

*Full Length Research Paper*

# Enhancing the research prowess of emotionally tensed distance learners (DLS) through three behaviour techniques

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**Understanding the relationship between learners' emotions and how they achieve academically is a regular research emphasis. And in particular, knowing how to select adequate Behaviour Techniques (BTS) and subsume that in psychotherapy to enhance the academic potentials of the Distant Learners (DLS) still constitute a challenge. Participants in the study are 1057 DLS graduates of the four academic sessions (1997, 1998, 1999 and 2000) in Education and Guidance and Counselling Baccalaureate Programme, University of Ibadan, Nigeria. Using the Quasi-experimental and causal comparative research designs, participants were grouped along four interventions, with three BTS and the Control (CT); and were exposed to a four-week, face-to-face classroom lecture/review format. Adopting the descriptive statistics and ANCOVAR at the alpha level of 0.05, the findings showed that participants exposed to RT combined with AM(X=73.43) did better as compared to RT(X=71.23); REBT(X=69.56), AM (X=54.3) and the control(X=48.02) alone and was significant [F (3, 1053) =7.52; P<0.05] respectively. Overall, it further showed that participants' research prowess improved tremendously with a significant treatment effect [F (7, 1049) =5.01; P<0.05].**

**Key word:** Behaviour techniques, reframing, rational emotional behaviour technique, psychotherapies, assignment method, distance learners.

## INTRODUCTION

The benefits of behaviour techniques (BTS), otherwise, subsumed in psychotherapies, through skills empowerment, acquisition and, or enhancement have been notable following intervention studies. In multiple areas involving interpersonal, career/vocational and academic needs for instance, psychotherapy gains are quite revealing as evidences in studies (Woods, 1991; Seligman, 1995; Kellert and Beail, 1997; Lazarus, 1997; Adeyemo, 1998; Chambless and Ollendick, 2001; Barlow, 2002; Deacon and Abramowitz, 2004; Netz et al., 2005; Kame'enui, Fuchs, Francis, Good III, O'Connor et al, 2006) continue to indicate. Using selected psychotherapies and, or BTS therefore, in especially enhancing the skills of emotionally tensed and disturbed Distance Learners (DLS) in research methodology/project can therefore be a welcome gesture and beneficial.

Emotional tensions are the series of intermittent fears and, or worries that learners experience and which, some time may impede their ability to learn maximally especially when they are stressed. These fears and, or anxieties, do arise some times when learners find it difficult to comprehend and process necessary information directly related to their academic achievement and, or performance and especially, in research/project requirements. Some how, the academic expectation of the DLS may be exaggerated by academic programme facilitators. Programmes' facilitators (PF), usually, because the DLS are mainly adults, erroneously also believed that they should learn quickly and be able to process and recall needed information better than the learners in the "conventional University programmes' who may be younger and inexperienced.

Unfortunately, although the DLS may be older and have had quite lot of life experiences, a large number of this group of individuals have however left school for quite some time, have differential-age levels, married and are additionally encumbered with both work and family problems. With the obvious background from which the DLS are coming, therefore, adjusting easily to the rigours of academic activities and especially educational research may not be easy, especially after they have left schools for a long time. Part of their emotional stress and or worries, arising from research project, involves how to effectively construct/develop adequate research measures, use of designs and statistical methods as well as discussion of findings. Paramount in the research and evaluation skills requirement is on how appropriate and feasible a research topic could be developed without difficulties that would compromise the learners' potentials for early completion of their academic programme. Some other related problems which the DLS may have, are those which involve how to access relevant library materials as well as the retrieval of data for literature review. Thus, without doubt therefore, and with the apparent anxieties that learners manifest on getting to their final years, adequate method for demystifying their emotional tension is often regarded as appropriate in enhancing their chances of early completion and academic success.

Understanding the predicaments of the DLS therefore, three selected and inter-related behavioural techniques (BTS) subsumed psychotherapeutically (that is, Reframing, Rational Emotive and Assignment techniques) were adopted for their relative effectiveness in ameliorating learners academic challenges (that is, emotional tension and deficiencies in research methodology skills). These BTS have had therapy application and utility, intermittently and combinatorially incorporating the use of assignments at different therapy stages with profound outcomes. The simultaneous application of assignment methods (AM) and Rational Emotive Behaviour Technique (REBT) for example, in (Ellis, 1991; Osiki, 1999) were therapeutically productive in facilitating qualitative ability of graduate university students enrolled in both academic and professional Masters' Degree Programmes (Osiki, 1999). Other studies reporting similar therapy gains and with the use of the REBT and AM are (Woods, 1991) on self-acceptance, condemnation and self-worth; while Hauck (1991) study, emphasized on assertiveness. In reporting the gains of Reframing Technique (RT), Haley (1986) indicated the differential-values derived in its application in interpersonal relationship, business, creative dimension; but self-enhancing values in Schultz and Zeleny (2003). Others reported effective conflict resolution (Spangler, 2003) and public participation in meeting basic goals (Innes and Booher, 2004) respectively.

Learners in the Distance Learning Programmes (DLP), as part of their Degree Certification, are often expected to compile and write a field report in the form of either a pro-

ject and, or dissertation before graduation. To be adequately prepared and qualified to compile such field reports, all category of distance learners (DLS) would mandatorily register and obtain a credit pass in a Research Methodology Course. Obtaining the required pass mark and successfully conducting the research work, prior to certification, are two important academic areas that most learners, especially the DLS dread most.

Research methodology and, or research project/methodology which involves statistics, is usually taught in the final years of the DLP just as it is the case, with the conventional university programmes. Considering the fact that most learners, and in particular those of the DLS dread studies involving any quantitative methods, and as implicated in research methodology courses, learners often get emotionally tensed whenever they are in their final years, where both the research methodology course and project reports would be compiled for submission.

### **Confounders in psychotherapies**

The arguments for the relevance and, or direct effectiveness of psychotherapies has often been debated due to the possible effect of a placebo as well as other incidental outcome (Otherwise, results) on automation and halo effects in experimental studies. In control-trials as in medicines and related investigations (that is, psychotherapy), the effects of experimental confounders may be reduced to the barest minimum when experimental subjects are due to randomization (Buckwalter and Maas, 1990; Osiki, 2000) as well as the computational application of the ANOVAR (otherwise, ANCOVAR). To doubt the outcome of psychotherapy investigations is to equate it along with efficacy studies where participation is only due to restricted manipulation and very short lived and limited outcomes. Individuals in any institution and who perhaps, are diagnosed for learning difficulty (and a concomitant emotional tension) could be exposed to, and managed with varied psychotherapies following the assessment of their academic problems and particularly, in relation to research skills and methodology.

Comparing the differences between efficacy studies and psychotherapies however, Seligman (1995) argued that efficacy study could be a wrong method for empirically validating psychotherapy since it omits many crucial elements of what is actually done on the field. For specificity, Seligman reasoned that it is unfathomable to think on the actual completion of a scientifically compelling efficacy study of a treatment that has variable duration and self-correcting improvisations and that is aimed at improved quality of life as well as symptom relief, with patients (otherwise, clients) who were not randomly assigned and who had multiple problems. Embarking on mere efficacy studies could only prove futile as only psychotherapy could successfully undertake a task that could sustain lasting dividends.

Although the selection of study sample may ably follows some criteria as well as basic experimental conditions, the screening of participants to benefit from psychotherapy can have empirically tested features as Osiki (2000) and Seligman (1995) have observed. Some of such features are:

1. Psychotherapy (like other health treatments) in the field is not of fixed duration. It is usually maintained and keeps going until the client is markedly improved or until he or she quits. In contrast, the intervention in efficacy studies stops after a limited number of sessions-usually about 12-regardless of how well or how poorly the client is doing.
2. Psychotherapy (again like other health treatments) in the field is self-correcting. If one technique is not working, another technique or even another modality is usually tried. In contrast, the intervention in efficacy studies is confined to a small number of techniques, all of within one modality and manualized to be delivered in a fixed order.
3. Clients in psychotherapy in the field often get there by active shopping; entering a kind of treatment they actively sought with a psychotherapist they screened and chose. In contrast, clients enter efficacy studies by the passive process of random assignment to treatment and acquiescence with who and what happens to be offered in the study.
4. Clients in psychotherapy in the field usually have multiple problems that have potential for interconnectivity, and psychotherapy is geared toward relieving parallel and interacting difficulties. Clients in efficacy studies are selected on the basis of one diagnosis (except when two conditions are highly comorbid) by a long set of exclusion and inclusion criteria.
5. Psychotherapy in the field is almost always concerned with improvement in the general functioning of clients as well as amelioration of a disorder and relief of specific, presenting symptoms. On the contrary, efficacy studies usually focus only on specific symptom reduction and whether the disorder ends.

### Theoretical paradigm

Some explanations have re-echoed over time and again on the effectiveness of classroom practices (Wenglinsky, 2002), teacher quality (Rice, 2003; Wilson and Floden, 2003) and teacher preparation (Greenberg et al., 2004) as the indices for boosting high academic performance in learners. Fundamentally however, a more sustainable learning would combine such aforementioned factors along with the learners' emotionality, their preparation and readiness to learn as well as the availability of adequate and relevant learning materials (e.g. textbooks) if learning would be a worthwhile exercise.

Other factors may include the varied complimentary ef-

forts derived from learners' personal and private studies, student-teacher consultation, time management and the effective utilization of learners' study groups. The premise of this study therefore was based on the assumption that learners' (that is, DLS) emotional tension would not be ameliorated to enhance prowess and or skills, especially in research methodology/project when selected behaviour techniques (that is, RT, REBT and AM) are not subsumed in psychotherapy and applied. Importantly, the assumption was that Distance Education learners' ability to develop researchable topics, retrieve and apply needed library information, construct acceptable research designs and measures as well as the choice of appropriate statistical methods will not differ significantly when they are exposed to the three selected BTS. The maturation effects of DLS was equally assumed to boost the potentialities of the control group (that is, those without intervention) while equating their outcome research prowess to those of RT, REBT and AM groups respectively.

Specifically therefore, the study hypothesized that:

- (i) DLS' research prowess will not be significantly different following their exposure to the combined effect of the three BTS subsumed in psychotherapy and the non-intervention group (CT).
- (ii) DLS either exposed to the RT/AM and AM alone and REBT/AM and AM will not be significantly different in their research prowess.
- (iii) Exposing the DLS to the individual psychotherapies with a concomitant research prowess will not be significantly different.

### Behavioural techniques for the study

#### Reframing technique

Reframing is a robust psychotherapy that assists the individual potentials for rephrasing, re-stating and the re-evaluation of life perspectives and circumstance and, or situation to the point of personal self-worth and growth as well as fulfillment. Its theoretical underpinnings are clarified in terms of systemic and solution-focused therapies, and Social Constructivism. Application of reframing technique (RT) in group and individual counselling has been profoundly successful empirically (Haley, 1986; Innes and Booher, 2004). The practical application of reframing in psychotherapy derives its usefulness from life frames that facilitates individual's ability in reconstructing the advantages of life challenges for future bliss. It is positively-oriented and essentially the extension of Viktor Frankl Existential Psychotherapy (that is, Logotherapy).

The rationale for selecting and applying the RT in facilitating the DLS research skills was to present a re-education potential to the learners through the adoption of new, reliable and goal-directed frames. Unlike the REBT, which is basically more on the correction of personal illo-

gicalities and faulty ideas/thinking, adopting new frames is more of re-appraisals of life meanings. The RT uses humours, paradoxical intentions, pre-emption, de-reflection, confusion advertising, worse alternative, re-labeling, prescription, and surrender tactics in boosting emotional wellness and, or stability while concomitantly enhancing skill acquisition in, especially research methodology/project reporting.

### **Rational Emotive Behaviour Technique**

Rational Emotive Behavior Therapy (REBT) is an active-directive, solution-oriented therapy which focuses on resolving emotional, cognitive and behavioural problems in clients, originally developed by the American psychotherapist, Albert Ellis. REBT is one of the first forms of Cognitive Behavior Therapy and was first expounded by Ellis in 1953. Fundamental to REBT is the concept that emotional suffering (or disturbances) results primarily, though not completely, from our evaluations of a negative event, not solely by the events per se. In other words, human beings on the basis of their belief system actively, though not always consciously, disturb themselves, and even disturb themselves about their disturbances.

The REBT framework assumes that human beings have both rational and irrational tendencies. Irrational thought/images prevent goal attainment, lead to inner conflict, lead to more conflict with others and poor mental health. Rational thought/images lead to goal attainment and more inner harmony. In other words rational beliefs reduce conflicts with others and improved health and the ability for life success (as in research prowess). The REBT was particularly annexed to provide the basis for the DLS in their personal evaluation on the damaging effects of wrong thoughts, ideas about their limitations, and, or awfulization (that is, the constant and over use of such terms as "I should....") which easily deplete on their potentials.

### **Assignment method**

The assignment method is a term coined from after-school activity and, or tasks in the form of Homework given to learners to compliment school instructions by the teacher. The term is applied and, or subsumed in psychotherapy stages to intermittently follow-up on the personal recuperative ability of learners (otherwise, clients) which then provide regular feedback on his or her adjustment. Homework is generally work assigned to be completed by the assignee at home. The term is generally used to refer to primary or secondary school assignments as opposed to college-level coursework. In Nigeria the assignment method is adopted as a boost to the academic potential of learners as its assessment forms part of the learner's overall grade. Taken usually as part of continuous as

essment, its duration can span the entire academic session of a programme; and can also be in the form of mini-projects.

Adapting assignment in psychotherapy has proved to be the best choice of all time. It serves as the intermittent feedback method of knowing what the recipient of psychotherapy may be doing at what time, how and where. Its singular advantage is the feedback it provides the psychologist on how the client (otherwise, the DLS) has and, or have adjusted emotionally, while through client-therapist compromise, possible problems and, or challenges that are identified are resolved.

### **The Study and Setting**

The aim of this study was to investigate the relative and differential effectiveness of three behavioural techniques (BTS) subsumed in psychotherapies in ameliorating learners' emotional tension in the improvement of research writing and reporting skills. Specifically, the focus of the study is to examine how Reframing Technique (RT), Rational Emotive Behavioural Technique (REBT) and the Assignment Method (AM) can be utilized both as combinatorial and independent techniques to boost DLS research potentialities. The study is particularly focused to help the DLS to acquire expected emotional preparedness which is essentially important for meaningful learning.

The setting of the study was Nigeria but with the External Degree Programmes (Centre for External Studies), now known as the Distance Learning Centre (DLC), University of Ibadan. The University of Ibadan is the Country's premier University which initially stated as the university college with affiliation to the University of London in 1948. The growing desire of the populace to acquire further educational qualifications while at the same time retaining their employment status was the impetus for developing the Distance Learning Centres (DLC), University of Ibadan, Nigeria. Distance learning is Education that takes place when the instructor and student are separated by space and/or time. The strength of Distance Learning is the ability to deploy educational resources to a wider range of students who otherwise may not have the opportunity to attend a conventional university, but otherwise allowed with the opportunity to work in their best learning environments at their own pace.

## **RESEARCH METHODOLOGY**

### **Research design**

Both the Quasi-experimental as well as the causal comparative research designs were adopted in the study. The research design was partly experimental (that is, quasi-experimental) because the purely conditions for true experimental studies were not strictly adhered to as the participation across the levels/years were not equal. It was causal comparative because the events whose outcomes (that is, performance in Research Methodology Course) were com-

pared had already happened. The study however was derived from the evaluation of the impact of the participants' exposure to interventions which lasted four academic baccalaureate sessions among Distant Learners enrolled in education and Guidance and Counseling Programme, Faculty of Education. Prior to evaluation, in each of the academic sessions, the DLS usually meet for a face-to-face lecture for a six-week contact period. The face-to-face interactive section is purely meant for review and question time which is done for four weeks while the last two weeks of the six-week period was the examination.

### Study participants

The participants were made up of a total of 1057 DLS with 398 (37.7%) males and 659 (62.3%) females Baccalaureate programme in Education and Guidance and Counselling drawn from 1997, 1998, 1999 and 2000 academic sessions using the stratified random sampling technique within the framework of the multi-stage method. Each of the academic sessions was taken as a stratum (disproportionately allocated) and was easily differentiated from those in the conventional university programme. The stratified sampling format is more efficient in this regard as comparison was facilitated across selected years and has the likelihood of improved accuracy of results estimation while also useful in equating the statistical power of test of differences between strata.

Seven Departments in the Faculty of Education are involved in Distance Learning Programme in the University of Ibadan as at this period. With the adoption of the simple random technique, the researcher then selected the programme amidst others on the simple criteria of the credit hours allotted to Departmental core-courses. There are other courses the researcher equally facilitates in the DLP among which are, Practicum in Counselling Psychology, Culture and Psychopathology, Behaviour Modification and Psychological Testing. In the Department of Guidance and Counselling and at the Centre for External Studies (otherwise, now known as Distance Learning Center, University of Ibadan), however, the Course Code for the programme is designated as GCE 410 and has six credit-hours (that is, Research Methodology and Project).

The entry qualification of the participants was mainly the National Certificate in Education (NCE) as well as a pre-requisite credit academic performance (pass) at the General Certificate in Education (GCE, Ordinary Level) respectively. All the participants are teachers both at the Elementary (Primary) and Secondary school levels of education respectively. The participants teaching experience range between 1 and 23 years while their school location vary from rural to urban centers and from different parts of Nigeria. Their age range was between 26 and 54 years and a concomitant Mean Age of 37.9 (SD=12.3) was obtained.

### Research measure

The Research Status Inventory [ReSI] was the major research instrument used for data collection. The ReSI has two sub-sections (that is, Personal quality and Preference Indicator). The first sub-section is made up of 19 items that require the participants to rate him/herself on how good they are in the sub-component areas of research methodology. The Personal Quality (PQ) sub-section of the ReSI was screened following expert judgments in psychometrics for its validity while the reliability value of  $r(0.85)$  was obtained using the Cronbach alpha. The Preference Indicator (PI) so tagged, comprises of two sections 'A' and 'B'. While the first part, which consist of 11 items, taps information on the participants' emotionality, section 'B' is a proto-type Essay Question, usually moderated by External Examiners, and as part of the regulations in all Degree

Examinations monitored by the National University Commission (NUC). Such designed examination questions are moderated on the basis of certain criteria some of which are:

- (i) Adherence to designed curriculum.
- (ii) Difficulty level.
- (iii) Coverage.
- (iv) Whether verbose.
- (v) The response time.

The PI (B) is optional and the DLS were free to decide four out the six questions they preferred; but the grading of script was patterned to testing standard rule where all participants' feedback were scored and graded by marking all question one (Q1) across board before all Q2, Q3, Q4, Q5, and Q6 in that order. This was done to reduce both halo effect and discrepancies in script-grading; and it easily allows raters to assess individual position in terms of group performance. The reliability of the PI, which has 6 items in Question Format, and previously administered, and drawn from the Departmental item pool was ( $r=0.78$ ), following the split half coefficient relationship.

### Research prowess

The research prowess (otherwise, skills) of the DLS was assessed following the mapping of critical areas in project report writing and after which the DLS were exposed to end-of-course examination. The critical areas are in sub-categories and, or chapters and includes:

- I. (a) Title of study (which must be concise and feasible).
  - (b) Abstract.
  - (c) Introduction (background to the Study).
  - (d) Statement of Problem.
  - (e) Research question and, or Hypotheses.
  - (f) Objective of the Study (that is, General and Specific Objectives).
  - (g) Significance of the Study.
- II. Review of related literature:
  - (a) Theoretical framework.
  - (b) Empirical background.
- III. Research methodology:
  - (a) Research design.
  - (b) Population of study.
  - (c) Sample and sampling techniques.
  - (d) Research measures.
  - (e) Research procedure and administration.
  - (f) Data analysis.
- IV. Results and findings (that is, hypotheses testing and tabular summaries of findings) and discussion of findings.
- V. Final chapter (that is, summary of findings, implication of findings, conclusion of findings, recommendation/ suggestions for further studies); References and appendix (appendices).

Prior to the classroom lecture/instruction/review face-to-face section, test was administered along with course work (that is, assignment). The assignment was part of the correspondence lecture guide and was collected on resumption during the face-to-face contact period. The assignments and test which served as the pre-entry behaviour for the DSL was determined to ascertain the differential research skills already got during their private studies and at the National Certificate in Education Programme (that is, at the Pre-baccalaureate programme).

The logic of the emphasis is that research methodology courses are equally regarded as pre-certification requirement at the pre-baccalaureate programme; and should have been taught. The Research Status Inventory [ReSI] was therefore conceptualized to find out on what they already know, which is on-the-spot 5 to 10 min easily completed scale; was administered as part of the introductory lecture activities before the commencement of a four-week period of lecture/review question time.

### Emotional tension

The subscale in the ReSI, that is Preference Indicator (PI) reflected on the emotions, fears, worries, likes and, or dislikes that describe the personal disposition of the DLS about research methodology generally. Such item-statements as 'I hate to do statistics'; 'I would be happier if research project was not compulsory'; 'I like research methodology/project, as it prepares me for the future'; 'writing and reporting project is my best course'; 'I just cannot say what my position with research methodology is for now'; are part of the content of the PI which elicited the DLS responses.

### Procedure

Usually four out of six weeks of face to face review of lectures and question periods following correspondence are given to the DLS on campus-format and, or in-school residential interaction form. The four weeks instruction was provided prior to another two weeks of examination (making 6-weeks in all). The DLS, enrolled in Education and Guidance and Counselling Programme were exposed to the three BTS subsumed in psychotherapies separately and the non-intervention group, using the four academic sessions (that is, as a block or stratum) each, for allotment into and combination of psychotherapies (Groups I, II, III and IV) respectively. The intervention periods lasted two hours (double periods) and one-hour (single period), representing three credit hours, thrice weekly during the face-to-face interactive lectures while assignments were provided as take-home for Continuous Assessment (CA).

## Summaries of intervention details

### The group exposed to reframing technique

Four weeks out of six weeks was the intervention duration as indicated earlier for the group exposed to the RT. The main objective of the intervention section was to create avenue for the re-education of participants' life frames following Viktor Frankl's existential model (Logotherapy) through the identification of their personal emotional worries, fears and, or anxieties predisposing to low skills acquisition and, or poor academic performance (otherwise, prowess) in research methodology/project writing which, also involves statistical methods. Such sub-themes as paradoxical intention, pre-emption, advertising, relabeling, humour among others, were annexed simultaneously, along with teaching/instruction in the face-to-face activity to stimulate and sustain DLS' interest without being judgmental.

The single rationale for the intermittent application of the FT to this group, was the belief that, if DLS have right frames, they would enthusiastically be available to under-

take personal rehearsals in research methodology and do well. This BT was however simultaneously incorporated in the four-week period of face-to-face review/teaching instruction and question time. The participants were made up of 274 DLS (Table 7, appendix) in a normal classroom setting.

### REBT group

This group was made up of 308 DLS (Table 7, appendix). The main objective germane to the application of the REBT was to identify all illogicalities, wrong ideas, superstitions, faulty beliefs as well as irrational fears and to point out to the DLS where they are wrong and concomitantly, discuss its negative effects on learners' potential and life goals. The DLS are expected to re-write their life scripts by shelving such thoughts as "I should be" "I cannot make it no matter what..." "S/he hates me and so..." and to say the least. Thus, unlike the RT, the REBT is judgmental, even though, essentially, like the RT on the other hand, when the DLS are able to identify their endless awfulization, through active-directed and power-laden thoughts and are corrected, their life ambitions (i.e. academic) would get better. The tenets of the REBT was also intermittently taught and incorporated in the normal classroom teaching for four weeks.

### The AM group

The group with the AM was made up of 251 DLS (Table 7, appendix). Assignments was used and administered regularly to this group with the intension that the more the DLS had take-home activity tasks the more they would be spurred to evolve more personal practices on their own. The AM was also intended to facilitate the internalization of curricular content. Assignment was given at the end of each weekly face-to-face contact period; and for four the four weeks.

### The control group

This group which was made up of 224 DLS (Table 6, appendix) comprised the non-treatment (non-intervention) group. They only had the final assessment at the end of the four-week period of training; even though, at the follow-up stage, the group was given the benefits of the interventions.

### Data analysis

The data collected were analyzed using both the descriptive (that is, simple frequency counts expressed in percentages) and inferential statistical methods (ANCOVA and Student-t) at the 0.01 and 0.05 alpha levels respectively.

## RESULTS/ FINDINGS

The details of the reported findings as reflected in this section are split into the pre-intervention and post-intervention outcomes respectively. At the pre-intervention section however, the details of the administered copies of the questionnaire (that is, the Research Status Inventory) (ReSI), subsumed in sub-section 'I' (Personal Quality) and sub-section II-AI (Preference Indicator) as well as that on A-II (Preference Indicator-Emotionality) are summarized.

### Pre-intervention outcome

The initial introductory lecture that was given to the DLS showed that over 95.64% of the distance learning participants had no previous research orientation and would be happier if research methodology courses and, or dissertation were not made part of University Programme. Other findings as reflected in Table 1 below, showed that out of 1057 DLS enrolled differentially for the respective academic sessions, but whose responses were pooled, 986 (93.3%) argued that they would prefer to have a programme that does not include writing research dissertation for submission.

Another 879 (83.2%) also said that it were better if dissertation would be made as part of a regular course for instruction and examinable only at the end of the academic session while 91.9% reasoned that the dissertation should be made optional respectively. Furthermore, while only 16.1% of the participants affirmed to the item-statement, that they like research methodology, (Table 2) below, 83.9% however responded otherwise; and similarly, another 78.4% said that they detest statistical methods.

### Post-Intervention outcome

#### Hypothesis one

The first hypothesis has it that the DLS' research process will not be significantly different following their exposure to the combined effects of the RT, REBT, AM and the CT (that is, the non-intervention group). In order to examine the effectiveness of the three BTS embedded in psychotherapies (that is, RT, REBT, and AM) in inducing the expected outcome (that is, enhancement of DLS in research prowess) however; the hypothesized statements were therefore tested using the Analysis of Covariance (ANCOVA) and the student-t statistical methods at the 0.01 and 0.05 alpha levels (which indicated least-significant difference test n comparison) respectively. The details following the computed outcome are summarized below in Tables 3 and 4 below.

The computational outcome as summarized in the Tables above however showed that it was statistically sig-

nificant having the main treatment effects with the Fisher value [ $F(4,1052)=7.52$ ;  $P<0.05$ ] (Table 5). Furthermore, the group Mean-Differential Scores equally indicated that the participants exposed to the RT( $X=71.23$ ) demonstrated major psychotherapeutic gains with more evidence shown in the acquisition of research skills. Other result details showed that the REBT( $X=69.56$ ), AM( $X=54.31$ ); and the CT( $X=48.02$ ) respectively are in the order of their merits (Tables 3 and 4). Following these computed details and results therefore, it could therefore be argued that psychotherapies would undoubtedly, be beneficial if well harnessed to facilitate learning. Learning difficulties and to a large extent, some retardation-learning related problem can become summable when learners are potentially given the benefits of the doubt.

A further re-confirmation, apart from that already indicated (Tables 4 and 5) and which utilized the least-significant difference test n (Table 4 especially), the Bonferroni correction method (Table 7) was also used to compare the individual cell Means ("x bar"). Both the least-significant difference test n and Bonferroni are two of the examples of post hoc statistics; and as a coincidence, the cell comparison showed that the means were all significant across the cell levels, at alpha 0.05 (Table 7).

#### Hypothesis two

In examining the psychotherapy outcome as indicated in the second hypothesis, the participants were exposed to either the combined intervention of RT/AM with the AM alone and, or the REBT/AM and AM alone as well as RT/REBT. With the use of the ANCOVA, the findings showed that the outcome was statistically significant with [ $F(2,1054)=5.07$ ;  $P<0.05$ ]; [ $F(1,1055)=3.61$ ;  $P<0.01$ ] and [ $F(2,1054)=9.70$ ;  $P<0.05$ ] for all the dimensions respectively (Table 8).

An additional information as gleaned from the previously summarized details in table 4 above also showed that the combined effects of RT/AM( $X=73.43$ ), REBT/AM ( $X=69.91$ ) and RT/EEBT ( $X=79.34$ ) are more potent than the participants' exposure to individual psychotherapy while, though, the combination of RT/REBT was more prominent. By implication, and as evident in the computed statistical details, the DLS' academic problem ably facilitated by their emotional tension can however be ameliorated when psychotherapies are well selected, combined and are applied for a more reliable outcome. It was also noticed that the maturation effect of the participants who are in the non-intervention group (CT) with Mean-score of 48.02 (Table 4) did not boost their research potentialities.

#### Hypothesis three

Finally, the third hypothesized statement which says that, exposing the DLS to the individual psychotherapies with

**Table 1.** Preference Indicator [AI]- Assuming I had a choice for making suggestions in programme re-organisation, I would prefer a programme where:

S/N	Item category	Yes	No
1	Research Project is Optional.	971 (91.9%)	17(1.6%)
2	I am free to decide between writing a dissertation and, or contributing few articles for journal publication.	314 (29.7%)	89 (8.4%)
3	There is nothing like writing and submitting dissertation at all.	986 (93.3%)	21(1.9%)
4	Dissertation is compulsory but I can be free to contract it out for payment	516 (48.8%)	203 (19.2%)
5	Dissertation is compulsory and cannot be contracted out.	96 (9.1%)	491(46.5%)
6	Dissertation is made part of regular University Programmes that would be taught and examined at the end of session only.	879 (83.2%)	298(28.2%)

**Table 2.** Preference Indicator [All]-Emotionality.

S/N	Item-type	Yes	No
7	I like research methodology/project; it prepares me for the future	67 (16.1%)	349 (83.9%)
8	I hate to do statistics	294 (78.4%)	81 (21.6%)
9	I would be happier if research project was not compulsory	297 (68.1%)	139 (31.9%)
10	I just cannot say what my position is with research methodology	211 (73.3%)	77 (26.7%)
11	Writing and reporting project is what I like the most	79 (21.6%)	286 (78.4%)

**Table 3.** Analysis of Covariance (ANCOVA) comparing the combined outcome of participants in the intervention conditions (that is, RT, REBT, AM, CT).

Source of variation	Sum of square	df	Mean square	F-Dist.	P
Main Effect	165.20	4	41.30	7.52	<0.05
RT/REBT/AM/CT	165.20	4	41.30	7.52	<0.05
Explained	165.20	4	41.30	7.52	<0.05
Residual	5783.18	1053	5.48		
Total	5948.39	1057			

F (4, 1052) =7.52; P<0.05.

**Table 4.** Group Means-Differential Scores Comparison.

Category of variable	Column (X)
RT	71.23
REBT	69.56
AM	54.31
CT	48.02
RT/AM	73.43
REBT/AM	69.91
RT/REBT	73.47

a concomitant research prowess will not be significantly different was tested by using the student-t statistical method at the 0.05 alpha levels. The computed details as summarized in Table 5 above indicated that its findings were statistically significant; and thus further support the

relevance of psychotherapies and, or BTS in education for the modification of learning deficiencies especially when average scores are used as standards.

## GENERAL DISCUSSION

Reflecting the findings, and as could be inferred from the computed data interpretation, following the investigation, the results showed that when learners' academic needs (DLS in particular) are identified early, and activities for their academic adjustment are ably facilitated, expected learning outcomes are better boosted, predictable and achievable. In consequence therefore, while early identification of DLS research needs may constitute the basic step to ameliorating their academic difficulties, effective diagnosis of the sub-categories as well as the severity of the need area may be directly related to adequate choice, selection and application of psychotherapies. The impli-



**Table 5.** Student-t Outcome Results of intervention Group showing Mean-Scores, Standard Deviation, t-cal. and the degree of Freedom Comparison.

Category of variable	N=1057n	X	SD	t-Cal.	df	P
RT	274	71.23	4.174	10.02	580	P<0.05
REBT	308	69.56	6.320			
RT	274	71.23	4.174	6.61	523	P<0.05
AM	251	54.31	5.341			
REBT	308	69.56	6.320	7.64	557	P<0.05
AM	251	54.31	5.341			
RT	274	71.23	4.174	5.91	496	p<0.05
CT	224	48.02	5.801			
REBT	308	69.56	6.320	4.85	530	P<0.05
CT	224	48.02	5.801			
AM	251	54.31	5.341	3.57	473	P<0.05
CT	224	48.02	5.801			

**Table 6.** Confidence intervals.

Comparison	Mean1 - Mean2	95% CI of difference
1: RT VS. REBT	+ 1.67	+ 0.34 to + 3.00
2: RT VS. AM	+ 16.92	+ 15.52 to + 18.32
3: REBT VS. AM	+ 15.25	+ 13.85 to + 16.65
4: RT VS. CT	+ 23.21	+ 21.74 to + 24.68
5: REBT VS. CT	+ 21.54	+ 20.07 to + 23.01
6: AM VS. CT	+ 6.29	+ 4.82 to + 7.76

**Table 7.** Statistical Significance.

Comparison	Significant? (P <0.05?)	t
1: RT VS. REBT	Yes	3.319
2: RT VS. AM	Yes	31.967
3: REBT VS. AM	Yes	28.812
4: RT VS. CT	Yes	41.683
5: REBT VS. CT	Yes	38.684
6: AM VS. CT	Yes	11.296

cation may be that, when learners' needs are not discovered early enough especially through the mechanism of learners-facilitators consultation, their coping strategies may be overstressed due to the cumulative effects of academic challenges. With the DLS for instance, part of their cumulative challenges may include, previous examination failures, delays in submission of assignments, inability to improve on school grades and memory failure.

Others are irregular class attendance either due to personal values and, or illness as well as commitment; and as Wenglinsky (2002) study suggested, academic success is a function of adequate learning activities, spurred and maintained by the individual self-discipline. Thus, in consequence, identifying the DLS' learning academic dif-

ficulties and, or needs is prime factor for the effective screening and application of relevant BTS as well as sustainable therapy outcomes.

Arising from the findings and particularly at the pre-intervention stages (gleaned from earlier tests and assignments' details), the DLS' research and general academic potential may remain on the low ebb, if their research needs are not understood, and are inadequately assessed by programme facilitators. The inability and, or failure in understanding (otherwise, under estimating) basic research needs of the DLS by the programme facilitators may therefore have a lot of implication for learners' academic growth as well as the beneficiaries' later contribution to the world of knowledge. Evaluating the research skills of learners is a necessary pre-condition for assessing relevant psychotherapies that may be important and needed both for the management of learners' emotional behaviour (as the case in irrational fears and anxieties) and, or the enhancement of skills in research methodology and generally, academic performance.

Differentiating between efficacy studies and psychotherapeutic outcome, Seligman (1995) have elaborated on the benefits of psychotherapy from the standpoint of the consumer reports survey. The effective utilization of the RT, REBT and the AM to boost the research potentials of the DLS as indicated in the findings, have also therefore been supported empirically (Ellis, 1991; Gilligan, Rogers, Tolman, 1991; Woods, 1991; Osiki, 1999; Hayes and Spencer, 2005; Breitbart, 2006). And thus, correcting and facilitating academic potentials of the DLS as well as that of other category of learners can be effectively done using the advantages of psychotherapies.

A more fundamental issue germane to the findings however, and as implied in the results (that is, Tables 5 and 7), was that, sometimes, during psychotherapeutic encounter, the eclectic application of interventions, rather than the single counselling approach, can be more pro-

**Table 8.** Analysis of Covariance (ANCOVA) comparing the outcome of participants in the intervention Conditions (that is, RT/AM, AM alone, REBT/AM, AM alone and CT).

Source of variation	Sum of square	df	Mean square	F-Dist.	P
Main Effect	372.14	2	186.07	5.07	<0.05
RT/AM	372.14	2	186.07	5.07	<0.05
AM	132.49	1	132.49	3.61	<0.01
CT	95.79	1	95.79	2.61	<0.01
REBT/AM	711.98	2	355.99	9.70	<0.05
Error	38576.41	1054	36.7		
Total	39888.80	1056			

i.  $F(2, 1054) = 5.07$ ;  $P < 0.05$ , ii.  $F(1, 1055) = 3.61$ ;  $P < 0.01$  and iii.  $F(2, 1054) = 9.70$ ;  $P < 0.05$ .

ductive. In the case of the DLS for instance, while psychotherapy results, following the individual application were though unique, the collectivization and combine application of psychotherapies yielded more outstanding and eventful outcomes. Such outstanding therapeutic outcomes are observable with the computed details following the combined treatment effect of RT/AM ( $X=73.43$ ); RT/REBT( $X=73.47$ ) and RT/REBT/AM/CT [ $F(4, 1052) = 7.52$ ;  $P < 0.05$ ]; as summarized in Table 5 respectively.

## Conclusion

Assisting the learners (particularly, the DLS) to learn meaningfully presupposes that there would be readiness and enough motivation from the institutions of learning as educational facilitators in understanding basic learning needs of the recipients. The basic learning needs of the DLS may include educating them on how to develop and construct effective study guide, access adequate learning acronyms, improvement on supplementary reading facilities and effective management of their time as well as library information retrieval. Some other issues as memory difficulties, examination anxieties, defective learners-programme facilitators' consultation, and delays in submitting assignments can also be tackled symbiotically within the learner-programme facilitator paradigm. These all have implication for how the learner essentially learns meaningfully particularly in an academic environment.

## Recommendation

Fundamental to the outcome of this study, is that, selecting appropriate behaviour techniques and or psychotherapies, is undoubtedly effective in boosting learners progress especially in research potentials. The potentials of DLs in especially research activities can be adequately propped up if programme facilitators (PFs) would harness and utilize the benefits of psychotherapies in facilitating their emotionality to learn meaningfully as learning-environmentally related anxieties and or stress are reduced.

If learners would learn maximally therefore, and would sustain stable emotionality which have high propensity to boost and or mar their learnability, the learners' emotional status to learn should first be diagnosed while learning materials are effectively selected and arranged by the PFs for a beneficial and more sustainable learning outcomes.

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**APPENDIX****Appendix:** [Research Measure]

Research Status Inventory [ReSI]

Rate yourself on how good you think you are to the following sub-themes in Research Writing and Reporting

**Table 1.** (Personal Quality).

<b>S/N</b>	<b>Category of sub-themes</b>	<b>Very Good</b>	<b>Moderately Good</b>	<b>Not Good At All</b>
1.	Choosing feasible titles/topics			
2.	Developing issues for background			
3.	Statement of problem			
4.	Rationale for the Study			
5.	Conceptual definition of terms			
6.	objective of the Study			
7.	Review of Related Literature			
8.	Library information Retrieval			
9.	Theoretical Framework			
10.	Empirical Background			
11.	Conceptual Model			
12.	Research Questions/Hypotheses			
13.	Research Design			
14.	Sample and Sampling Technique			
15.	Research Measure			
16.	Research Procedure/administration			
17.	Data Analysis/Use of Statistics			
18.	Results and Findings(use of tables)			
19.	Discussion of Findings			