

Teaching Strategies

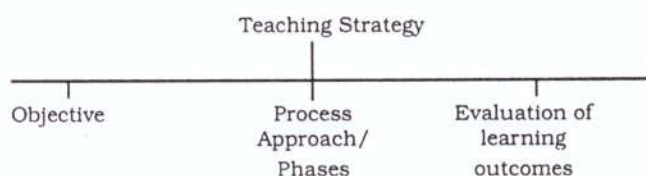
L.C. SINGH
NIRUPMA JAIMINI

The perennial quest for effective methods of teaching has attracted the attention of many a probing mind since a long time. Dating back from Plato's "Meno" which exemplifies the debate about teaching problems and takes up the Socratic technique of teaching, this quest has come a long way to current strategies of teaching. These strategies of teaching derive largely from behaviouristic, cognitive and humanistic perspectives.

A teaching situation necessarily involves the teacher, learner(s) and the teaching-learning environment. Mitzel, H.E (1960) was the first to suggest that research on teaching involved presage, process and product variables. When viewed in the total perspective of teaching-learning situations, the following conceptualisation emerges:

Presage	Process	Product
* Teacher behaviour	* Teaching strategy	* Learning outcomes
* Learner characteristics	- objectives	- knowledge
* Teaching-learning condition	- approach/phases - content material	- skills - attitudes

As a step further, taking the teaching strategy at micro level (process-product variables), it may be visualised as follows:



Most of the studies reviewed here fall under the category of process-product correlational studies.

The objectives of teaching strategies by and large fall in the cognitive domain. When the studies took the context of classroom teaching, the samples were school-children, while in the context of study at teacher-training level the samples were teacher trainees. The dependent variable in the two situations would be:

Context	Product
* School level	* Learning outcomes in specific subject areas
* Teacher training level	* Learning outcomes in terms of skills and competence in teaching

REVIEW OF RESEARCH IN TEACHING STRATEGIES

The various teaching strategies may aim at certain common objectives and may therefore be similar in expected learning outcomes but they may differ in their approaches to attain the specific objectives. Therefore, the various

research studies reviewed may be classified on the basis of their approach.

An operational basis of classification adopted here is: (i) Model-based teaching strategies, and (ii) Other teaching strategies. It may be added here that the basis of classification is purely

operational and has been evolved to do maximum justice to some kind of categorization to facilitate the study of reasearch trends emerging out of the limited abstracts of researchers carried out during the period of review (See Table 1).

Table 1
Classification of Researches on Teaching Strategies

Teaching Strategy	Single Strategies		Compared with Other Strategies		Research Study
	School Level	Teacher Training Level	School Level	Teacher Training Level	Both Levels
<i>Model-Based</i>					
Advance Organiser	1	1			
Model (ADM)					
Concept Attainment	2	1	ADM 3	1	2
Model (CAM)			Computer 1 Model		
Inductive Thinking		CAM 2			
Model					
Inquiry Training		CAM 1	CAM 1		
Model (ITM)					
Jurisprudential	2		CAM 1		
Inquiry Model (JIM)					
Synecotics Model	2	1			
All Information					1
Processing Models					
CLER Model					1
<i>Other Strategies</i>					
Method-Based		4			
Objectives-Based		2			
Mastery Learning	1		CAM 1 *		
Perceptual Correlation	1	1			
Innovative	6	2	1		1
Total = 44 Studies					

* This study falls under both the categories; hence an arbitrary placement in the matrix.

Research on Model of Teaching

The model situations are such in which the teacher interacts with students in a classroom using instructional materials so that the students can achieve selected learning outcomes consisting of knowledge, attitudes and skills. To be concerned with teaching strategies is to focus on the acts performed by the teacher and the expected activities of the learners in classroom situations. A model of teaching is merely a tool for thinking about the teaching situation; it is a set of concepts carefully arranged to explain what teachers and students do in a classroom, how they interact, how they use instructional materials and how these activities affect what students learn. The activities are considered in a sequence of the phases, ultimately leading to certain direct and indirect metacognitive abilities and attitudes among the learners. Teaching has been defined as "a plan or pattern that we can use to design face to face teaching in classrooms or tutorial settings and to shape instructional materials—including books, films, tapes and computer mediated programmes and curriculum (long-term courses of study). Each model guides us as we design instruction to help students achieve various objectives". (Joyce, B. and Weil, M. 1990.)

The models of teaching usually adopted by the researchers are those developed by Joyce, B. and Weil, M. (1980). These models have been categorised into four families depending upon the nature of specific objectives to be achieved through these models. They are: Information Processing Model, Social Interaction Model, Personal Model and Behaviour Modification Model.

In the past few years, research in the area of models of teaching has mainly seemed to be concentrated upon the Information Processing family. Out of the twenty-four studies on the models of teaching, one is a critical review of research done on the Information Processing model (Sau, T. 1988) while two are review studies on the research done on CAM (Bawa, M.S. 1991; Khan, M.S. and Siddiqi, M.H. 1992). The other

studies are experimental in nature, conducted at school or teacher-training level. In some studies individual models have been taken up, such as AOM (Kaushik, N.K. 1988; Gupta, S. 1991), CAM (Manocha, V. 1991; Viney, 1992; Agarwal, R and Misra, K.S. 1988; Chaudhury, K. 1989), JIM (Mishra, G.S. 1991; Pandey, S.P. 1991), Synectics (Malhotra, S.P. 1990; Kumari, S. 1990; Martis, A. 1990). There are some studies in which the effectiveness of two models has been compared. The studies where AOM has been compared with CAM are by Sood, K. (1990), Jaimini, N. (1991) and Mahajan, J. (1992). CAM was also compared with JIM (Mohanty, B.K. 1992), with the Inquiry Training Model (Singh, D.K. 1990), with the Inductive Thinking Model (two studies by Baveja, B. 1989) and with Mastery Learning (Vaidya, S. 1990).

Research on other Strategies

There were quite a number of studies which compared the various methods of teaching such as lecture, demonstration, etc. (Ramani, M.V. 1989; Perumal, V. 1989; Gangopadhyay, T.K. 1991; Narain, A. 1992). Some researchers focused upon instructional objectives-based strategies of teaching (Palanivelu, M.E. 1989; Sinha, S.B. 1989). A study on the Mastery Learning approach on nursing tutors was done by Mathur, R.G. (1988). An attempt to investigate the relationship between various perceptual factors and teaching competence was made by Prabhakar, A. (1988) and Jayappa, M.S. (1991). Innovative strategies too were explored by a few researchers (Majumdar, B.G. 1989; Jana, B. 1989; Ashraf, M. 1988; Malhara, S.B. 1988; Kulkarni, P.S. 1991 and Panda, P.K. 1990). A metacognitive study was conducted by Mishra, G.S. (1991).

RESEARCH TREND

Research studies on the Models of Teaching are found to be gaining increasing popularity. The models mostly adopted were those developed by Joyce, B. and Weil, M. (1980). Amongst these studies, the model most experimented upon was

the Concept Attainment Model (Bruner), either as a single model or in comparison with other models. In all, the information-processing models caught the attention of the researchers much more than the other families of the models of teaching.

The AOM was found to be effective in developing teaching competence among student teachers under simulated as well as classroom conditions (Gupta, S. 1991). While Kaushik, N.K. (1988) studied the long-term effect of advance organisers in relation to reading ability, intelligence and scientific attitude of the learners and found that the general introduction or an overview, which generally precedes learning material, is less effective as compared to the advance organisers. Secondly, the benefit derived from advance organisers is positively correlated with higher intelligence, reading comprehension and scientific attitude. The maximum number of studies were conducted on CAM. Out of the three strategies of CAM, viz., Reception, Selection and Unorganised, the Reception strategy seemed to catch the fancy of most of the researchers. Agarwal, R. and Mishra, K.S. (1988) studied the effectiveness of the Reception strategy in enhancing the attainment of science concepts and found it to be effective, while Manocha, V. (1991) studied Reception as well as Selection strategies in comparison to the conventional method for teaching of concepts in biology. The findings indicated no significant difference between Reception and Selection strategies with respect to achievement scores. Chaudhury, K. (1989) investigated and found that the teaching skills and competence developed among student-teachers through the use of CAM are easily transferable in other teaching situations, besides the teaching of concepts. This study also recommended the use of CAM instead of spending much more time on the microteaching technique to develop the teaching skills. Bawa, M.S.'s study (1991) attempted to review the research possibilities on conceptual learning (Burner's view) and indicated that there is a dearth of research studies in the area of concept learning. Another review study (Khan, M.S. and Siddiqi,

M.H. 1992) on effectiveness of concept attainment strategies came up with the findings that: (i) concept-attainment strategies were more effective over the traditional approach; (ii) personality factors had no significant effect on the concept-attainment process; (iii) these strategies were responsive to the needs of disadvantaged learners; and (iv) attainment of disjunctive concepts is more difficult than the attainment of conjunctive concepts.

The researchers also focused their attention on comparison of AOM and CAM. Mahajan, J.'s (1992) findings indicated that during the peer group sessions as well as classroom teaching sessions, the group taught by CAM was found to be superior to the groups taught by AOM as well as the routine method as far as the teaching ability of student-teachers was concerned. There were two studies (Kaur, R.P. 1991; Jaimini, N. 1991) which aimed at comparing the effectiveness of AOM and CAM in relation to the creativity of students. Kaur, R.P. (1991) found that for teaching of concepts in economics both the models are effective and that AOM is more effective than CAM. The interaction between teaching strategies, intelligence and creativity were not found to be significant.

The study (Jamini, N. 1991) which aimed to investigate the relative effectiveness of AOM and CAM on conceptual learning efficacy and retention of chemistry concepts in relation to divergent thinking indicated that although both AOM and CAM were equally effective in fostering concept learning, the AOM was comparatively more beneficial in concept learning to pupils with high divergent thinking while CAM was more beneficial to pupils with low divergent thinking. The AOM was found to be more effective than CAM in the retention of concepts irrespective of the level of divergent thinking of the pupils.

Another study (Sood, K. 1990) on comparative effectiveness of AOM and CAM for acquisition of language concepts in relation to cognitive style, intelligence and creativity reported that CAM was more effective than AOM in teaching of concepts in Hindi. Intelligence, creative levels and cognitive style were redundant factors so far as the

learning of concepts were concerned.

Bhaveja, B. (1989a, 1989b) in her two studies compared the effectiveness of CAM with Taba's Inductive Thinking Model in regard to the concept learning in biology and also analysed the thinking strategies used by the learners. The two studies differed in their sample population and elaboration. The findings were quite similar in the two studies supporting the role of inductive thinking processes in the process of conceptualisation and generalisation.

Studies on the Inquiry Training Model involved its comparison with the Concept Attainment Model. Singh, D.K. (1990) found both the models equally effective in the teaching of physical science to Class IX pupils. An elaborate three phase experimental study of CAM and ITM was conducted by Passi, B.K., Singh, L.C. and Sansanwal, D.N. (1991) under the guidance of Bruce Joyce, aimed at finding the efficacy of the training strategy adopted for training application in Indian classroom conditions. This was a workshop-based study on development of training in CAM and ITM, which brought about significant favourable changes in the attitudes of both—the teacher educators and the student teachers towards the models.

Pal, S.K. and Misra, K.S. (1991) studied the effectiveness of the Jurisprudential Inquiry Model in developing the social consciousness and the ability to solve social conflicts among pupils of Class IX. It was found that the individual Jurisprudential Inquiry approach was less effective than the group approach. The instructional and nurturant effects of JIM were studied (Pandey, S.P. 1991); here the intelligence and socio-economic status of the pupils were found to be interacting with the development of certain values such as, equality, tolerance and justice, etc.

JIM was compared with CAM (Mohanty, B.K. 1992) in development of moral concepts and judgement and the personal values of Class VIII pupils. The findings of the study indicated JIM was more effective for developing the moral judgement and personal values of students whereas CAM was effective in developing moral

concepts.

The effectiveness of the synectics model in development of creativity in language was studied (Malhotra, S.P. 1990). The students after being taught through this model showed more improvement on the factors of fluency, flexibility, originality and elaboration in the various areas of language skills. This improvement had a high positive correlation with the intelligence level of the students.

The instructional and nurturant effects of the Synectic Model in language teaching were studied (Kumari, S. 1990) wherein the students of Classes VIII and IX were compared for development of creativity in Hindi, English and in general.

Martis, A. (1990) attempted to find out the effectiveness of the Synectics Model in developing 'Making Strange Familiar' (MSF) competencies and also its effectiveness in developing the scientific and general creativity of graduate student-teachers. The training in MSF comprising theory, discussion, demonstration and practice, developed the desired competencies and generated favourable reactions in pupil-teachers as well as the high school students towards the model. Further, the training in MSF significantly improved the verbal, non-verbal and scientific flexibility and originality of trainees. These achievements of the training in MSF in turn led to the development of general and scientific creativity of school students. The findings of the study also suggested that MSF needed to be slightly modified in the light of classroom situations.

A review study of research on the Information Processing Models of teaching was carried out (Sau, T. 1988); the findings indicated that most of the studies were undimensional, although the concept was multidimensional.

Besides model-based strategies, there has been an attempt to investigate other teaching strategies, (non-model) too. These strategies can be categorised on the operational criterion of objectives/approach. There were some studies on the methods-based approach. The teaching strategies other than model-based were either experimental or survey-based. Here, most of the

studies focused upon single-teaching strategy while a few studies compared the efficacy of various teaching strategies.

Perumal, V. (1989) and Ramani, M.V. (1989) took up comparative studies on the outcomes of teaching some selected units in commerce and electronics respectively, by different method-based teaching strategies at the senior secondary stage. Among the methods studied for teaching commerce—lecture, discussion and assignment—the assignment method was found to be the most effective in teaching commerce, and the lecture method as the least effective. While for teaching of electronics, out of (i) lecture, (ii) discussion, (iii) demonstration, and (iv) laboratory methods, the laboratory method was found to be the most effective, followed by group discussion, demonstration, and, last of all, the lecture method.

A similar kind of study was conducted by Gangopadhyay, T.K. (1991) for the effectiveness of (i) lecture, (ii) lecture and explanation, (iii) lecture, explanation and questioning, and (iv) lecture, explanation, questioning, and using the feedback. The learners were Class IX students in the subject of history. Method (iv) was found to be the most effective followed by (iii), (ii) and (i), respectively. Narain, A. (1992) studied the effect of large-group lecture-demonstration and small-group laboratory methods in the teaching of chemistry at secondary level. The study proved that neither of the methods is superior in teaching all aspects of science exclusively.

A study on objective-based teaching was conducted (Palanivelu, M.E. 1989) at the primary level; here the objectives taken up were based on Bloom's taxonomy. The teaching as well as testing material in science, based on the cognitive, affective and psychomotor objectives were prepared. The study was based on the performance of 20 teachers both from rural and urban schools. These teachers were found to have preferences for three levels of instructional objectives in the order: affective, cognitive and psychomotor. The performance of the students taught by the objectives-based approach was better than those taught by the teacher of the

controlled group. Sinha, S.B. (1989) studied the effectiveness of teaching strategy, based on instructional objectives and found it to be superior in the context of the personality and situational variables of the student teachers.

Normative studies on teaching competence in relation to perceptual factors were carried out. Prabhakar, A. (1988) studied the relationship among role perception, performance and personality variables of nurse-tutors. The findings showed similarity between perception and performance of roles. There were some roles seen in priority by the nurse-tutors. Jayappa, M.S. (1991) studied the relationship of various perceptual factors to good teaching among teacher trainees. The study concluded that good teaching was primarily a function of certain perceptual factors.

Studies on effectiveness of the Mastery Learning programme were conducted to investigate its effect on the achievement, self-concept and attitude of pupils towards statistics (Mathur, R.G. 1988) and Hindi (Vaidya, S. 1990), respectively. The sample taken in the former study consisted of students while in the latter the sample comprised students of Class VI. Vaidya, S. (1990), compared Mastery Learning Strategy with CAM and the Traditional Method. The findings of Vaidya, S.'s (1990), study indicated that MLS was more effective than CAM or TM: in (i) facilitating learning and enhancing the achievement level, and (ii) improvement in self-concept and attitude towards the subject. Mathur, R.G. (1988), also found MLS as an effective strategy in terms of achievement, self-concept and attitude towards statistics for both undergraduate and postgraduate students. Mathur, R.G.'s (1988) study also established the effectiveness of MLS in reducing the gap between repeaters and non-repeaters.

There were some studies which attempted to experiment on innovative strategies of teaching. Malhara, S.B. (1988) compared the effectiveness of competition oriented and cooperation-oriented methods of teaching and found that cooperative methods of teaching were more effective than the methods of competitive teaching in developing

various skills and creative faculties. A case study of some schools in Delhi was done (Ashraf, M. 1988) with reference to innovative classroom practices. This study revealed that about 28.57% schools in the random sample had innovative practices in the classroom situation. The degree of achievement of educational innovations was found to be more in aided and unaided schools as compared to the government schools.

Jana, B. (1989) studied the pupil growth and personality development under the nurturant effect strategy and found it to be effective over the traditional strategy. A study on the use of drama in improving the teaching-learning process (Kulkarni, P.S. 1991) was done on children at elementary level. It was a workshop-based study and the findings indicated that children grew on cognitive as well as affective plane by more meaningful and enjoyable experiences through drama.

Panda, P.K. (1990) carried out a study on the effect of some curricular strategies which involved use of teaching skills, extra reference material and parental involvement. This study was done on children of rural primary schools. The findings showed a positive impact of these strategies on certain cognitive and non-cognitive traits of the learners.

Majumdar, B.G. (1989) in his study applied the principle of cybernetics in the teaching-learning process. The proposed cybernetic model was solely concerned with the activity of sustaining mechanism of an individual and proper coordination between the teacher and the taught so that maximum output is achieved. The model also advocates periodical evaluation of performance rating and quantum of incentive and motivational effects.

Dhoundiyal, N.C. (1987) in his study investigated the nature of expectancy biases prevalent among pupil-teachers at B.Ed. level and the influence of these expectancy biases on their evaluation of the students. Dhoundiyal, N.C. (1987) subsequently formulated a remedial strategy to restructure expectancy biases among pupil-teachers.

Joshi, S.M. and Kumar, S. (1983) studied the

effect of the skill-based approach and decision-making ability on developing the teaching competence in teacher-trainees. It was found that a gradual increase in the number of skills, time duration and pupil number resulted in higher teaching competence as compared to all the skills being taken together.

Sharma, R.C. (1991) compared the effect of various modes of classroom teaching involving video-based instruction, teacher discussion, demonstration, self-experimentation, etc., on the achievement in science of the secondary level learners. The conclusions drawn favoured most the video-based instruction while self-experimentation under the guidance of the teacher was found to be least effective of all the models.

In a metacognitive study (Mishra, G.S. 1991), the information processing tasks as carried out by tribal and non-tribal learners were compared under problem-solving situations. The findings proved that tribal children were no less intelligent than their counterparts. Rather, the distinguishing variables seemed to be the motivational deficiency, sub-optimal mobilisation of effort and faulty metacognition.

OBSERVATIONS

Research Design/Method

The research studies on teaching strategies were found to be by and large based on experimental design. This is true for almost all the model-based studies, while some studies exploring the effectiveness of innovative practices in teaching or those co-relating the teaching competence with perceptual factors were of the survey type, very few studies seemed to have employed true experimental designs. Most of the experiments on teaching strategies have been carried out in actual classroom settings and are quasi-experimental. Designing such studies in the classroom situation has an advantage of assessing the effectiveness of a teaching strategy in real conditions. At the same time, it may not fulfil the requirements of a true experimental

design such as random sampling, control of extraneous variables, nature of control group, in-built impact of the instructional treatment, low generalisability, and so on. Hence, most of the studies are based on quasi-experimental designs. There are a few workshop-based studies also (Passi, B.K. and Singh, L.C. 1991 and Kulkarni, P.S. 1991).

In the majority of the studies the dependent variable is generally the achievement score of the learners which is a macro-level variable, assumed to be of normal distribution, whereas there is a need to take criterion-referenced variables at the micro-level. This aspect has to be specially considered in cases of studies on mastery-learning approach, as here the post-experimental score would not hold normal distribution. In the two studies based on Mastery Learning strategy (Mathur, R.G 1988 and Vaidya, S. 1990), the achievement score has normal distribution assumption. The non-adoption of micro-level variables could be possibly due to the non-availability of standard tests; or, a greater effort required to develop special tools to measure micro-level variables.

For instance, in the case of model-based strategies, it is known that in most of the models, there are direct or instructional effects and indirect or nurturant effects. Therefore, nurturant-effect variables can rather be taken as common-criterion variables rather than instructional effects which may not be common for the models selected for comparison. However, it has been observed that achievement in norm-referenced testing as the broad criterion is taken in general to compare the otherwise specific effects of any two models of teaching.

In an experimental study where two model based strategies were compared — Advance organiser with Reception Model and development of concepts in language (Sood, K. 1990)—the design comprised of two experimental groups only whereas a sound experimental design requires a control group also.

Sample

The sampling in most of the studies has been purposive, stratified purposive, stratified random,

multistage random, cluster random, and, in a few cases, random also. The sample population in the majority of the studies is comprised of school-children, and that, too, at secondary level. Very few studies have been conducted at primary or senior secondary level or in vocational streams. Many studies have been conducted on teacher trainees, very few on in-service teachers, and one (Passi, B.K. and Singh, L.C. and Sansanwal, D.N. 1991) on teacher educators. There is one study on nursing tutors, also (Mathur, R.G. 1988).

The sample size in experimental studies ranged from very small (twenty) to medium-sized. But keeping in mind the control of variables in multivariable and compelled teaching situations, the smaller sample is the practical feasibility.

Instruments/Tools

Researchers in their studies have used either standardised tools or developed their own tools to measure the cognitive and effective outcomes of learning through specific instructional strategies. For measuring the independent variables, the standardised tools, and for measuring the dependent variables, mostly self-developed tools, have been used. The independent variables, taken for measurement in the cognitive domain mostly comprise intelligence, creativity and cognitive style.

While the dependent variable taken in the cognitive domain is mostly achievement, and in the affective domain are reaction and attitude, there is a need to develop specific tests for measuring micro-level criterion variables. With the adoption of observation and participatory approach, comprehensive observation tools may be developed.

Analysis

A changing trend in analytical approach is that in most of the studies the data collected have been analysed by using Analysis of Variance (ANOVA) or Analysis of Covariance (ANCOVA) besides the simple 't' test. These techniques have helped in studying the interaction effects and to partial out the effects of co-variants (e.g., SES,

intelligence) instead of controlling these variables through sampling. In a complex situation of teaching, the variables are of such a nature that all of them cannot be quantified or measured. In fact, there is a danger of over-simplification of the teaching situation. At times, some of the variables have to be studied qualitatively. This, in turn, invites attention to the collation and collection of data obtained through quantitative as well as qualitative approaches and a meaningful interpretation of this data.

CONCLUSIONS

If one looks at the *Fourth Survey of Research in Education* (Buch, M.B. 1992), the research on teaching strategies was a part of the chapter on Research in Training, and less than twenty studies were reviewed under this section. In the present survey, there is a separate chapter, reviewing forty-four research studies on teaching strategies. This is undoubtedly a potent indicator of the momentum gained by the research on teaching strategies. It is now being increasingly realised that teaching processes do form the core of the educational process as a whole. Therefore, they need to be probed deeper and they do have a lot of scope for probing.

The research studies on teaching strategies have, by and large, been of the Process-Product type, i.e., simply measuring the outcome of an instructional process. In order to have a more comprehensive and closer-to-reality interpretations, the research designs could be Presage-Process as well as Presage-Process-Product. Here presage variables include the learner as well as the teacher. As observed earlier, most of the studies have been conducted on secondary-level learners and teacher trainees. There is scope for studying the efficacy of teaching strategies at primary level for the learners with special educational needs, such as underachievers, and gifted and handicapped (physically or mentally) learners. One or two studies have been conducted on tribal children, which is an enlightening move on the part of

researchers.

Most of the studies have been done in the areas of the academic disciplines, usually sciences and languages, whereas there is scope in the vocational streams, as well as non-scholastic areas such as behaviour modification, attitude building, and so on. For this model-based strategies, which are objective-specific, can be adopted.

In one or two studies based on models of teaching, a constructive move is the development of a modified strategy to suit Indian requirements. Besides these, a substantial number of studies (about ten) have experimented on innovative strategies, either evolved by the researcher or studied as being practised in actual situations. Thus the innovative element in teaching strategies holds a lot of promise in future.

In the beginning, the teachers can master a repertoire of four or five models. The creative and experienced teachers use the models not as recipes, but as stimulators to their own activities. It is essential for a teacher in the beginning to follow the steps of a teaching model as he/she gains experience and confidence. The possibilities for designing new approaches and for personalising the models remain endless. Thus there is a need for designing and conducting research to study the effectiveness of using two or three models of teaching in an integrated manner in a classroom lesson in different subjects. It would open up new vistas of research and application in classroom teaching in the area of integration of models of teaching.

The innovative spirit of the researchers would hopefully take into consideration the demands of Indian learners and their learning environment, on the one hand, and the emerging educational policies on the other. Since the research on teaching strategies would have direct implications for teachers and teacher educators in the actual field situations, there is a need to make the research design more flexible and composite rather than adhering to a simple design and excluding others. The use of participant observation and unstructured interviews, which involve a close relationship with teachers and

pupils, are the main elements of ethnographic methods and can be adopted to form a composite research design which can be more of analytical descriptive and experimental research. Such approaches would raise the level of research from pure empiricism to a more realistic and practical dimension which characterises educational situations. It would enable the researchers to become better acquainted with the concerns of teachers and also create a context within which teachers may begin to appreciate the benefits of such research studies.

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