SUMMARY AND CONCLUSIONS

10.1 RATIONALE OF THE STUDY:

The needs and demands of changing, progressive societies in the latter half of the twentieth century have compelled educationists to reassess not only the goals of education but also the validity of current curriculum and of teaching methodologies so as to make them more responsive to current and projected societal needs. In fact, instructional strategies are the inbuilt aspect of curriculum to be continuously updated.

The growing evidence in the field of cognitive psychology, major advances in problem-solving, schema theory, generative learning and research on mathemagenic skills or thinking skills have all provided new insights into students’ thinking and learning, indicating thereby that direct, conscious efforts by teachers are needed to improve learning. Research has already identified a number of links between effective teaching and improved learning (Eggen and Kauchak, 1988). As a result, an urgent need to refine and improve the instructional strategies and techniques with a view to realizing the fullest potentialities of the individual learner has been felt.

Effective learning occurs when students are actively involved in organizing and finding relationships in the information they encounter rather than being the passive recipients of teacher-delivered bodies of knowledge since this activity results not only in increased learning and retention but also in improved thinking skills (Eggen and Kauchak 1988). Active, participant approaches like discovery learning or inquiry-training are being offered as more effective options for instruction wherein the learner becomes a progressively active participant.
in the learning process.

The roles of teachers and students, of learning processes and of learning environment under the broad spectrum of instructional strategies, therefore, essentially have to be reassessed and re-evaluated and adaptations in methodology of teaching have to be carefully thought out, researched and implemented. The goal of maximising the inherent potential of each individual points strongly towards such teaching strategies wherein the individual becomes the focus of attention. Since learners develop and mature at different rates and have their characteristic learning as well cognitive styles, interests, goals, capabilities and abilities, aptitude etc., questions about interactions need specially to be researched in relation to instruction.

Language teaching has a centrality in education, particularly in a multi-lingual country like India. Despite widespread controversies about its status, English is regarded as the language of opportunity, higher education, better job and upward social mobility. It still enjoys the status of a language of intellection and of national and international language.

Hence it is necessary to ensure adoption of effective dynamic methods of teaching this language. However, it is being increasingly recognized that not all language learners will have the capacity or the need to become expert users of English and so the functional use to which they will need to put the English they are learning has focused attention on developing competence in certain communication skills. As such, teaching of writing skills in English has come to be considered a vital part of schooling. At no other time more than today has the need and urgency been greater to explore various strategies and techniques as are appropriate to specific goals and objectives so that students become proficient in writing skills.
Mamchak and Mamchak (1977) have continuously emphasized that discovery techniques are purposeful; that is they are pinpointed and tailor made for particular individuals and classes in specific situations and this need for precision is particularly felt in the field of language arts ad thus of writing skills. It was in this context that the four instructional modes currently in use in various fields as also in that of language arts identified by Gage (1969) as lecture, discussion, discovery and classroom discourse were analyzed in terms of reasons for use, that is teacher role and student role (ref. table 2.4). 

Research evidence in the last few decades has motivated a large number of educators to introduce a larger component of 'discovery' experiences into the elementary and secondary school and thus to emphasize direct, immediate and concrete experience as a pre-requisite for genuine understanding and a pleasant learning environment as a contributory factor to full and balanced development of the learner. Sufficient research evidence exists to establish the desirability of using discovery learning in science teaching and points to the desirability of some of the teaching in every field of study being done through discovery strategy and that such teaching should be spaced throughout the curriculum.

Taking the case of English language teaching, it is argued by linguists that parts of the English syllabus as necessary technicalities of verse form, of punctuation and of spelling - may be well handled by expository presentations wherein the teacher dominates and presents the relevant information, principles and generalizations and this often results in initial fast learning. Other parts, however, may need learning that produces maximum relevance to the pupil in terms of retention and transfer such as guided discovery. Also it is said that when the goals involve affective development, problem - solving or creative
thinking (as in the higher classes), teaching should become less
direct, less teacher-led and should favour group work, heuristics
and student - centered assignments.

In the instructional strategies adopted by a teacher to
teach specific domains within a subject, the discovery-expositive
continuum is the most important group of strategies connected
with the actual process of learning. Hence in the present
study, instructional material in accordance with the formulated
procedural steps of the two selected strategies, namely guided
discovery and expository teaching, was planned and developed
and the effect of these strategies on acquisition, retention and
transfer of learning of higher-level writing skills in English was
investigated.

Additionally since individuals differ from each other, and
as these differences are likely to interact with the teaching
strategy, it necessarily follows that schools and society must
provide a range and diversity of teaching strategies, methods
and goals commensurate with the range of human abilities. The
reality of individual differences should not mean educational
rewards for some and frustration for others.

Differences in mental abilities are, no doubt, strongly related
to level of scholastic performance in schools. However, differences
in class performance that are seen are not due to differences
in ability or effort alone. Rather, differences in other variables,
of which an important variable is cognitive style of the
learner-i.e. the individuals' preferred way of processing new
information- may offer as valid an explanation of differential
achievement levels as those in mental ability. For these reasons,
the independent variable of cognitive style, along with that
of mental ability, was chosen to see if adaptation of instructional
strategies to pupil's cognitive style and intelligence level results
in maximal acquisition, retention and transfer of learning of higher-level writing skills in English.

Specifically it was expected that field-independents and higher intelligence level learners might profit more from the non-directive nature of guided discovery whereas field dependents and lower intelligence level learners from expository teaching. Therefore, categorization of students by intelligence and cognitive style was done in the present study in order to examine and locate interactions of individual differences among learners with instructional treatments, if they exist.

10.2 STATEMENT OF THE PROBLEM:

"THE EFFICACY OF GUIDED DISCOVERY AND EXPOSITORY TEACHING STRATEGIES ON ACQUISITION, RETENTION AND TRANSFER OF WRITING SKILLS IN ENGLISH AMONG STUDENTS AT THE +2 STAGE IN RELATION TO INTELLIGENCE AND COGNITIVE STYLE".

10.3 OBJECTIVES OF THE STUDY:

The study was undertaken with the following objectives:

1) To study the differential efficacy of guided discovery and expository teaching strategies on acquisition, retention and transfer of learning of higher level writing skills in English.

2) To examine the effect of intelligence on acquisition, retention and transfer of learning of higher level writing skills in English.

3) To examine the effect of field dependence-independence cognitive style on acquisition, retention and transfer of learning of higher-level writing skills in English.
4) To study the first-order interactions of instructional strategies X intelligence on acquisition and retention of higher-level writing skills in English.

5) To study the first-order interactions of instructional strategies X cognitive style on acquisition and retention of higher-level writing skills in English.

6) To study the first-order interactions of intelligence X cognitive style on acquisition and retention of higher-level writing skills in English.

7) To study the second-order interactions of instructional strategies X intelligence X cognitive style on acquisition and retention of higher-level writing skills in English.

In addition, in pursuance of these objectives, it was required to develop instructional material in accordance with the procedural requirements of guided discovery and expository teaching strategies and to construct and standardized a test of writing skills in English for measuring learning outcomes in respect of acquisition and retention. Also, a transfer of learning test to assess applicational transfer of writing skills in English was constructed locally.

10.4 Delimitations of the study:

The effect of the two selected instructional strategies, namely guided discovery and expository teaching was examined on only higher level writing skills in English.

In view of the constraints of the experimental study, the sample was limited to students studying at the +2 stage in only one representative Senior Secondary School of Union Territory of Chandigarh.
The effect of the chosen instructional strategies was seen in relation to only intelligence and cognitive style of the learners.

10.5 HYPOTHESES OF THE STUDY:

The study was designed to test the following hypotheses in respect of acquisition of higher-level writing skills in English.

1. Difference in instructional strategies leads to differential effects on acquisition of higher-level writing skills in English.

2. Intelligence significantly affects acquisition of higher-level writing skills in English.

3. Cognitive style of the learner significantly affects acquisition of higher-level writing skills in English.

4. a. Interaction of instructional strategies X intelligence contributes significantly in the acquisition of higher-level writing skills in English.

b. Interaction of instructional strategies X cognitive style has a significant effect on the acquisition of higher-level writing skills in English.

c. Interaction of intelligence X cognitive style contributes significantly in the acquisition of higher-level writing skills in English.

5. Second-order interactions of instructional strategies X intelligence X cognitive style contribute significant variance in acquisition of higher-level writing skills in English.
A similar set of five hypotheses was formulated in respect of retention of higher-level writing skills in English.

6. Difference in instructional strategies leads to differential effects on retention of higher-level writing skills in English.

7. Intelligence significantly affects retention of higher-level writing skills in English.

8. Cognitive style of the learner significantly affects retention of higher-level writing skills in English.

9. a. Interaction of instructional strategies X intelligence contributes significantly in retention of higher-level writing skills in English.

b. Interaction of instructional strategies X cognitive style has a significant effect on retention of higher-level writing skills in English.

c. Interaction of intelligence X cognitive style contributes significantly in retention of higher-level writing skills in English.

10. Second-order interactions of instructional strategies X intelligence X cognitive style contribute significant variance in retention of higher-level writing skills in English.

Following hypotheses were formulated in respect of transfer-of-learning of higher-level writing skills in English.

11. Difference in instructional strategies leads to differential effects on transfer-of-learning of higher-level writing skills in English.

12. Intelligence significantly affects transfer-of-learning of higher-level writing skills in English.
13. Cognitive style of the learner significantly affects transfer-of-learning of higher-level writing skills in English.

10.6 DESIGN OF THE STUDY:

A factorial-design was employed in the present study with a view to studying the main as well as interactional effects, if any, of instructional strategies, intelligence and cognitive style on response variables, namely (a) acquisition and (b) retention of higher-level writing skills in English by involving a 2x3x2 analysis of variance. Thus twelve independent groups were formed and all possible treatment combinations were studied. However, as regards the third response variable of transfer-of-learning of higher-level writing skills in English, only the main effects of independent variables were sought to be examined through one-way analysis of variance due to constraints of time and sampling.

10.7 VARIABLES IN THE STUDY:

Of the six variables in the present study, three were independent and three were dependent.

**Independent Variables:**

1) Instructional strategies varied in two ways: Guided discovery and Expository teaching.

2) Intelligence varied in three ways: high, average and low.

3) Cognitive style was categorized as field independent and field dependent.
Dependent Variables:

1) Acquisition, that is learning of higher-level writing skills in English.

2) Retention of higher-level writing skills in English.

3) Transfer-of-learning of higher-level writing skills in English.

10.8 SAMPLE:

Three different and distinct samples were raised for the study at different stages of the experiment.

Sample A (for first try-out of the test) was raised from a local senior - secondary school of the city with a view to standardizing the test of writing - skills in English to be used as a measure of acquisition and retention both (details given in Chapter IV). Two out of a total of seven twelfth-class sections were chosen randomly and from each of these two chosen sections, twenty-five students were randomly drawn. A sample of fifty students was derived in this way.

Sample B (for second-try out and for estimating test-retest reliability) of 105 twelfth class students of the same school from which sample A was drawn, was similarly raised for second try-out of the test and for establishing test-retest reliability. The two class sections from which the sample for first try-out was drawn were excluded and of the five remaining twelfth class sections, three were randomly selected and from each of these three sections, thirty five students were drawn randomly to constitute the sample. The test was administered to this sample again after an intervening period of fourteen days.

Sample C (for conduct of the study) was restricted to only one school in view of the experimental nature of the
study. The treatment sample constituted of the entire twelfth class population (N=233) of Government (non-model) Senior-Secondary school, Sector 18 in the city of Chandigarh. One English language class section served as a unit of selection of a group for treatment purposes and thus intact groups, based on existing classes, were taken up for treatment. The six heterogeneous English - language class sections were randomly assigned to the two treatment conditions - three to treatment condition 1 (guided discovery - N=115) and three to treatment condition 2 (Expository teaching - N=118).

For purposes of data analysis, these students were categorised on the basis of instructional strategies, intelligence and cognitive style. After eliminating from the analysis subjects for whom a complete set of results was unavailable and equalising the cases in each of the twelve groups categorized on the basis of the three independent variables, the final sample consisted of 72 students (details in chapter IV).

It needs to be mentioned here that transfer-of-learning test could be administered to only 117 students of the treatment sample. When these students were classified on the basis of three independent variables, sample size was further reduced to 85 only, 32 cases having been lost in the process of classification.

10.9 TOOLS USED: The following tools were employed in the study.

1. Standard Progressive Matrices (Raven, Courts and Raven, 1977) was used to classify the students at three levels of intelligence.

2. Group Embedded Figures Test (Witkin et al. 1971) - was used to categorize students on the variable of cognitive style into field-independents and field dependents.
3. Instructional material - Twenty five lessons according to the procedural steps of each of the two selected strategies, namely guided discovery and expository teaching - were developed by taking units from the recommended syllabus of English (C.B.S.E.) for twelfth class.

4. Test of Writing Skills in English - developed and standardized by the researcher - was used as a measure of acquisition/initial learning as well as retention of higher level writing skills in English.

5. Transfer-of-learning test locally developed by the researcher was used as a measure of transfer of learning of higher-level writing skills in English.

10.10 CONDUCT OF THE EXPERIMENT:

Instructional material needed for the conduct of the study was planned and developed (details in chapter V) and two tests - one to be used as a measure of both acquisition and retention and the other as a measure of transfer of learning - were developed (details in Chapter VI).

The experiment was conducted over a seven-month period and had four phases (ref. table 4.4)

Phase 1: Standard Progressive Matrices (SPM) and Group Embedded Figures Test (GEFT) were administered to twelfth class students present in the school on the day of administration (N=233).

Phase 2: Experimental treatment began which lasted for six weeks wherein intact class units were taken up for teaching which had earlier been randomly assigned to the two treatment conditions. These class sections were not clubbed together for treatment but all
twelfth class students in their respective English language sections were taught selected units of writing skills in English.

Phase 3: Test of writing skills in English was administered immediately on completion of treatment period for measuring acquisition. Two weeks later, the same test was readministered to obtain retention scores.

Phase 4: Five months after the termination of treatment, transfer-of-learning test was administered.

The four distinct phases yielded all the data needed for the fulfilment of the stated objectives of the study as following-

Acquisition scores as measures of acquisition of higher-level writing skills in English.

a) Test-total (ACQ-T) was the combined score on all test items of both Part A and Part B of the test.

b) Part-score (ACQ-A) was the score obtained on selection-type-test items of Part A.

c) Part-score (ACQ-B) was the score obtained on supply type test items of Part-B.

Retention scores as measures of retention of higher-level writing skills in English.

a) Test-total (RET-T) was the combined score on all test items of both Part A and Part B of the test.

b) Part-score (RET-A) was the score obtained on selection type test items of Part A.

c) Part-score (RET-B) was the score obtained on supply-type test items of Part-B.
Transfer-of-learning scores as measures of transfer of learning of higher-level writing skills in English.

a) Test total - a single score obtained on the transfer of learning test.

10.11 STATISTICAL TECHNIQUES:

1. Measures of central tendency - i.e. mean, median and measures of variability, i.e. skewness and kurtosis were calculated to study the nature of distribution of scores on SPM and GEFT and also on acquisition, retention and transfer-of-learning data.

2. Bartlett's test of homogeneity of variances within each set of scores was used on acquisition and retention data.

3. 2x3x2 analysis of variance was employed to study the main and interactional effects of the three independent variables on acquisition and retention of higher-level writing skills in English.

4. One way analysis of variance was employed to examine the effects of instructional strategies, intelligence and cognitive style on transfer-of-learning of higher level writing skills in English.

5. T-ratios were calculated to specifically locate the significance of differences between various pairs of groups, only when the submitted F-ratios were found to be significant.

10.12 RESULTS The main findings of the study are also follows:

1. The 2x3x2 analysis of variance (instructional strategies x intelligence x cognitive style) in respect of criterion variable on test totals and part scores obtained from the measure of acquisition yielded the following significant effects.
a) There was a significant main effect on account of instructional strategies on acquisition of higher-level writing skills in English (vide tables 7.3, 7.4 and 7.5); that is, the initial learning or acquisition of students in guided discovery condition was significantly better than that in expository teaching condition.

b) There was a significant main effect on account of intelligence on acquisition of higher-level writing skills in English (Vide tables 7.3, 7.4 and 7.5), that is, students in the higher-intelligence group did significantly better than those in average and low intelligence groups.

c) There was a significant interactional effect on account of instructional strategies and cognitive style of the learner on acquisition of higher-level writing skills in English as measured by test-totals and part-scores on supply type items but not on part scores on selection type items (vide tables 7.3, 7.4 and 7.5); that is, the performance of field-independents in guided discovery condition was significantly better than that of field-dependents but that of field-dependents in expository teaching condition was only slightly but not significantly better than that of field independents on test totals and part scores on supply type items.

2) The three way analysis of variance performed on acquisition scores yielded the following non-significant effects.

a) There was a non-significant main effect on account of cognitive style on acquisition of higher-level writing skills in English (vide tables 7.3, 7.4 and 7.5); that is, the acquisition of field-independents did not differ significantly from that of field dependents.
b) No significant interactional effect was observed due to instructional strategies and intelligence on acquisition of higher-level writing skills in English (vide tables 7.3, 7.4 and 7.5); that is, the acquisition of higher intelligence group in guided discovery condition did not differ significantly from that of lower-intelligence group in expository teaching condition.

c) Interactional effect due to intelligence and cognitive style on acquisition of higher-level writing skills in English (vide tables 7.3, 7.4 and 7.5) was found to be non-significant.

d) Second-order interaction due to instructional strategies x intelligence x cognitive style on acquisition of higher-level writing skills in English (vide tables 7.3, 7.4 and 7.5) resulted in non-significant F-ratios.

3) Calculations of 2x3x2 analysis of variance (instructional strategies x intelligence x cognitive style) on the test-totals and part scores obtained from the measure of retention yielded significant effects only due to main variables as follows:

a) There was a significant main effect on account of instructional strategies on retention of higher-level writing skills in English (vide table 8.3); that is, the retention of students in guided discovery condition was significantly better than that in expository teaching condition.

b) There was a significant main effect on account of intelligence on retention of higher level writing skills in English (vide table 8.3); that is, students in the higher intelligence groups retained significantly better than those in lower-intelligence groups.
c) The main effect on account of cognitive style on retention of higher-level writing skills in English as measured by test totals and scores on supply-type items was significant, but it was non-significant on selection-type items (vide table 8.3); that is field independents retained better than field-dependents on all three sets of retention scores but the difference in means on scores on selection type items was minimal and non-significant.

4) The analysis yielded non-significant interactions due to instructional strategies x intelligences; instructional strategies x cognitive styles; intelligence x cognitive style and instructional strategies x intelligence x cognitive style in respect of test totals as well as part scores from the measure of retention.

5) The one-way analysis of variance performed on the test scores obtained from the measure of transfer of learning yielded the following significant effects.

a) There was a significant main effect on account of instructional strategies on transfer of learning of higher-level writing skills in English (vide table 9.2); that is, students in guided discovery condition did significantly better than those in expository teaching condition.

b) There was a significant main effect on account of intelligence on transfer of learning of higher-level writing skills in English (vide table 9.4); that is, students in the higher intelligence groups did significantly better than those in lower intelligence groups.

c) There was a significant main effect on account of cognitive style on transfer-of-learning of higher-level writing skills in English (vide table 9.6); that is, field-independents'
transfer-of-learning was significantly better than that of field dependents.

10.13 CONCLUSIONS:

Conclusions drawn in the light of all the hypotheses of the study are as follows:

1 a. The variable of instructional strategies had a significant effect on acquisition, retention and transfer-of-learning of higher level writing skills in English.

   b. Guided discovery emerged as a more effective instructional strategy in comparison with expository teaching as far as acquisition, retention and transfer-of-learning of higher-level writing skills in English was concerned.

2 a. The variable of intelligence had a significant effect on all three criterion variables, namely acquisition, retention and transfer of learning of higher-level writing skills in English.

   b. High intelligence groups' acquisition, retention and transfer-of-learning of higher-level writing skills in English was significantly better than that of average and low intelligence groups.

   c. Average and low intelligence groups did not differ significantly from each other as regards acquisition of higher-level writing skills in English. The average intelligence group, nevertheless, outperformed the low intelligence group in respect of mean scores.

   d. Average intelligence group retained significantly better than low intelligence group when assessed through test totals or scores on selection type items of Part A but
The transfer of learning of average intelligence group was significantly better than that of low intelligence group.

3 a. The variable of cognitive style of field independence-dependence had a non-significant effect on acquisition; a significant effect on retention as measured by test totals and scores on supply-type items of Part B but not when measured by scores on selection type items of Part B and a significant effect on transfer-of-learning of higher-level writing skills in English.

b. Field-independents' as compared to field-dependents' retention was significantly better but the difference in means on selection-type items of Part A of the two groups was minimal and non-significant.

c. Field-independents were able to transfer the learning of higher-level writing skills in English in a significantly better way than field-dependents.

4 a. Instructional strategies x intelligence had a non-significant interactional effect on acquisition as also on retention as measured by test totals and by scores on supply-type items of Part B but a significant effect on retention as measured by scores on selection-type items of Part A.

b. As regards acquisition of higher-level writing skills in English, high intelligence group outperformed both average and low intelligence groups within both guided discovery as well as expository teaching conditions; Low intelligence group in expository teaching condition as against average intelligence group was able to score higher means on all three sets of
acquisition scores but the case was reverse in guided discovery condition.

c. As regards retention of higher level writing skills in English, high intelligence group retained better than average and low intelligence groups within each treatment condition, i.e. guided discovery and expository teaching; average and low intelligence groups in expository teaching condition did not differ much from each other as seen from their mean performances; and students at all three levels of intelligence in guided discovery condition retained better than their counterparts in expository teaching condition.

5. Instructional strategies x cognitive style had a significant interactional effect on acquisition as measured by test totals and by scores on supply type items but not as measured by scores on selection type items; Guided discovery strategy resulted in significantly better acquisition for field independents in comparison to field dependents but Expository teaching strategy helped field dependents to acquire significantly better than field independents; the acquisition of field independents was significantly better in guided discovery condition than in expository teaching condition; and from among the various groups, acquisition of field-independents in guided discovery condition was the best and that of their counterparts in expository teaching condition was the lowest.

6. With regard to retention of higher-level writing skills in English, instructional strategies x cognitive style had a non-significant interactional effect. However, within guided discovery and expository teaching conditions, field independents retained better than field dependents but the difference in mean scores of the two groups in expository teaching condition was only marginal and their performance was more or less equal; Guided discovery
enabled both field-independents and field dependents to retain better than expository teaching; and field-independents in guided discovery condition performed best whereas field-dependents in expository teaching condition showed the least performance.

7. (a) Intelligence x cognitive style had a non-significant interactional effect on acquisition of higher-level writing skills in English. However, within high and average intelligence groups, field independents slightly outperformed field-dependents; within low-intelligence group, field-dependents scored marginally higher means than field-independents on test totals and scores obtained on supply type items of part B; field-independents in high intelligence group outperformed those in average and low intelligence groups; and likewise, field dependents in high-intelligence group outperformed those in both average and low intelligence groups.

(b) Intelligence x cognitive style had a non-significant interactional effect on retention of higher-level writing skills in English. However within high, average as well as low intelligence groups, field-independents retained slightly better than field-dependents; field-independents in high-intelligence group retained better than those in average and low intelligence groups; and likewise, field dependents in high intelligence group retained better than those in average and low intelligence group.

8. Instructional strategies x intelligence x cognitive style had a non-significant interactional effect on acquisition as also on retention of higher-level writing skills in English. However, a) as regards acquisition, within guided discovery condition, field-independents in comparision with field dependents at all three levels of intelligence acquired better but within expository
teaching condition, field-dependents by and large scored consistently higher means than field-independents at all three levels of intelligence, the only notable exceptions here were field-independents in high intelligence group when assessed through test totals and scores on selection type items; further, the highest acquisition means were attained by field-independents in high-intelligence group taught through guided discovery and the lowest by field-independents in average intelligence group taught through expository teaching; (b) In the case of retention, within guided discovery condition, field-independents retained better than field-dependents at all three levels of intelligence; within expository teaching condition, field-independents in high and low intelligence groups retained better than field-dependents but the trend in the case of average intelligence group was not clear; and the best retention means were attained by field-independents in high intelligence group taught by guided discovery strategy.

10.14 EDUCATIONAL IMPLICATIONS:

The present study has certain implications for educational theory and practice.

1. The result of the study revealed that guided discovery emerged as a more effective instructional strategy as compared to expository teaching, as regards acquisition, retention and transfer-of-learning of higher-level writing skills in English. It may, therefore, be added profitably to the list of tools that may be used for teaching higher level writing skills in English. Using this instructional strategy, it would be possible to structure the writing class as a workshop with active participation and engagement of all students in the learning environment wherein the learner becomes the constructor of generalizations.
2. It is generally seen that teaching in language classrooms is adjusted to the ability or intelligence level of the average student. As a result, the more able or the more intelligent face an achievement deficit or an acquisition deficit in a large heterogeneous class. The results of the study focus attention on the significance of the spread in ability and acquisition in a writing classroom. Does this have any implication for such key issues in education as homogeneous versus heterogeneous ability grouping?

3. The inclusion of data on students' cognitive style field-dependence/independence in placement decisions may result in more effective use of different classroom environments and this increases the likelihood that each child will be in that academic setting most conducive to learning retention and performance.

10.15 SUGGESTIONS FOR FURTHER RESEARCH:

The results of this study point to potentially significant directions for future research.

1. It remains to be seen whether these results are generalizable to other samples at different age/grade levels, and thus replication, verification and systematic follow-up studies are needed. In addition, longer experimental treatments might focus on the involvement of students with a wider range of achievement and at different age levels to add support to the findings of the study.

2. Future research is needed to test the generality of findings to language skills other than those of writing and consideration of other individual differences may lead to further clarification of what conditions make for better acquisition, retention and transfer-of-learning of higher-level writing skills in English.
3. It is important to learn the parameters of successful classroom instruction in writing. It needs to be established if good writing is an antecedent to involving peers in the writing process or if having peer group support encourages hard work at a difficult task or both. So the influence of peer group and consequently of peer editing on the writing skills of learners is to be researched; as also the effects of instruction in revision on the quality of student writing.

4. Future research is needed to identify subgroups that are most sensitive to effects of improved innovative instructional strategies.