the bucket yesterday.

a. died c. removed the bucket

b. stumbled upon a bucket d. fainted.

11. SECTION B

COMPREHENSION AND SUMMARY

Read the following passage and answer the questions that follow. Choose the correct answer from the alternatives lettered A to D.

One day Tortoise was coming home from his brother's place dragging a bundle of salt wrapped up in a bark cloth. Suddenly he found that he could not pull the bundle and when he looked around he saw a large lizard sitting on the bundle. "Get off my salt" said Tortoise. "Your salt?" replied Lizard. "It is not your salt, its mine I found it here on the ground".

They argued for some time, and Lizard refused to get off unless Tortoise went with him to the elders to let them try the case and decide whose salt it was. So Tortoise and Lizard went along to see the elders.

Tortoise explained that because his arms and legs were so short, he could not carry bundles but had to drag them behind him. Lizard argued that he had picked the salt up on the road and that anyone who found anything lying about could keep it.

The elders thought for some time and they ruled that the salt should be cut in half and that each one should have a half. This was done, and immediately Lizard grabbed his half, scattering Tortoise's half all over the place so that he lost most of it.

Some time later Tortoise thought of a plan to get his own back on Lizard. He walked along the path until he saw Lizard lying asleep on a rock in the sun. Tortoise whent up and grabbed him by the waist. "Put me down!" said Lizard. "See what I have found" cried Tortoise. "I was walking along the road and I found this lizard lying there and now he belongs to me".

Lizard wriggled and wriggled but Tortoise would not put him down until he argreed to go along to the elders. The elders listened to the story and as they wanted to be fair, they said that they must give the same decision as the other day. "The Lizard must be cut in half and the Tortoise can have half", they said. And before Lizard could say anything Tortoise smatched a knife and cut him in half. And that was the end of the greedy Lizard.

11. A suitable title for this passage is:-

(a) A liar should never be trusted"

(b) "The bag of salt"

(c) "Wickedness gets its own reward"

(d) "The Court case".

12. Tortoise was dragging the bundle of salt along the ground because

(a) It was too heavy for him to carry

(b) His build made it difficult for him to carry things.

(c) His brother had wrapped it up for him in back cloth.

(d) His arms and legs soon got tired.

13. Lizard argued to the court that the salt was his because

(a) Tortoise had agreed to come to the court.

(b) He had found it lying on the road.

(c) Tortoise was unable to carry the salt.

(d) He had sat on it to stop Tortoise from taking it away.

14. Tortoise plan was to:-

(a) Be carried out behind Lizard back.

(b) Make Lizard return to where he had come from.

(c) Help Tortoise get his revenge on Lizard.

(d) Get his salt back.

15. Tortoise's plan against Lizard could be described as:-

(a) Shrewed

(b) Stupid

(c) Complicated

(d) Humurous

16. The elders ruled that Lizard should be cut in half because they:

(a) Were friends of Tortoise

(b) Liked to punish people

(c) Knew that Lizard had deceived them.

(d) Thought this was the only right thing to do.

17. Tortoise pretended to find Lizard in the very same way that Lizard had pretended to find Tortoise's bag of salt. Why?

(a) To show that he was just as clever as Lizard.

(b) To play a joke on Lizard

(c) To show the elders how stupid Lizard was.

(d) To force the elders into making the same decision.

18. It is obvious from the way he spoke and acted that Lizard was a

(a) Fool (c) Friend

(b) Liar (d) Lawyer

19. The sort of person who would be very like Lizard in the story would be the person who:-

(a) Likes to take advantages of people

(b) Likes to play silly jokes on others.

(c) Considers himself inferior to others.

(d) Is always taking people to court.

20. Which of the following pairs of words could best be used to describe Lizard?

(a) Unreliable and unsettled.

(b) Untruthful and unfortunate.

(c) Unthinking and unfortunate.

(d) Unfriendly and unco-operative.

21. Which of the following proverbs could be best applied to this passage?

(a) A stich in time saves nine.

(b) Birds of a feather flock together.

(c) He who laughs last laughs longest.

(d) Make hay while the sun shines.

22. What do you consider is the main purpose of this story?

(a) To teach people that dishonesty does not pay.

(b) To tell people how clever some animals are.

(c) To show people how to treat their enemies.

(d) To make people laugh at other people's misfortune.

Choose from the list lettered A to D the one nearest in meaning to the underlined word(s) in the passage.

23. Anthing lying about

(a) Any lost article

(b) Anybody telling lies about

(c) Anything lying asleep

(d) Anything lying outside.

24. Ruled

(a) Measure with a rule

(b) Cut with a ruler

(c) Agreed

(d) Decided

25. Grabbed him by the waist

(a) Touched his waist

(b) Held him by the waist

(c) Seized him by the waist

(d) Came from the west and grabbed him.

SECTION C

GRAMMAR (LEXIS AND STRUCTURED)

Choose the word or phrase from option A -- E which has the nearest meaning to the underlined word or words in each sentence.

26. When you go to a foreign country to study, you will discover that life is not always a bed of roses.

(a) As pleasant as one thought

(b) A bed without roses

(c) An unmitigated disappointment

(d) As expected

(e) Uncomfortable.

27. "John, if your mother catches you playing in the filthy mud like that you will really be in hot water"

This means that if John's mother catches him. he will-

(a) Have to wash in hot water

(b) Be in serious trouble

(c) Feel terribly ashamed.

(d) Be punished by having hot weter thrown over him.

(e) Be made to feel foolish.

28. That is _____ story I have ever heard.

(a) That riduclousest (b) The ridiculous

(c) The most ridiculous (d) Most ridiculous

29. I shall telephone you when I _____ back next week.

(a) Will have come (c) Had come

(b) Come (d) Would come

In the following passage the numbered gaps indicate missing words. Against each number in the list below five choices are offered in the columns lettered A to D. For each question, choose the world that is the most suitable to fill the numbered gap in the passage.

A new housing 30 is being developed just across the road. At first we were deafened by the roaring of bull-dozers levelling the ground and swoping out new roads. Gangs of labourers followed to dig the 31, mix cement, pour concrete and operate noixy machines. Gradually the walls rose and the 32 design became clear. Some houses were bungalows, others had two 33, all had verandas. The roofs were made of 34 asbestors sheets which were hammmered onto the wooden rafters by the highly skilled Capenters. It was soon the turn of plasterers, plumbers, painters and electricians to invade the site. Finally huge lorries drove in with shinning

new gadgets and furniture, and now all is ready for the first 35 to move in.

	A	B	C	D
30.	Compound	Plan	Estate	Land
31.	Groundwork	Foundations	Holes	Drains
32.	Architect's	Planner's	Contractor's	Builder's
33.	Levels	Layers	Rooms	Storeys
34.	Lacerated	Corrugated	Undulating	Uneven
35.	Renters	Dwellers	Tenants	Applicants.

Choose the word which is nearest in meaning to the underlined word(s) in the sentence.

36. Charles was the sort of person who always looked on the bright side of life

(a) Illuminated (c) Brilliant

(b) Cheerful (d) Laughable

37. The first explorers of central Australia suffered almost incredible hardships –

(a) Irrational (c) Insensible

(b) Unbelievable (d) Unlikely

38. I am very sorry for being late but I was held up by the traffic.

(a) Prevented (b) Confused

(c) Delayed (d) Arrested

Choose an antonym of the underlined words from the list of words lettered A - D.

39. The nurse was very gentle with her patients.

(a) Rude (c) Rough

(b) Bad-mannered (d) Unkind

40. The famous musician was once an organist in a small Village Church.

(a) Opaque (c) Immature

(b) Illiterate (d) Obscure

41. Victoria was inclined to take her studies rather too lightly.

(a) Gloomily (c) Seriously

(b) Heavily (d) Weightily

Choose from the list lettered A to D to complete the following sentences:-

42. There is a book lying on the floor but I don't know _____ it is.

(a) Of whom (c) Who

(b) Whose (d) Who of

43. There are _____ oranges in the market this season than last.

(a) More few (c) Fewer

(b) Lesser (d) More less

44. There is only _____ sugar lef in the bowl.

(a) Small (c) A little

(b) A few (d) Less

45. The speaker said, "_____ this occasion we should all be happy".

(a) In (c) At

(b) With (d) On

After each of the following sentences a list of possible interpretations of all or part of the sentence is given. Choose which interpretation you consider most appropriate for each sentence.

46. The doctor asked whether the patient had turned round the corner. In other words he wanted to know if the patient -

(a) Was getting worse

(b) Had started to get better

(c) Had gone to sleep

(d) Had been removed to another bed.

47. He flew off the handle at what she said. This means that he

(a) Performed a miraculous feet

(b) Became very warned

(c) Lost his temper

(d) Threw off the handle

48. He went away bag and baggage. This means -

(a) With only one suitcase

(b) With his books in his bag

(c) With nothing.

(d) With all his belonging.

49. Our bone of contention is personal. This means

(a) Battle ground
(b) Subject of dispute
(c) What we intend to do
(d) Bone in our body.

50. In order to understand the poetry, a reader must read between the lines. This means -

(a) Look for hidden meanings in what is written
(b) Read with little concentration.
(c) Be an experienced person.
(d) Have specialist knowledge.

APPENDIX C

MATHEMATICS ACHIEVEMENT TEST (MAT)

INSTRUCTIONS

Attempt all questions. For every question there are four alternatives lettered A to D. Choose the letter which bears the most correct answer. And then on the answer sheet provided, shade the letter against the number of the question.

SECTION A

1. Simplify $\frac{(0.2)^3 \times 30}{(0.4)^2}$

A. 0.15 (B) 1.5 (C) 15 (D) 7.5

2. Express 0.00050674 correct to 3 significant figures -

A. 0.005 B. 0.00506

C. 0.0005067 D. 0.00507

3. Calculate in litres, the cubic capacity of a tank 3.2 metres long, 2.1 metres wide and 0.75 metre deep.
(1 litre = 1000 Cm^3)

A. 336 litres C. 504 litres

B. 470.4 litres D. 5040 litres

4. Evaluate $\sqrt[3]{\frac{218}{3.12}}$

A. 4.119 C. 4.019

B. 4.219 D. 4.989

5. Evaluate $10.33^2 - 9.67^2$

A. 0.66 C. 19.34

B. 13.20 D. 20.00

6. The diagram below shows a water tank in the farm of a cuboid with the dimensions as shown -
Find the amount of water it will contain.

N.B.:- 1000 Cm^3 = 1 litre.

A. 96 litres C. 9,600 litres

B. 960 litres D. 96,000 litres

7. A flagpole 6.3 m long is driven 1.4m long into the ground. What fraction of the pole is above the ground?

(A) 2/7 B. 5/7 C. 2/9 D. 7/9.

8. Evaluate (½ of 38):- (21/3-3½)

A. 3½ B. 6 C. 7½ D. 11½

9. A goat is tethered by a rope 13 m long to a post which is 12 m from a fence, what length of the fence is with reach of the goat?

A. 5m B. 10m C. 13m D. 12m.

10. Find the circumference of a circle with radious 28 Cm.

A. 28 C. 28^2

B. 56 D. 14

11. The length of a rectangle is three times its width. If the perimeter is 72 cm. Calculate the width of the rectangle.

A. 4 cm B. 9 cm C. 12 D 18 cm

12. In ten year's time, a father will be twice as old as his son, ten years ago he was six times as old; how old are they both now?

A. 25½ years 12½ years C. - 30 years; 10 years

B. 30 years; 10 years D. 40 years; 15 years

13. Gbenga spent 1/3 of his pocket money on food. If ¼ of what remained went on books, what fraction of his money, was left?

A. 1/6 B. 1/3 C. 1/7 D. ½

14. Evaluate $\frac{3.68 \times 3.96}{91.38}$ correct to three places of decimal.

A. 0.1594 C. 0.159

B. 0.1595 D. 159

15. If the distance varies directly as the time, when a car travels 100 km, it takes 2 hours. How long will it take the same car (with the same speed) to travel 150 km.

A. 100 hours C. 3 hours

B. 2 hours D. 50 hours

SECTION B

16. Expand the following term $(-3a^2b)(-b^2)$

A. $3a^2b-b^2$ C. $3a^2b-b^2$

B. $3a^2b^3$ D. $3a^2b^3$

17. Expand $(a + 3)(a-4)$

A. $a^2 + 7a + 12$ B. $a^2-7a - 12$

C. $a^2 + a - 12$ D. $a^2 - a - 12$

18. Factorise the following term $2mu - mv - 3m$

A. $m(2u - v) - 3m$ C. $2mu - m(v - 3)$

B. $m(2u - v - 3m)$ D. $m(2u - v) - 3$

19 Solve the following equation - 5 = U + 2

A. 3 B. 7 C. 10 D. 5

20. $\frac{1}{11}X + 3 = 3$ implies that X =

A. 66 B. 33 C. 0. D. - 33

21. If V = U + at, find the value of V ifu = -6, a = -2, t = 4

A. 14 B. -14 C. 2. D. -2

22. The value of B, if a = -2, C = 3 in 3a - 4B + C = 9 is -

A. 3 B. $-3\frac{3}{4}$ C. -3 D. $3\frac{3}{4}$

23. Solve the following systems of simultaneous equations,

= 2 - y = 5; y = 3 - 7

A. (1, 2) C. (-2, 1)

B. (2, 1) D. (2, - 1)

24. The sum of two numbers is 19 and their difference is 5. Find the numbers

A. (12, 7) C. (-12, -7)

B. (7, 12) D. (12, - 7)

25. A woman is three times as old as her daughter and 8 years ago, the product of their ages was 112. Find their present ages.

A. (12 years, $\frac{3}{4}$ years) C. (-12 years, $\frac{3}{4}$ years)

B. (36 years, 12 years) D. (4 years, 12 years)

26. Factorise $6X^2 + 11Xy + 4y^2$

A. (6X+4y) (X+y) C. (3X+y)(2X+4y)

B. (6X+y) (X+4y) D. (3X+46)(2X+y)

27. The formula for solving a quadratic equation is -

A. $\frac{C \pm \sqrt{a^2 - 4ac}}{2A}$ C. $\frac{b^2 \pm \sqrt{a - 4ac}}{2A}$

B. $\frac{-b \pm \sqrt[2A]{b^2 - 4ac}}{2A}$ D. $C^2 \pm \sqrt{C^2 - 4bc}$

28. For the equation $2y = aX^2 + 1$, $y = 2$ when $X = 1$; find y when $X = 3$.

A. 23 B. 14 C. 12 D 5

29. Find two consecutive numbers, such that the sum of their squares is equal to 145

A. 9 and 8 C. 6 and 5

B. -9 and 8 D. 10 and 9

30. Multiply $(3 + a)$ by $(5 - 2a)$

A. $15 - a - 2a^2$ C. $2a^2 - a + 15$

B. $15 - a^2 - 2a$ D. $2a^2 - a - 15$

SECTION C

31. Which of the following is not a property of a parallelogram?

A. Both pairs of opposite sides are parallel

B. Both pairs of opposite sides are equal

C. Both pairs of opposite angles are equal

D. None of the above.

32. In the following figure, to find relationship between X and y -,

we use the axion that

A. Corresponding angles are equal

B. Alternate angles are equal

C. Vertical opposite angles are equal

D. None of the above.

33. Which of the following equation is correct about the figure below? (Arrows indicate parallel lines)

A. $y = q$

B. $X = y$

C. $P + q = X + y$

D. $q + X = P + y$

34. What is the sum of the exterior angle of a polygon of n sides?

A. 4 rt. angles C. 2n rt angles

B. (2n - 4) rt angles D. None of the above.

35. If an exterior angle of a polygon is 30°, how many sides has the polygon?

A. 8 B. 12 C. 6 D. 10

36. What is the sum of the interior angles of a regular convex polygon of 9 sides?

A. 540° C. 14 rt. angles

B. (2n - 4) rt. angles D. 18 rt. angles

37. Study the following diagram carefully and find the relationship between f, p , d, e.

A. f = P + d + e

B. f = P + d

C. P = f - d + e

D. f = P + (d - e)

38. A regular convex polygon has each of its interior angle.

A. Equal to the exterior Angle

B. Double the exterior angle

C. Less than the exterior angle

D. Less than two right angles

39. The angles of a pentagon are X, 2X, $X+30^{\circ}$, $X - 10^{\circ}$, $X + 40^{\circ}$, find the value of X

A. 80° B. 60° C. 72° D. 50°

40. The diagonals of a Rhombus bisect each other at

A. 45° B. 60° C. 30° D. 90°

41. The size of a cetain angle is 30° how many such angles make up 4 right angles.

A. 12 B. 30 C. 22 D. 10

42. Find X° in the diagram below

A. 55°

B. 65°

C. 60°

D. 40°

43. The angles of a triangle are:- $(Z - 10)^{\circ}$, $(Z + 20)^{\circ}$ and $(Z + 20)^{\circ}$, the value of Z is

A. 50 B. 30 C. 20. D. 10.

44. One angle is three times another, if the angles are supplementary they are:-

A. 50 and 130 C. 60 and 120

B. 60 and 135 D. 45 and 145

45. All vertical opposite angles formed by the intersection of two straight lines are:

A. Obtuse angles C. Equal

E. Opposite D. Right angles.

SECTION D

Questions 46 - 50 are based on the line graph above.

46. During what month of 1937 were more hogs sold than in the corresponding month of 1938?

A. January C. June

B. March D. December

47. During what month in the latter part of 1937 aid the sales again reach the January level?

A. February C. May

B. March D. November.

48. Which seems the safest conclusion to draw from this graph?

A. The price of hogsis highest in December.

B. The number of hogs being marketed is steadily increasing.

C. Late rainny season and early dry season are the chief hog marketing months.

D. August is the poorest month to market hogs.

49. During what one-month period was there the sharpest decline in number of hogs marketed?

A. From April to May 1937

B. From January to February 1938

C. From July to August, 1937.

D. From December to January 1938.

50. During what period was there no increment in the sales of hogs?

A. From May to June 1937

B. From May to July 1937

C. From July to August 1938

D. From June to August 1937.

APPENDIX D

MODEL-REINFORCEMENT GROUP COUNSELLING THERAPEUTIC PROGRAMME

EFFECTIVE STUDY BEHAVIOUR

1. General Study behaviour

(A) Proper Setting.

I Place = has a location which is conducive to concentration; which is free from auditory and visual distraction; and which provides optimal comfort (i.e. proper lighting; ventilation and temperature but not so relaxing that drowsness results)

II Time = Schedules himself so that class time plus study time totals not more than 10 hours a day. Students not less than 45 hour nor more than 60 hours each week. Works efficiently (tries for 60 - 90 minutes of concentrated study at a time then takes a short break). Tries to predict the amount of time he should be taking for certain tasks (this probably will vary for his different subjects) and

tries to do his work in the predicted time. Studies early in the day rather than late at night.

(B) Proper Strategy

I Uses a study schedule

II Assignment procedure =

(a) Records assignments in a book. Has a clear conception of what is required and for when it must be completed. If he is not sure he asks questions from his teachers.

(b) Gathers necessary materials. Uses all available resources. Asks librarians and teachers for assistance in locating the most appropriate materials.

(c) Records information on 3" x 5" note cards which can be arranged advantageously.

(d) For essay writing, makes a rough outline first. Use large blocks of time when he begins to write. Writes quickly for the rough draft. Put it aside for 24 hours; then rewrites it. Has someone else read his essay and discusses their comments. Leaves essay for another 48 hours,

then prepares final draft.

(e) Does his most difficult assignments during his best concentration periods. Saves his rewriting tasks for periods when his concentration is not as good. Tries simpler assignments first; therefore building up his confidence.

III. Study Procedures =

(a) Schedules definite times and outlines specific goals for his study time. Allows at least two hours for every subject each week for a review of notes and text contents.

(b) Surveys a book before he begins reading it. Surveys each chapter before he begins reading it. Briefly looks at all the material that he will be reading during an alloted period of study time.

(c) Asks questions about what should be learned during the study time.

(d) Reads material. Notes important items of information. Looks for answers to the questions he posed. Realises that scanning is sufficient in certain areas, while in other places he may

need to read more analytically.

(e) Goes over the content which he wants to remember. Prepares notes on it in order to help his memory.

(f) Asks further questions and then re-surveys the material.

2. Specialised Study Behaviour

(A) Interactive participation in class

I Asks the teacher questions when clarification of certain points taught is needed.

II Volunteers answers to questions posed by teacher in the class.

III Participates in class discussions.

(B) Interactive participation out of class.

I Asks the teacher for clarification of topics taught or assignments, or for comments on questions which have arisen from the student's studies.

II Engages in formal or informal discussions with class-mates on topics relevant to his courses. Clarifies points which had not been clear during class-room periods or laboratories. Reviews subjects content with other students.

III Interacts with other resource persons on the school compound (for example, librarians, group leaders, laboratory assistants) or in the community.

(C) Note-taking behaviour.

I Previews the topic to be taught before he goes to class.

II Rereads last few days' notes before the class begins.

III Listens first, writes second

IV Uses the margins of his paper for headings; writes his note in the body of the page.

V Writes neatly

VI Makes special notes of content which the teacher stresses.

(1) Examination behaviour.

I Starts preparation early; follows "Study precedures" mentioned above.

II Makes note of teacher's hints concerning examination content or format.

III Discusses with classmates the areas of subject which they think are most relevant for the examination.

IV Reviews past questions papers.

V Prepares sample test questions while he studies. Administers these to himself the day before the examination and corrects his responses.

VI On the day of the examination, he is on time; reads the questions carefully; schedules his time for each question; meets his schedule; begins with the easier test items in order to build up his confidence.

VII If he finds himself tensing during the examination, closes his eyes and tries to relax for a moment. Does this by thinking of a relaxing thought. Then goes back to work.

VIII Before an examination, does not induce anxiety by talking to fellow students whose questions or apparent mastery of the subject, will upset him.

IX Writes neatly.

The major task of the first session was for each group to create a comprehensive model from the written handout which they, as a group, could then seek to emulate. By the end of this first session each subject selects one detail from their written group model that he is going to

practice during the week. To help each subject remember and to generate commitment, before the session ends, each subject is to make a written note of what he plans to practice. In addition, each student is asked to keep a written record of what he actually does day by day concerning his performance of what he is practising.

APPENDIX E

DESENSITIZATION GROUP COUNSELLING THERAPEUTIC PROGRAMME

/B/ Desensitization Group Counselling.

This procedure involves systematic desensitization A standardised group hierarchy is developed and modified by suggestions from students. The items to be chosen for the common hierarchy progressing from the least anxiety-provoking to the most anxiety-provoking would be as follows:

Group Anxiety Hierarchy

(1) Now imagine yourself leaving for the school compound on a bright, warm day. Just take the trip comfortably and leisurely until you get to the building where your class is.

(2) Next, imagine yourself in a class. This is one you have enjoyed a lot. It is informative, yet entertaining. See yourself as you sit at your desk watching your teacher. Relive that experience as vividly as possible.

(3) Go on to imagine yourself leaving the class carrying your notes and texts. Then you stop to talk to a close friend and you decide to tell him all about the class you just came out of.

(4) Now imagine yourself arriving at your residence carrying your books, feeling good. Just go through the door and take your books to the place where you study and look around the room while you put your books down.

(5) You have just enjoyed a good meal and a little relaxation afterwards. Go to your study area and imagine yourself working very hard and productively for three hours.

(6) Imagine yourself studying hard in your favourite area and all of a sudden there is a lot of noise. Stop, hear the noise, then return to studying hard.

(7) Picture yourself in a lesson where the teacher is really boring. It's a waste of time for you to be there.

(8) Now imagine yourself in the same boring class, but the person next to you speaks up and asks a question.

This livens things up and the lesson takes and added interest.

(9) Imagine yourself at the beginning of the session in a new class with the teacher telling all of you what a tough subject he teaches is, and what a hard marker he is.

(10) Next, assume that you have in favourite study place, working hard on this difficult subject and feeling very productive. The information is being learned and you enjoy the feeling.

(11) The next day you are feeling confident as you walk into the examination in this subject. You look at the paper and you get a terrific feeling because you know the answers.

(12) Now you are getting back the paper. You have a good mark. You feel so good that you want to know the class average, so you ask for this information.

(13) Imagine yourself later that night preparing for your next examination, studying as hard as you can, but you can't seem to grasp the materials; however you continue working at it.

(14) The next morning you are talking to a friend just outside the examination room. He asks you a question about one of the basic principles in the subject and you can't give him an answer.

(15) Imagine yourself in the examination room reading the paper, and you cannot answer anything. You realise how important this test is for you.

(16) You are in the examination room. You have been siting looking at the paper. Nothing is coming. Time is flying by and you aren't writing anything down.

(17) Because you are not doing anything people are turning around and starring at you. As the invigilator comes toward you he is laughing, seemingly making fun of your behaviour.

(18) Imagine two people you really like sort of sneering at you and intimating that you are stupid as you tell them you have been asked to leave the school because of your failing grades.

All subjects in this second treatment are also to receive copies of the written model and also review

copies of the written model and also review the details of the model. Again, as in the first treatment, subjects would also indicate specifically what they plan to practice during the forthcoming week.

Begining Desensitization With Relaxation

Following presentation of the model, the following outline would now be used by the therapist during the first session:

/A/ Desentization Retionale And General Procedure.

(1) The belief is that, it is very possible that students become xcessively anxious about their study habits and that this anxiety inhibits them from performing effectively.
In other words, somehow anxiety becomes connected with various aspects of studying.

(2) Therefore, it is concluded that if students can be helped to handle, or even eliminate this anxiety, then they will be more able to perform better study habits.

(3) It will be agreed that it is impossible for a person to feel relaxed and anxious (tense, fearful) at the same time. Therefore, if we can help you learn to relax yourself - and you learn it well enough so that you are able to do it by yourself in future - then you should be able to gain control over anxiety or tenseness. Relaxation is a skill which can be improved with practice. At first, it will / take approximately 30 minutes to go through the entire procedure properly. Eventually you will be able to relax yourself in 10 - 15 minutes or even less.

(4) The basic principle is that when muscles are tensed, and then released, they go into a deeper state of relaxation. It is important to focus your thinking on the particular muscle system which you are relaxing during the exercise.

(5) The relaxation exercises also will teach you how to recognise tension and to distinguish it from relaxation and from muscle strain. By learning

how to recognise tensions you can readily eliminate them.

(6) Once you have learned to relax, we will try the second part of the procedures. When you imagine a scene in a vivid way, your nervous system will react as if you were actually behaving in that way. You will be asked to imagine a series of scenes which frequently make students anxious about studying. If you imagine these scenes while being in a relaxed state, then relaxation - not tension - should become associated with them.

(7) It is believed that if you can vividly imagine your reaction to a particular scene, then this will be the same reaction which you would have if that scene occured in real life.

(8) One is not saying that you should become overtly relaxed in all study settings. An optional degree of tension is probably necessary for good study behaviour. One is saying that if you learn to relax yourselves, then when you become tense and anxious in study settings you will be able to relax yourselves.

If the process is really effective, study settings which formerly made you tense up should no longer occasion such a result.

Relaxation training would then be conducted for the remaining portion of this initial session. The subjects would be asked to practice the exercises between sessions. While subjects are comfortably seated in their chairs with their eyes closed, they would alternately tense and relax 15 of the major voluntary muscle groups during this 30 - minutes training period. All during this time, the therapist would verbalise cues for relaxation ("Relax", "Feel Calm", "Warm and Relaxed" and so forth) in an attempt to augment the relaxed feelings accompanying the exercises. Once the complete set of exercises had been performed, the therapist counts slowly up to 20 while requesting that the subjects take deep breaths on the odd numbers and exhale on the even ones. Discussion is then to be encouraged about the nature and effectiveness of this relaxation training for each participant. Questions whould be asked for while suggestions are to be offered to those who experience difficulty relaxing.

/B/ Instructing Subjects In Densensitization

The following procedural outline would be adhered to by the therapist during the desensitization process. The outline is as follows:-

(1) Each scene will be presented for 10, 20, and 30 second intervals, preceded by instructions such as "Now imagine as vividly as possible that you ....." and followed by instructions such as "Leave that scene, and continue to concentrate on total relaxation". The item content will be repeated only for the 10 and 30 second interval.

(2) Each session will begin by re-presentation of the final scene visualised by the group during the previous session. Each session will end only with the successful presentation of a scene. If subjects cannot handle a scene without anxiety, and the time is almost up, then, the subject would have to go back to a scene lower on the hierarchy and present this one. No new item would be introduced within the last four minutes of a session.

(3) Between presentations of the same scene, the therapist would allow for about 20 seconds of continued relaxation. Instructions about relaxation, letting go, or counting

up to six with subjects breathing in on the odd numbers and out on the even ones, or all of these will be used in order to help the group members, attain more relaxed conditions.

(4) Group members would raise their left index fingers if they feel themselves becoming less relaxed or becoming afraid. The therapist would remind them of this each session, as well as remind them to try to imagine each scene for as long as they have time.

(5) About 45 seconds would be taken between the presentation of different hierarchy items.

(6) When a group member signals anxiety, the whole group will be asked to "stop imaging that scene". The therapist would then help the members get relaxed again either by relaxation instructions or by having them imagine a scene which they find is very relaxing. Then he will say, "Just signal by raising your right index finger when you have returned to a relaxed state". Once they have all relaxed again, he will have them think only about staying in that state. If they relax, the therapist may have to repeat the

the counting-to-20 and deep breathing exercise.

(7) After the anxiety signal on an item, the therapist will always continue with that same item for the same time interval. If anxiety recurs, he will ask the group to leave that scene and relax. Then he will go back and represent the last scene which they all successfully handled. He will work back up to the anxiety-eliciting scene.

(8) If anxiety is signaled for a third time, on the same time interval, first the therapist will have the group imagine it for an intermediary time period - that is, 5, 15, 20 or 25 seconds - whichever applies. If the anxiety persists, the therapist will have to employ intermittent scenes (one may suffice) which represent modifications of the hierarchy items. He will present them for the regular time intervals. If this does not work, it will be necessary to talk with the group members in an effort to identify the anxiety cues in the scene. During the third through the seventh sessions the

groups should work through the items on the group hierarchy. The following agenda for each session is to be followed.

1. (5 - 10 minutes)

   Open discussion of points from previous sessions and subjects' comments regarding study - related experiences which have occured during the interim between recent sessions.

2. (10 minutes)

   Muscular relaxation procedures using selected exercises plus relaxation deepening instructions through counting-to-20 while deep breathing on odd numbers.

3. (25 minutes)

   Visualisation of scenes from specified hierarchy of items.

4. (5 - 10 minutes)

   Bring group members back to a normal - that is, no tension - state by reversing the relaxation deepening instructions and omitting the deep breathing. The therapist would conduct any summary discussion which seems necessary including study problems they may wish to discuss.