CHAPTER VI

ANALYSIS OF CASE STUDIES

1. Introduction

The process and contents of selected educational innovations in the respective adopter colleges form the theme of the present study which relied on the case study approach. Case study data is strong in reality but difficult to organise, in contrast to other research data which is often weak in reality but susceptible to ready organisation; The strength of case studies lies in their attention to the subtlety and complexity of the case in its own right (Adelman, Jenkins and Kemmis 1976).

In the present chapter the various dimensions of the innovations described in the case studies are analysed, using predominantly the qualitative approach. The guiding concern in the process of analysis has been to identify both the unique characteristics of each case as well inter-relationships and commonalties. Interpretation of data has been done with due regard to the advantages and limitations of the case study method.

2. Analysis and Findings

As explained in Chapter IV the researcher had relied on non-probability sampling and selected the

units of study based on the verdict of a jury of experts and his own discretion and judgement. This purposive sample consisted of eight collegiate innovations which possessed the following characteristics:

(1) They were adopted in arts/science colleges.

(2) They had reached the stage of institutionalisation.

(3) They had been evaluated as successful "to a considerable extent" in achieving their objectives.

(4) They were collective efforts in change, involving the entire college or a Department or a substantial section of the staff/student community.

(5) They were oriented to the objectives of organisational renewal, academic excellence or social relevance.

(6) They were implemented in colleges with a common type of management structure, functioning under the jurisdiction of the respective university.

(7) They were implemented in various parts of the India, five in Tamilnadu, one in Delhi, one in Bihar, and one in Andhra Pradesh.

Such a sample has the limitation, of the related data not being easily generalisable for the entire population and the generalisations, if at all made, being applicable only to the units of the sample. However, in the present study, it was not one unit but a spectrum of units of innovation that was examined, so as to gain breadth and to detect similarities or relationships of characteristics. Case studies being susceptible to subjectivity and bias, the investigator tried to avoid faulty perception, unconscious bias, or the desire to provide the right answer. Each unit was studied in depth so as to obtain insights into the relationships and interdependence of events. Such relationships as were detected in the cases of the selected innovations might also be the characteristics of other innovations in similar institutions, with similar life cycles and problems. The investigator on the basis of the data analysed and interpreted, has arrived at a set of findings which could lead to generalisations of wider relevance and applicability. Even if such generalisations are not arrived at, the case studies considered as products might form a collection of descriptive material and data source sufficient to admit subsequent reinterpretation. The case studies could also be used as steps to action, by virtue of the insights that might be directly interpreted and put to use.

3. Objectives of the Study

The objectives of the study were:

1) to examine the conceptual basis and objectives of selected innovations in colleges;

2) to find out by whom and how they were developed and diffused;

3) to find out how they were adopted and implemented;

4) to identify the factors which facilitated or constrained them;

5) to study related aspects such as the evaluation, personnel, cost, consequences, change agentry and dissemination of innovations.

4. Dimensions of Innovations

To fulfil the above-mentioned objectives of the study the following dimensions of innovations were examined.

1) Time-frame of the Process of Innovation.

2) Innovators in Colleges.

3) Need/Problem related to Adoption.

4) Sources of Awareness.

5) Decision to adopt innovations.

6) Preparing for Implementation.

7) Objectives.

8) Contents/Activities.

9) Personnel.

10) Financial Aspects.

11) Acceptance/Resistance.

12) Evaluation.

13) Change Agents and their Role.

14) Consequences.

15) Communication and Replication.

16) Factors which facilitated/constrained the Innovations.

17) Models of the Process of Change.

The following sections of this chapter contain the analysis of data, focussing on the dimensions identified. In this respect the following clarifications are necessary:

(i) In the tables that follow the Innovations are indicated by numbers 1,2,3,4,5,6,7 and 8 in the order in which they were placed in Chapter V.

(ii) The findings are based on the contents of the case studies presented in Chapter V as well as the analysis of selected aspects discussed in the following sections.

5. Time-frame of The Process of Innovation

Educational change is a slow process. Concepts and schemes proposed to improve existing practices or structures manage to overcome the resistance of output, input and throughput factors only in a tardy manner, despite the best intentions and efforts of enterprising innovators. Consequently a time lag occurs between the articulation of a new idea in a significant and authentic manner and its actual incarnation in a concrete institutional setting.

The time-frame of the selected innovations and the reasons for the time lag were points of enquiry for the investigator and the related data is given in Table 1.

TABLE 1 - TIME OF ADOPTION OF INNOVATIONS

Sl. No.	Time of Adoption	Innovations 1	2	3	4	5	6	7	8
1.	Year in which the innovation was adopted	1980	1973	1977	1978	1979	1976	1973	1978
2.	Time lag between Education Commission Report(1966) and adoption	14	7	11	12	13	10	7	12
3.	Reasons for time lag:								
	- Slow diffusion	-	-	X	-	-	X	-	X
	- long preparation	-	X	X	X	X	-	X	X
	- resistance to proposal	X	-	-	X	X	-	-	X
	- neglect of proposal	X	X	X	X	-	X	X	X
	- Lack of initiative on the part of college/academic community	X	X	X	X	X	X	X	-
	- absence of autonomy	-	-	-	X	X	-	-	-
	- Late realisation of significance	X	-	X	X	-	X	X	-
	- Lack of sponsorship by competent authority/agency	-	-	X	X	-	-	X	X

(The symbol 'X' denotes a positive response and '-' a negative one.)

A movement for educational change requires a conceptual framework. Such a framework and detailed action plans with guidelines on strategies for implementation were imparted to Indian education by the Education Commission Report (1964-66). The distinctive features of the Report were, its comprehensive approach to educational reconstruction and its attempt to project a blue print of a national system of education for India (Naik 1982). The Report envisioned education as an instrument of social change and development; and presented a model based on sound technical, pedagogical and ethical principles. Owing to the lack of dialogue between politicians and educationists in the country and since most major educational decisions are political decisions, some of the significant recommendations of the Commission were not implemented; some others were distorted, avoided or neglected; and some met with only half-hearted or inconclusive implementation.

After the publication of the Report, the Government of India circulated it to the State Governments and the universities. Thereafter at the national level, consultations on its contents were held involving all sections of the educational community and other interest groups. The well-researched findings and recommendations were diffused,

extensively and in-depth, to universities, colleges, schools and individual teachers. The National Policy on Education (1968) emerged from it. The educational policies and programmes adopted during the Fourth (1968-73), Fifth (1973-78) and Sixth (1978-83) Five Year Plans were based on the recommendations of the Report, as modified by the National Policy on Education.

The eight studies included in this investigation were related to the recommendations of the Commission. It is not contended that the Commission was the first body to conceive, conceptualise or project all of them. Some were the brain-children of the Commission; some found clear articulation and affirmative support from the Commission; some were well-known educational practices that got an operational manifestation in the formulations of the Commission. The exact passages wherein the innovations were embedded were quoted in seven of the case studies on innovations -relating to, preferential option for the poor in Admissions, repair and maintenance of scientific equipment in laboratories and research centres by the academic personnel and application of science to the needs of the community; Restructuring of the First Degree course; communicative teaching of English with streaming of students according to their ability levels; inculcation of moral,

social and spiritual values: orientation programme for new entrants to the colleges: and college autonomy. It was reported during interviews that the remaining item, Self Evaluation Programme came into the awareness horizon of the college personnel and the founding society after the subject was discussed at length at a national conference held in December 1966 with the specific purpose of discussing the theme 'Education and National Development'. Thus it was also allied to the Commission's Report. While the adopters of the eight innovations might have got awareness about them from other sources also, the Education Commission (1964-66) was found to have addressed itself to the problems/needs related to the innovations and suggested remedial action. Therefore, the investigator has taken the year of publication of the Report, 1966, as the base year for calculating the time-frame of the selected innovations.

From Table 1 it is seen that the selected innovations were introduced in the respective college systems in the years 1980, 1973, 1977, 1978, 1979, 1976, 1973 and 1978 respectively. The range of the time lag in adoption is from 7 years for the earliest innovation to fourteen years for the latest.The mean of the lag between the time of proposals in 1966 and the time of their substantive adoption in colleges is 10.75 years.

The reasons for the time lag were found to be:—

slow diffusion by resource systems (3 cases); long period of preparation needed (6 cases); resistance to the proposal by internal and/or external forces (4 cases); neglect of the proposal by implementation agencies or colleges (7 cases); lack of initiative on the part of the college or the academic community (7 cases); absence of autonomy for colleges (2 cases); late realisation of the significance of the innovative idea (5 cases); and the lack of sponsorship or legitimisation by the competent authority/agency (4 cases).

The seventies were a period of intensive analysis and discussion of the educational issues raised by the Education Commission Report (1964-66), through research, study, publication of books, conferences, seminars etc. and also a period of planning for implementation of the recommendations by the University Grants Commission, the universities and voluntary bodies. An educational ferment and collective enthusiasm for innovation and change were manifest; many individual colleges and educators were influenced by the 'zeitgeist' (the spirit of the age) and they ventured to fabricate their own innovations with internal resources. This trend was noticeable in most of the innovations under study.

From the above analysis and/on the basis of the case studies, the investigator arrived at the following findings:

(i) New educational concepts undergo a time lag between articulation and accomplishment, proposal and implementation, diffusion and adoption.

(ii) The propositions contained in the reports of high-powered Commissions take time to be developed, adapted and tried before they are communicated to adopter systems.

(iii) The major reasons for the time-lag in the adoption of innovative ideas in higher education are: (a) lack of legitimisation/sponsorship by the competent bodies such as State legislatures and the bodies of the University; (b) long period of planning and preparation; (c) neglect of, or resistance to, the proposal by critics, sceptics or vested interests; (d) lack of initiative on the part of the colleges and the academic community; (e) laggardly realisation of the significance of the new ideas by the adopters; (f) slow diffusion; and (g) absence of autonomy for colleges.

6. Innovators in Colleges

Who initiates the process of change in the college context? Who is mainly responsible for sensing the needs/problems, searching for solutions and identifying the most effective one? Who maintains linkages with resource systems and change agents? What are the characteristics of the innovators? Who is responsible for the planning and preparatory work for adoption of the innovations? These questions were sought to be answered by item IV of the Interview Schedule and items 1-7 of the Questionnaire. The characteristics of the respective innovators were confirmed not only on the basis of the assessment made by the respondents but also the information and impressions gathered by the investigator through personal interaction. The data collected thereon is presented in Table 2.

TABLE 2 : INNOVATIONS IN COLLEGES :

PERSONS RESPONSIBLE FOR ADOPTION, PLANNING AND PREPARATION

Sl. No.	Items	Innovations							
		1	2	3	4	5	6	7	8
1.	Persons responsible for adoption								
	- Principal	x	-	x	-	-	x	x	x
	- Head of the Dept.	-	x	-	x	-	-	-	-
	- Professor(s)	-	-	-	-	x	-	-	-
2.	Characteristics of the innovator identified above:								
	- High academic standing	x	x	x	x	x	x	x	x
	- Effective Communication	x	x	x	x	x	x	x	x
	- Administrative Authority	x	x	x	x	x	x	x	x
	- Participative Approach	x	x	x	x	x	x	x	x
	- Cosmopoliteness	x	x	x	x	x	x	x	x
	- Research	-	x	x	x	x	x	-	-
	- Good Human relations	x	x	x	x	x	x	x	x
	- Concern for students	x	x	x	x	x	x	x	x
	- Linkage with resource system.	x	x	x	x	x	x	x	x
	- Sense of social justice	x	x	x	x	x	x	x	x
	- Fund-raising skill	x	x	x	x	x	x	x	x
3.	Persons/ responsible for Planning/preparation								
	- Heads of Departments	x	-	x	-	-	x	x	x
	- Professor(s)	x	-	-	x	-	x	x	x
	- Principal	-	x	-	x	x	-	-	-
	- Faculty	x	x	x	x	x	x	-	x
	- Students	-	-	-	-	x	-	-	-

(Note: The symbol 'x' denotes a positive response and '-' a negative one).

Table 2 indicates that the Principals were responsible for the adoption of five innovations; the Heads of the Departments for two; and Professors for one. The two Heads adopted two departmental programmes and the group of Professors a new interdisciplinary programme (Social Ethics). The activities for which the Principals were responsible, covered the whole college. The persons who assisted the innovator in planning and preparation were the Heads of the Departments (5 cases), Professors (5 cases), the Principal (3 cases) and the faculty members (8 cases). Students helped in the planning and preparation of the Social Ethics Programme, by direct involvement.

The identified characteristics of the innovators included: high academic standing, effective communication skills, administrative authority, participative approach, cosmopoliteness, good human relations, concern for students, high sense of social justice, linkages with resource systems and fund-raising skills. These traits were confirmed in the case of all the eight innovations. However, only in five cases the innovator was a researcher too.

From the above analysis it could be noted that the Principals, Heads of Departments and Professors were the innovators in the colleges and that the faculty members

assisted in planning and preparation in all cases. In those cases where the Head or Professor was the innovator the Principal cooperated in planning and preparation. Thus the Principal was an invariably present character in all change efforts, in different capacities.

Regarding the characteristics of innovators, it could be seen that high academic standing and research competence lent credibility and respectability to the new experiment in the estimation of the colleagues and students. The halo of administrative authority as Principal or Head was of advantage to get things done expeditiously and to elicit accountability from others. Effective communication skills came in handy to clarify new concepts, to encounter criticism satisfactorily, to reason with resistors, to persuade those who were fearful and undecided, to resolve conflicts, to build up group cohesion and to give positive or negative strokes. Cosmopoliteness helped the innovators to visit new places, to see new models of innovations in other countries, to exchange notes with change agents and communicate with resource systems. Concern for students helped him/her to focus the innovations on student needs/problems and the sense of social justice prompted him/her to link the college resources and offerings with the interests of the underprivileged. Since funds

were indispensable much of the resource mobilisation was also his/her responsibility.

This analysis generated the following findings:

(i) In the context of colleges the innovators are the Principals, Head of Departments or Professors. The faculty members help in planning and preparation.

(ii) Innovators are characterised by traits such as high academic standing, administrative authority, effective communication skills, participative approach, cosmopoliteness, research competence, good human relations, concern for students, sense of social justice, linkage with resource systems and fund-raising skills.

(iii) The innovator is assisted by a close-knit group of associates who help in planning, preparation and ongoing evaluation.

(iv) The innovator is a cosmopolite, who attends professional conferences, visits other institutions and contacts resource systems in various parts of the country and abroad; he is a carrier of new insights and ideas from other systems.

(v) The innovator is a good communicator and skillful in group dynamics.

(vi) The innovator is an effective motivator and uses reinforcements and strokes to show appreciation or to reprimand.

(vii) The innovator relies on change agents for training of staff, evaluation of performance and control of quality.

(viii) The innovator helps other institutions in adopting innovations and functions as a change agent.

(ix) The innovator has a high sense of social justice and is continually concerned about student needs.

(x) The innovator takes decisions consultatively.

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7. Need/Problem related to the Adoption Of Innovations

An innovation is envisaged as an attempt to improve a given situation and the needed improvement contains in itself a problem to be solved. Early and accurate identification of the underlying need/problem, helps to bring about effective innovation. (Adams and Chen 1981). The precise definition and clarification of the problem will be helpful to, (a) the innovator who intends to propose the action that is likely to be effective in solving the problem; and (b) the evaluater who judges the innovation in terms of its problem-solving competence. Items V (a) and (b) in the Interview Schedule were meant to shed light on this point of enquiry. Table 3 shows the nature of the need/problem and the source of its awareness.

Table 3 - NATURE OF NEEDS/PROBLEMS PERCEIVED BY ADOPTERS OF INNOVATIONS AND THE SOURCE OF THEIR AWARENESS.

Sl. No.	Items	Innovations							
		1	2	3	4	5	6	7	8
1.	Need/Problems related to:								
	- learners	x	-	x	x	x	x	x	x
	- teachers	-	x	-	x	x	x	x	x
	- college organisation	x	x	x	-	x	-	x	x
	- community	x	x	x	-	x	x	x	x
	- any other	x	-	-	-	-	-	x	x
2.	Awareness of Need/Problem from:								
	- personal experience	x	x	x	x	x	x	x	x
	- discussion with colleagues	x	x	x	x	x	x	x	x
	- discussion with students	-	x	x	x	x	x	-	x
	- discussion with parents/ public	x	x	x	-	x	x	-	-
	- any other	x	-	x	-	-	-	x	-

(Note: The symbol 'x' indicates a positive response and '-' a negative one).

It can be seen from the table that seven out of the eight innovations under study were addressed primarily to the students' and the community's needs/ problems; six each to the teachers' and the college organisation's. The student needs were:

- access of indigent students to higher education;
- gaining communication skills;
- Study of rural development skills;
- acquiring social consciousness and ethical discernment;
- learning study skills;
- participation in . . evaluating the college and providing feedback;
- learning relevant courses, with the course teacher testing them.

The teachers' needs were, respectively, the need to repair and maintain the scientific equipment in the laboratories in the case of 'Applied Science Programme'; to teach according to the ability levels of students in the case of 'Communicative Teaching of English'; to safeguard and strengthen the college tradition of value education in the case of 'Social Ethics"; to have students proficient in basic study skills in the case of 'College Preparatory Course'; to evaluate the college and bring about improvements in the case of

'Self Evaluation' and the need for academic freedom and responsibility in the case of college autonomy. In two cases, Self Evaluation and College Autonomy, organisational needs were paramount, the need for critical self-scrutiny, for renewal and betterment; and the need for freedom to develop relevant courses; teach with effective methodologies and to get the students evaluated by the course teachers themselves. The community needs were basic to the Rural Development Science Course and its restructuring in the direction of learning oriented to rural problems and development . The founding societies' need to be relevant to the original goals and to the changing times led to the preparation of the Self Evaluation Programme and the policy of preferential option to the disadvantaged.

The awareness of the need/problem was generated by personal observation/experience (8 cases); by discussion with colleagues (8 cases); by discussion with students (6 cases); discussion with parents/public (5 cases); discussion with the members of the founding society (2 cases); and interaction with the rural poor in one case. In all these cases it was the sensitivity and empathy of the innovator and his/her close associates that enabled them to identify with the needy group and diagnose its problem. The diagnosed problem was discussed with the various segments of the college community so as to arrive at the definition of the problem. This would not

have been possible unless the communication channels were open for the two way transmission of messages. Necessary structures for problem-analysis, search for alternate solutions and the retrieval of possible solution were made use of. The clarity and sharpness of problem identification and articulation influenced the formulation of the solution.

From this analysis the following findings evolved:

(i) Empathy and sensitivity on the part of Principals and teachers lead to perception and awareness of the needs/problems in the college milieu-of the students, teachers, the local community and the organisation as a whole.

(ii) Open communication channels, upward, downward and horizontal, facilitate exchange of perceptions and ideas on needs/problems to be met/solved in a college system. Regular staff meetings, informal or formal face-to-face conversations, field visits and self-study programmes facilitate awareness of the needs/problems.

(iii) The needs of the underprivileged in terms of access to colleges and compensatory education were receiving the attention of concerned educators.

(iv) Internally identified needs/problems have a greater motivational thrust on college personnel, than those proposed by external agencies. When there is congruence between the two, or when they interface, the will to change gets energised in the direction of innovations.

8. Sources of Awareness of Innovations

The new knowledge, that penetrates the shells which envelop educational systems, originates from various sources: books, journals, media, visits abroad, professional meetings, other colleges, universities, Unitersity Grants Commission, change agents, discussion among colleagues, voluntary bodies etc. Some new ideas may evolve from the experiences, reflections and insights of creative educationists desirous of and committed to, change.
Item VI of the Interview Schedule was aimed at collecting data on the sources from which the adopter group received awareness about the eight selected innovations.
Table 4 presents the related information (shown on page 369).

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TABLE 4 - SOURCE OF AWARENESS ABOUT INNOVATIONS

Sl. No.	Items	Innovations								Total (A)
		1	2	3	4	5	6	7	8	
1.	Source of Awareness:									
	- Books/Journals	-	x	x	x	x	x	x	x	6
	- Visit to other states	-	x	-	-	-	x	-	-	2
	- Seminars/Conferences	-	x	x	x	x	x	x	x	7
	- Visits Abroad	-	x	-	x	-	x	-	-	3
	- Other Colleges	-	x	-	-	x	x	-	-	3
	- Universities	-	-	x	x	-	-	-	x	3
	- U.G.C.	-	-	x	-	-	-	-	x	2
	- Change Agents	-	x	x	x	-	x	x	x	6
	- Personal Observation/ Reflection	x	x	-	x	x	-	-	-	4
	- Discussion with Colleagues	x	x	x	x	x	x	-	-	6
	- Voluntary Bodies	-	-	-	x	-	-	x	-	2
2.	Total Number of Sources reported by adopters of each Innovation	2	8	5	8	5	7	4	5	

(Note: The symbol 'x' stands for a positive response and '-' for a negative one).

The column at the end (Total A) shows the number of adopters reporting the item as a source of awareness.

It was noted from the table that the adopters of innovations had reported seminars/conferences as the source of awareness in 7 cases; books/journals, change agents and colleagues in 6 cases each; personal observation/reflection in 4 cases; visits abroad, university and visits to other colleges in 3 cases each; and visits to other states, University Grants Commission and Voluntary bodies in 2 cases each. The media was not indicated as a source in any case. The maximum number of sources (8) was reported by the adopters of the Applied Science Programme and the Communicative Teaching of English; followed by College Preparatory Course (7); Restructuring of First Degree Course and College Autonomy (5 each); Self Evaluation Programme (4) and Preferential Admission to Lower Income Group (2).

It could be gathered from the data that the college innovators were frequenters of seminars and conferences in the University or other forums, organised by professional societies, voluntary organisations, centres of research, University Grants Commission etc. The summer institutes and other conferences on innovations organised by the University Grants Commission could also be counted under this head. The social interaction and intellectual stimulation that scholars from various parts of the country, receive

in such 'temporary systems' were naturally the most prolific source of new ideas and attitudes supportive of educational change. Books, and journals including the reports of various learned committees and commissions were carriers of innovative ideas. Individual educators with sensitivty and empathy were observing the socio-educational scene around, sensing and analysing needs, discussing their concerns with colleagues and shaping with their creativity and imagination, innovative ideas and programmes. Resource persons, and other specialists from resource systems such as the University Grants Commission, Universities, Association of Indian Universities National Institute of Educational Planning and Administration etc., were also agents disseminating new ideas and practices in higher education.

The following findings were drawn from the case studies and the analysis above:

(i) Social interaction among educators through professional seminars/ conferences/courses, promotes the diffusion of innovative ideas and practices.

(ii) Successful innovators are cosmopolites who visit other colleges, states and countries. They establish linkages with change agents.

(iii) University Grants Commission is a major source of innovations for college educators.

(iv) Individual educators and communities of educators in colleges shape innovations out of their experience, creativity and interactions with colleagues.

(v) As books and journals are important sources of new ideas, the quality of library resources in the colleges affects innovations.

9. Decision to Adopt the Innovations

The decision to adopt a new idea, practice, programme or organisational structure is bound to unsettle the existing equilibria of power distribution, relationships, work schedules and decision-making processes in the college organisation. Who makes the decision, in what manner in consultation with whom, is a crucial question with a bearing on its universal acceptability, motivation to implement it and the quality of its execution. The investigator collected information about this aspect with respect to the eight selected innovations, by item VIII and IX (a) in the Interview Schedule and items 8(m) and (s) of the Questionnaire. The related data are presented in Table 5.

TABLE 5 - DECISION -MAKING ON THE ADOPTION OF INNOVATIONS

Sl. No.	Items	Innovations							
		1	2	3	4	5	6	7	8
1.	With whom the proposal for adoption was discussed								
	- the Governing Body	x	x	x	-	x	x	x	x
	- the staff	x	x	x	x	x	x	x	x
	- the Students	-	-	-	-	x	-	x	-
	- the University	-	-	x	-	-	-	-	x
	- any other	x	-	x	x	x	-	x	x
2.	No. of Staff consulted:								
	- All the Staff members	x	-	-	x	x	-	x	x
	- Majority of staff	-	-	x	-	-	x	-	-
	- Some of the staff	-	x	-	-	-	-	-	-
	- None at all	-	-	-	-	-	-	-	-
3.	Nature of decision to adopt:								
	- optional	-	-	-	-	-	-	-	-
	- collective	x	x	x	x	x	x	x	x
	- authority	x	-	x	x	x	-	x	x
	- contingent	-	-	-	-	-	-	-	-

(Note: The symbol 'x' denotes a positive response and '-' a negative one).

The table above indicates that the decision was basically collective in all cases; and that in six cases, the collective decision was buttressed by authority decision at a higher level. In the case of Preferential Admission to the Lower Income Group, the proposal was first discussed with the founding society, Departmental Heads and all staff, later considered by the Governing Body and finally an authority decision was taken. The decision had far-reaching implications for the admission policy of the college and the composition of its student body and hence it required the authorisation and stamp of authority which the Governing Body alone could provide. In the case of the Applied Science Programme the decision was taken after the Head of the Department's consultations with other Heads, the Principal and some staff members. As it was a Departmental activity consultation with all staff, was not required. The decision to restructure the course in Rural Development Science was adopted in consultation with the the Staff, the Governing Body, the University and the University Grants Commission, which had researched, developed and disseminated the idea. The majority of the staff were consulted and the decision was both collective and authority-based. The programme of Communicative Teaching of English was a Departmental Programme and all the staff members of the Department of English

and the Academic Council of the college which was autonomous were the consultees. The decision in this connection was collective and authority-based. The Social Ethics Programme was adopted after consultations with all the staff members, student representatives, and the Governing Body. The decision was collective in the first phase and finally the Academic Council of the College, after deliberations took the final decision to adopt the programme as a new course. The College Preparatory Course was started after the decision to initiate it was discussed by the majority of the staff members. It was a collective decision. In the case of the Self Evaluation Programme the decision - making had two levels. The founding society of the college had decided to conduct self-study in all its units for organisational renewal and it was an authority decision. At the college level the proposal was discussed with all the staff members, the students and the Governing Body and a collective decision was taken. College autonomy, being a comprehensive innovation, had four levels of decision - making. The University Grants Commission originally decided in consultation with expert committees to endorse the conferment of autonomy on selected colleges; this was a collective authority decision, in exercise of the authority vested in it by the Parliament in connection with the

maintenance and coordination of academic standards. The State Government after much consultations at the political level favoured the proposal to amend the University Acts so as to make provision for autonomous colleges in the Universities of the State. The University to which the concerned college was affiliated, after consultation with the university bodies, took the decision to confer autonomy on selected colleges, subject to prescribed terms and condition. At the institutional level the proposal was discussed with all the staff members and a collective decision was taken. Later this was endorsed by the Governing Body. Thus the decisions were primarily collective and eventually based on the authority of the superordinate body at every level, the University Grants Commission, the State legislature, the University and the Governing Body of the College.

In the autonomous colleges the Academic Council was empowered to decide upon the introduction of new courses and hence the Governing Body or the parent university was not involved in the decision to start the Communicative Teaching of English. But in another autonomous college where the Social Ethics Programme was initiated, the proposal for a value education programme as an integral part of the curricula of the courses in the college originated from the Governing Body itself and later the Academic

Council endorsed it. The University was consulted with regard to the introduction of the Restructured Degree Course and the college autonomy. The students had an opportunity to vent their views before the decision to start the Social Ethics Programme and the Self Evaluation Programme were launched. The "others" consulted included the founding societies of the colleges, experts and resource persons. In the case of four innovations (1,5,7, 8) the entire staff were consulted. and in the case of a Departmental Programme (5) all the staff of the concerned Department were involved. Only "some of the staff" on a selective basis were involved in deciding upon the setting up of the Applied Science Programme, owing to the technical and specialised character of its operations.

Thus it was seen that the decisions on adoption of new activities in colleges were not either based on majority opinion only or based on the authority of the superordinate body or persons only; the decisions in most cases were a combination of democratic, participative consultation and the exercise of the legitimate authority of the competent body. The Governing Body as a watchdog of institutional objectives and interests was quite visible at the decision - making level. Student participation seemed to be rather subdued in most of the colleges

and the explanation was that they were a "floating population" changing from year to year and that they were swayed by temporary concerns including examination results and not by the long term benefits of significant innovations. This appeared to be an area of weakness in the decision - making processes of the selected innovations. It was also noted that as a result of autonomy the decision - making had become de-centralised, from the university to the autonomous college with respect to the approval of new courses and curricula. This was an important component of the academic freedom offered to the autonomous colleges.

From the foregoing analysis the under-mentioned findings have been arrived at :

(1) Decision - making on adoption of major innovations in colleges has the twin characteristic of being both consultative/collective and authority-based.

(2) Governing Bodies of colleges take sustained interest in the decision-making on innovations, especially when they impinge on the college's objectives, policies and financial concerns.

(3) The teaching staff are frequently consulted and involved in the decisions relating to adoption of innovations in colleges.

(4) Student participation in decision-making on adoption of innovations is rather weak. In most cases usually they are 'informed' or 'briefed' after the decision is taken.

(5) Major innovations disseminated by the University Grants Commission and the Universities gain acceptance and adoption in colleges, owing to the fact that they have already been scrutinised by expert committees at various levels and bear the stamp of academic soundness.

(6) The parents of the students are conspicuous by their absence in the decision-making process related to innovations.

(7) Decisions on the adoption of innovations taken consultatively and participatively with the staff, enhance the chances of their success in achieving the objectives.

(8) Innovations adopted in participative consultation with the staff have a greater chance of continuance in colleges.

(9) The usual forum for consultations with the staff in colleges, is the staff meeting, both Departmental and college-level. Their frequency, regularity and the quality of interactions and communication therein contribute to the success of innovations.

(10) The new administrative structures set up in autonomous colleges such as the Academic Council, Boards of Studies and Boards of Examiners provide forums for the participation of teachers in the decision - making in general, and particularly on the introduction of innovative practices.

10. Preparing for Implementation of Innovations

In the case of the eight innovations under study, preparing for the implementation of innovations had started in the colleges, in anticipation, long before the actual decision for adoption. In fact the decision itself was made possible by a series of prior planning and shaping activities, spanning two to three years in some cases. With the help of item X in the Interview Schedule data on the preparatory steps was gathered. Table 6 presents the same.

TABLE 6 - PREPARING FOR IMPLEMENTATING INNOVATIONS - STEPS TAKEN BY COLLEGES

Sl. No.	Items	Innovations							
		1	2	3	4	5	6	7	8
1.	Planning Committee	x	x	x	x	x	x	x	x
2.	Framing Rules	x	x	x	x	x	x	x	x
3.	Scheme of Work	x	x	x	x	x	x	x	x
4.	Budgeting/Fund raising	x	x	x	x	x	x	x	x
5.	Personnel	x	x	x	x	x	x	x	x
6.	Curricula/Teaching Materials	x	-	x	x	x	x	-	x
7.	Contact-Change Agents	x	x	x	x	x	x	x	x
8.	Orientation for Students	x	-	-	-	x	-	x	x
9.	Orientation for staff	x	-	x	x	x	x	x	x
10.	Training of Staff	x	x	x	x	x	x	-	x
11.	Monitoring & Feedback Mechanism	x	x	x	x	x	x	x	x
12.	Information Campaign	x	x	x	x	x	x	x	x

(Note: The symbol 'x' stands for a positive response and 'x '-' for a negative one).

From the table it was seen that most of the steps in the preparatory stage were common to the innovations, the difference being the varying degrees of organisational complexity, academic content, required personnel, span of time involved and cost. College autonomy, the most complex of the eight innovations, remoulded the entire organisational structure, curricular pattern, teaching methods and evaluation procedures of the college and hence required comprehensive preparations which started about five years before the actual adoption. The College Preparatory Course which lasted only for a fortnight every year had the minimum of complexity; however it needed almost the same type of preparatory steps for its implementation; The commonalty observed in the steps did not imply that they were pursued in the same sequence in all institutions.

The common steps identified were - setting up of a planning/steering committee, charting of a scheme of work, framing of rules and regulations, budgeting and fund-raising, personnel planning, allocation of responsibilities, preparation of software including curricula, teaching materials etc., contacting change agents, orientation for staff and students, training of staff, creation of monitoring and feedback mechanisms and information campaign to project the correct image of the innovation before the parents/public.

During interviews it was found that the planning/ Steering Committee consisted mostly of the leader of the innovation and his close associates. They were in charge of framing the rules and regulations, preparing the scheme of work, schedules etc. and activating the monitoring mechanisms. In the case of autonomy a number of new administrative structures were created such as the Academic Council, Boards of Studies, Boards of Examiners, Awards Committee, Appeals Committee etc. Conducting the examinations in the college and maintaining their confidentiality and schedules were new, grave responsibilities. Administration of autonomy was another additional charge on the college. Therefore additional staff were appointed for the new functions that arose. Meanwhile the newly entailed cost was to be properly budgeted and extra funds raised. Resource persons from various agencies were contacted and invited to the campus to conduct staff development programmes. To brief the students and parents on the meaning and implications of autonomy separate meetings were organised for them. A special feature of the Social Ethics and Communicative Teaching of English programmes was that the teaching resources for both were prepared by the teachers themselves. In the former case the teachers who volunteered to teach the course met at a workshop for a fortnight, outlined the syllabus of the course,

prepared the teaching materials including cases for discussion, lessons on each component of the syllabus and guidelines for teachers; and composed a "Teachers' Manual". In the latter case all the twenty teachers of the Department of English used to meet for "project discussions" regularly wherein the preparatory work was reviewed and assessed. Orientation for staff and students separately was provided before the Self Evaluation Programme commenced. During the orientation the various inventories of the Programme were explained to them and detailed instructions provided on how to use them. Publicity through the newspapers was given to the Preferential Admission for Low Income Group policy, so that eligible parents could apply for the admission of their daughters. Thus it was seen that meticulous and planned preparation constituted the prelude to the implementation of all the change efforts. Like Rome, successful innovations were not built in a day.

The following findings emerged from the case studies and the analysis of the data:

(i) Preparation for the implementation of innovations in colleges has components such as : constitution of a planning/steering committee, charting out a scheme

of work, framing rules and regulations, budgeting, fund-raising,appointment of personnel with appropriate job description, shaping the curricula and teaching materials, drafting the assistance of change agents, staff development programmes, orientation for students and staff, creation of monitoring and feedback mechanism and an informational campaign to project the correct image of the innovation. These steps are not sequential and many of them become operational simultaneously or in a different order of succession.

(ii) Innovations whether complex or simple, long term or short term, organisational or curricular/ methodological, cost - intensive or inexpensive - have mostly the same types of preparatory activities.

(iii) An informational campaign helps to project an accurate and appealing image of the innovation before the college community and the general public.

(iv) Orientation programmes for the staff and students forestalls possible misconceptions about, and distortions of, the innovation in the later stages.

(v) Monitoring and feedback mechanisms, if installed at the preparatory stage itself, assists early detection of deviations from the charted course and expeditious corrective action.

11. Objectives of Innovations

Clearly defined and sharply focussed objectives help an innovation to secure optimum results in the most cost-effective manner. It is also important that the objectives are set participatively by the members of the user system and that they fully understand and subscribe to them. The compatibility of the objectives of the innovation with the aims and ethos of the college contributes to its success. With these assumptions the investigator enquired whether the aims of the adopter colleges contained certain significant concerns such as contribution to national development, promotion of social justice, service to the poor, relevance to societal needs, academic excellence, value-orientation and employability of students- all elements of the national educational objectives set by the Education Commission (1964-66). It was also probed, whether elements of these concerns were present in the objectives of the selected innovations. The results of this enquiry are given below:

11.1 Preferential Admission to Students from Lower Income Group:

(a) College Objectives:

To provide an integrated, all round education to the young, and among them, especially for the poor.

(b) Innovation's Objectives:

To admit to the degree courses girls belonging to neighbourhood families with lower income,

irrespective of the marks they scored in the qualifying examination and the type of school they attended. To provide such students, after enrolment, remedial help in study and communication skills so as to improve their level of academic achievement and social adjustment.

(c) Common Concerns

- Promotion of social justice
- Service to the poor
- Relevance to societal needs
- Academic improvement of under-achievers

11.2 Applied Science Programme:

(a) College's Objectives

Excellence with relevance and employability was the goal of the College.

(b) Innovation's Objectives:

- To make available the scientific capabilities and resources of the college to the community on the campus and in the neighbourhood through practical applications of science.
- To impart application-oriented training to students and the members of the local community.
- To establish linkages between the science departments and the industries and workers outside.

(c) Common Concerns:

- Contribution to development
- Relevance to societal needs
- Employability of students

11.3 Restructuring of the First Degree Course:

(a) College's Objective:

"To raise the standard of education and of living" in the backward area where the college was situated with special emphasis on the intellectual, moral and spiritual development of the students and the inculcation of a 'strong sense of social service' in them.

(b) Innovation's objectives:

- Relating the learning experiences in the college to the life and needs of the people.
- Integrating theory and practice so as to lead to productivity.
- Promoting the employability of students.
- Helping the emergence of educated youth who could impart skilled leadership in rural life.

(c) Common Concerns:

- Promotion of social justice.
- Service to the poor.
- Relevance to societal needs.
- Academic excellence.
- Employability of students.
- Value-orientation.

11.4 Communicative Teaching of English:

(a) College's objectives

Training of young men of quality to be leaders in all walks of life so that they might serve

the people in truth, justice and love.
Fostering an atmosphere of intellectual vigour and moral rectitude in which the Indian youth along with youth from various parts of the world might find their fulfilment, achieve greatness and stand out in their time as eminent men of service.

Achieving academic excellence and integrated development of persons with a social responsibility.

(b) Innovation's Objectives

To make the teaching of English relevant to student needs and interests; and suitable to the different ability levels of students.

(c) Common Concerns

- Relevance to student needs.
- Academic excellence
- Promotion of social justice.

11.5 Social Ethics Programme:

(a) College's objectives:

Sound liberal education, with academic excellence, social relevance and spiritual vitality as principal goals.

(b) Innovation's objectives:

- To raise the level of social consciousness of students by exposing them to social transformation in India.
- To train students in integrated thinking on the multidimensional questions surrounding

the social reality and in communicating their understanding.

- To equip the students with the capacity to take a stand on contemporary social issues as responsible and conscientious human beings.

(c) Common Concerns

- Promotion of Social Justice
- Service to the poor
- Relevance to societal needs
- Value-orientation

11.6 College Preparatory Course:

(a) College's objectives

To serve the society without distinction of caste, language or creed, setting before students high ideals of service, humanism, social justice and national development at all levels and striving towards a personal integrity training of the young.

(b) Innovations Objectives

To cultivate study skills, communication skills, and independent learning habits in students from socially and academically deprived background.

To generate in them self-confidence in human relations.

(c) Common Concerns

- Academic Excellence
- Promotion of social justice
- Service to the poor

11.7 Self Evaluation Programme:

(a) College's objectives

To emancipate the women of Bihar through a good system of education.

(b) Innovation's Objectives

To provide a social technology by which all could participate in the task of institution-building. To help the college community to optimise performance. To build into the existing structures feedback and planning mechanisms that would improve organisational health and good relations of the institution with its environment. To facilitate planning for the future in such a way that the college would contribute to social justice and national development.

(c) Common Concerns

- Contribution to national development
- Promotion of social justice
- Relevance to social needs
- Academic excellence
- Value-orientation

11.8 College Autonomy:

(a) College's Objectives

- Educating the women of the region and training them in the service of God and society.
- To help the student realise her potentialities of mind and spirit.
- To help her to develop her intellectual powers and to understand her own self in her own religious and cultural setting.

(b) Innovation's Objectives

i) To work towards achieving academic excellence at par with international standards.

ii) Development of the full personality of each student, as reflected in :

- training
- full use of intellectual powers
- social awareness
- acceptance of responsibility

- understanding of national and cultural heritage
- ability to apply learning to life situations
- ability to make decisions as autonomous persons

iii) To help students become responsible persons.

iv) To help students develop attitude towards work which will make them employable adults.

(c) Common Concerns

- Academic excellence
- Promotion of Social justice
- Value-orientation
- Becoming autonomous persons
- Spiritual growth

On the basis of this enalysis the following findings were evolved:

(i) Innovative colleges have incorporated in their objectives elements such as contribution to national development, promotion of social justice,

service to the poor, academic relevance, value-orientation and employability of students.

(ii) The mission of the college and its goal-focus provide direction to the innovations.

(iii) The ideological content of institutional objectives gets reflected or incorporated in the objectives of innovations.

(iv) Compatibility or congruence of the objectives of the innovation with those of the college, contributes to its effectiveness.

(v) Academic excellence and social relevance can be complementary elements in the objectives of innovations.

(vi) Autonomy has helped the colleges to revise their objectives in terms of social relevance.

12. Contents/Activities of Innovations

The core of an innovation, especially an educational one, is its activity, the substantive academic or organisational operation involved; the nature and sequence of things done; the materials used; the decisions made; the new structures created or the substitutions effected; the totality of the new phenomena or characteristics that replaced an earlier practice or structure. If the soundness and validity of the contents of the new practice are not convincingly proved or established in conformity with the established norms, it may not be invested with legitimacy and acceptability in the estimation of the college clientele. In this connection the investigator enquired into the following points:

(i) The target group affected by the change-whether it was the whole college or part thereof.

(ii) Whether the innovation's activity was organisational/administrative or related to teaching-learning or inter-related, and if so to what extent.

(iii) What was the change involved? What was new about the innovation?

(iv) Actual work involved.

(v) Methods and materials used.

The case studies described in detail the above-mentioned aspects of each of the selected innovations and they are analysed here further succinctly.

In the case of the Preferential Admission Policy the target group was the prospective students, the clientele of the college. In the long run the attempted change would result in substantial alteration in the composition and complexion of the student body. The innovation had academic implications in terms of new remedial courses required, new methods and materials employed and the very concept of 'academic-standards', whether it was symbolised by examination results or by the improvement in the learning achievements and outcomes of students during the period between the entry and terminal points of the college experience. The existing practice that underwent modification was the admission policy whereby only students with high marks who normally happened to be from prestigious schools and affluent background could enter the college. The actual work involved; (a) framing new rules for admission; announcing them and conducting admissions according to them; and (b) compensating such new entrants with special learning experience and behavioural inputs. In the case of the Applied Science Programme which was scientific-technical

in nature the activity involved application-oriented training to students and members of the local community, maintenance and servicing of scientific hardware in the college, preparation of equipment for clients and optimum use of the resources of the college for the benefit of the community. The target group was the campus community as well as the local one. The innovation created a new structure where there was none. The materials were the machines and equipment of the college laboratories and the workshop. The activity involved teaching/training, maintaining/renewal of equipment, and service to the community.

The restructured course was application-oriented and linked to the life and needs of the rural poor in the neighbourhood of the college. The target group was the students drawn from the backward locality and the activity involved studies in rural development. The change was from a purely academic programme to one based on work experience and the needs of the rural poor with application-oriented methods and materials. The Communicative Teaching of English which had the students of the degree course as its target group, was academic in content and concerned only one Department. The change was from a literature-oriented curriculum and

structure-based methodology to, a new programme emphasising communication skills, experiential/ interactional methodologies and materials suited to the ability levels of the students. The Social Ethics Programme was academic in content, geared to behavioural objectives at the affective and values level, and the involved group was the students of the second year degree course. It was a curricular activity with, (a) a practical orientation in the form of project work; (b) group-based learning methods; and (c) contents centred around current social issues and their ethical dimensions. It replaced an optional value education programme which was largely lecture-based, exhortative and theoretical. The College Preparatory Course had the new entrants to the college as the target group and was skill-oriented and prepratory for the academic career ahead. It was a new activity comprising of library orientation and training in listening, reading, writing and speaking. The materials were assembled by the teachers themselves. The Self Evaluation Programme was organisational in character involving review and evaluation of the past and current performance in relation to college objectives and prospecting for improvements in future. The entire college population was involved in it, besides alumni and the

public. The materials comprised pre-prepared inventories and the methodlogy involved group work followed by discussion. The change was the introduction of structured and planned review/feedback/planning mechanisms in the college. College autonomy was, organisational and academic in content, comprehensive in scope and touching upon the college community as a whole, physical plant, all the Departments, services etc. The change involved restructuring administration, curricula, evaluation system and the relations with the university. Methods and materials underwent substantial changes as described in the case study. The findings that emerged from an examination of the contents/ activities of the selected innovation were the following:

(1) The programme content and activities of innovations were planned and prepared by the involved teachers jointly and cooperatively after detailed discussions, review and revisions;

(2) Change agents helped in planning the activities, designing the materials and evaluating their quality;

(3) The freedom enjoyed by the autonomous colleges helped them in scheduling their programmes independently and implementing them, uninterrupted by the disruptions which other colleges were experiencing:

13. Personnel Involved in the Process of Innovation

The process of change in the college organisation is a participatory activity of a variety of personnel; some drawn from within the system, some from outer systems related to the college and some from the resource systems. Motivating them, planning and controlling their activities and reinforcing them towards the achievement of the shared goals and objectives of the innovation are the tasks of those who manage the change process. An understanding of the identity, roles and functions of this crew was one of the objectives of the present study. Item VII of the Interview Schedule and items 1-7 of the Questionnaire were specifically framed for this purpose. Table 7 presents information about the type of personnel involved in the planning and implementation of the eight selected innovations.

TABLE 7 - PERSONNEL INVOLVED IN THE INNOVATION PROCESS

Sl. No.	Items	Innovations							
		1	2	3	4	5	6	7	8
1.	Persons involved in the process of change:								
	- Students	x	x	x	x	x	x	x	x
	- Teaching staff	x	x	x	x	x	x	x	x
	- Non-teaching staff	x	x	x	x	x	x	x	x
	- Additional Staff	x	x	x	-	-	-	-	x
	- Dept. Heads	x	x	x	x	x	x	x	x
	- Principal	x	x	x	x	x	x	x	x
	- Governing Body	x	-	x	-	x	-	x	x
	- Guest Lecturers	-	-	x	x	x	-	-	x
	- Teachers of other Colleges	-	x	-	x	-	-	-	x
	- University staff	-	-	x	-	-	-	-	x
	- Vice-Chancellors	-	-	-	-	-	-	x	x
	- Legislators	-	-	-	-	-	-	-	x
	- U.G.C. Staff	-	-	x	-	-	-	-	x
	- Educational thinkers/ writers/journalists	x	x	x	x	x	x	x	x
	- Change agents	x	x	x	x	x	x	x	x
	- Local Community	x	x	x	-	x	-	x	xx
	- Others	x	x	x	x	x	-	x	x

(Note: The symbol 'x' denotes a positive response and '-' a negative one).

From table 7,it may be seen that students, teaching staff, non-teaching staff, Departmental Heads, Principals and the change agents were present in all the eight innovations. These six groups seem to be the key figures in change efforts in the college. The subdued but functional role of the non-teaching staff has been highlighted by the data. Additional staff were required in four cases to perform tasks that newly emerged, such as remedial courses for the underachievers among the newly admitted students (Innovation 1); technical work to be done under the Applied Science Programme; teaching of specialised subjects such as animal husbandry, agriculture and rural development (Innovation 3); and conduct of work related to administration, examinations and laboratory under autonomy. The Governing Body members were active at the decision - making and evaluating levels of innovations 1,3,5 and 7 and 8.Guest lecturers were invited to assist the Restructured Course, Communicative Teaching of English, Social Ethics and autonomy programmes. The autonomous college involved the teachers of neighbouring colleges in Board of Studies and Board of Examiners. The university officials were concerned with the approval, conduct, funding and examinations of the Restructured Course. In the case of College autonomy the parent University had a pivotal role to play by way of effecting changes in the University Act, formulating rules and regulations for the conferment of autonomy and sending an Evaluation Committee to assess the performance of the

college after the first three years. The Vice-Chancellor of the neighbouring university was instrumental in getting the concept of autonomy accepted in the political, legislative and bureaucratic circles of the State administration and in facilitating the actual conferment of autonomous status on selected colleges. The legislators, Minister of State for Education and eventually the Chief Minister of the State were involved in the passage of the Bill for amendments to the University Acts for inserting therein provisions relating to college autonomy. This bears testimony to the fact that comprehensive and radical structural changes in higher education involving the redistribution or sharing power and authority, are possible only with the concurrence of political parties, political leaders and legislators. One reason adduced by educational analysts for the non-proliferation of autonomy to some of the States other than Tamil Nadu, was the lack of political will in support of the innovation, which was feared to lead to greater devolution of power to individual colleges. The officials of the University Grants Commission and the members of the committees set up to study the Restructuring of Courses and College Autonomy did the spadework to clarify the concepts underlying the two innovations and evolved the required criteria for selection of colleges and guidelines for implementation. The Commission's officials also monitored the progress of

implementation and facilitated financial support. Another group of persons supportive of educational change, consisted of educational thinkers, authors and writers of articles in educational/professional journals whose invisible but formative influence was acknowledged by the practitioners of all the innovations during interviews. The change agents were essential in all the innovations for upgrading the staff skills and effecting behavioural changes in the adopter group. The local community were the beneficiaries of innovations 1,2,3 and 7 whereby the people, especially the underprivileged, received, respectively, access to the colleges; scientific and technological services and training in applied science; improvement in agricultural and animal husbandry practices and community services. In the case of the Restructured Course, Social Ethics programme and College Autonomy the students used the community context for practical work experience, application-oriented studies, field work, projects, survey etc. People became a teaching resource, as it were. The 'others' involved in the innovation process included members of the Evaluation Committees deputed by the University; inquisitive visitors to the campuses searching for information about the new experiments; and leaders of teachers' unions who were critical of one of the innovations, college autonomy. While the Evaluation Committees were prospective agents of institutionalisation /discontinuance, the visitors were agents of dissemination/

replication and the union leaders, critics/resistors of innovations. In a democratic society wherein dissent and driticism are normal to the system, the critics of innovations can hardly be stigmatised as uninformed or as mere vested interests, inasmuch as they act, unwittingly perhaps, but all the same, as .. defenders of the value of the existing practices; gatekeepers warding off fads and whimsical novelties; and as questioners of the validity and legitimacy of new ideas. However, with such enlightened criticism cannot be equated, the attitudes and actions guided by sheer self-interest, apathy to work or inertia.

The staff were the core personnel in most of the innovations. Their updated knowledge, improved skills and cooperative attitudes made or marred an innovation. As the planning and preparations for change efforts usually spanned a long period of time, the permanent staff with stability of tenure and long-term commitment to the institution were found more useful to the innovation-process; short-term or temporary staff were constantly on the look out for better prospects and could hardly develop deep fidelity to the innovation.

The Principal's attitudes and approaches to the change process were acknowledged to influence the entire group adversely or in favour of the innovation. His leader-ship behaviour, linkages with resource systems, travels and visits and style of management were of consequence to

innovations.

The students were found to be the major beneficiaries of seven out of the eight innovations. Being the target group, their cooperation, willingness to work and maintain a reasonable amount of peace on the campus were essential pre-conditions for the growth of the innovations. As long as new experiments reinforced the students' need to pass the examinations with high marks, or at least when they did not conflict with that objective, resistance seemed to be muted. But in the case of the Social Ethics Programme when it was made compulsory, some of the students felt that they could better devote the time and energy to subjects of more utilitarian value in terms of examination results and this led to resistance and offensive action against the innovation. Student participation was institutionalised by membership in the Academic Council and other bodies of the autonomous college.

To use such a heterogenous group to accomplish a specific mission , called for multiple approaches including informing, motivating, orienting, skill-training, involving, rewarding, reinforcing, and stroking negatively when necessary and above all helping to self-actualise the individuals. This was a test of the resourcefulness and effectiveness of the

managers of the innovation.

The foregoing analysis leads to the following findings:

(i) Effective human relations constitute an important dimension of the management of innovations.

(ii) The success of innovations in achieving the objective is influenced by the change-oriented knowledge, attitudes and skills of the personnel involved.

(iii) Planned programmes of staff development precede and continue through the implementation of successful innovations.

(iv) The non-teaching staff of colleges play a low-profile but functional role in providing supportive services to new programmes; their continuing professional development is not attended to.

(v) The quality of the Principal's linkages with the resource systems, change agents and funding bodies and his/her cosmopolite/localite behaviour affect the progress of innovations.

(vi) The Principal's leadership behaviour affects the motivation of the staff in implementing innovations.

(vii) Major innovations that have a bearing on college policies are adopted with the endorsement of the Governing Bodies.

(viii) Visiting Professors/Guest Lecturers bring in fresh perspectives and new points of view; they enrich the instructional process and supplement the work of the college staff.

(ix) Comprehensive innovations involving sharing or re-distribution of power and authority are possible only with the co-operation of the political parties, governmental leadership and legislators.

(x) The Vice-Chancellor's commitment to the innovations expedites their entry into the university system.

(xi) Educational analysts, authors of articles in educational/professional journals and other writers on innovations influence the college personnel.

(xii) Local communities participate in the innovation process not only as beneficiaries but also as partners and helpers in the field -oriented learning experiences, work-study programmes, project work etc.

(xiii) Organised resistance from teachers' unions constrains certain innovations; however, their critical attitude helps to filter out the fads and whimsical novelties that seek entry indiscriminately into the educational system.

(xiv) The persistence of an innovation is a function of personnel stability - the greater the stability, the longer the persistence.

14. Financial Aspects of Innovations

Innovations entailed costs of varying magnitude at the planning, implementation, evaluation and institutionalisation stages. The cost factor could have been the reason for the non-adoption, rejection or discontinuance of an innovation and in some cases it was a factor that constrained its success. The quantum of funds available to colleges for the business of innovating was restricted and the pipelines that channelled such resources from funding agencies to the users were sometimes constricted or blocked. Items XI (a) and (b) in the Interview Schedule and items 8(a), (e), (f) and 9 (a), (b), (c) in the questionnnaire relate to the financial aspects of the innovation process. Table 8 gives information about the items of additional expenditure incurred, sources of funds and the extent to which shortage of funds constrained the implementation process.

Table 8 - FINANCIAL ASPECTS OF INNOVATIONS : ADDITIONAL EXPENDITURE CONSEQUENT ON THE IMPLEMENTATION OF THE INNOVATIONS, SOURCES OF FUNDS AND EXTENT OF FINANCIAL CONSTRAINT

Sl. No.	Items	INNOVATIONS							
		1	2	3	4	5	6	7	8
	Additional								
1.	Cost Items:								
	- Staff Development	x	x	x	x	x	x	x	x
	- Salaries of extra staff	x	x	x	-	-	-	-	x
	- Printing & Stationery	-	-	-	x	x	x	x	x
	- Books	-	-	x	x	x	x	-	x
	- Equipment	-	x	x	-	-	-	-	x
	- Resource Persons	-	x	x	x	x	x	x	x
	- Teaching Materials	-	-	x	x	x	x	-	x
	- Other items	x	x	x	x	x	x	x	x
2.	Source of Funds:								
	- U.G.C.	x	-	x	x	x	-	-	x
	- University	x	-	x	-	-	-	-	-
	- College Management	x	x	x	x	x	x	x	x
	- Students	x	x	-	-	-	-	-	-
	- Public/Community	x	x	x	-	-	-	x	-
	- Others	x	x	-	-	x	x	x	x
3.	Extent of constraint by shortage of Funds:								
	- Great	-	-	-	-	-	-	-	-
	- Considerable	-	-	x	-	x	-	-	x
	- Some	-	-	-	-	-	-	-	-
	- Not at all	x	x	-	x	-	x	x	-

(Note : The symbol 'x' indicates a positive response and '-' a negative one).

It was found that accurate financial information could be obtained only from the Principals, bursars or Heads of Departments and not from other staff members, most of whom appeared to be unconcerned about it, it being "none" of (their) business", as a teacher described it. It was part of the division of labour. The implementation of innovations required additional funds for defraying expenditure on items such as salaries for extra staff appointed; new overhead expenses, printing and stationery relating to production of teaching materials, hand-outs, question papers, photostat copies etc; newly acquired equipment; travel of, honoraria to, and accommodation of resource persons from outside; refreshments for staff and students etc. In the case of 'Preferential Admission to Students from the Low Income Group', the extra expenditure on the salary of additional staff for Special English was met by rationalising the teacher-student ratio ; the participation of staff in workshops/training courses etc. was financed by the college management or the sponsors of the programme; fees payable by the students were adjusted by the 'freeships' given by the university; but funds were needed to help the students to buy bus pass and to give them "some pocket money" for personal expenses in the college. This need was met from the accumulations in the Students' Aid Fund to which every student contributed

Rs. 10/- annually and from the donations received by the college from benefactors. The innovation was not constrained by the shortage of funds; in fact the cost appeared to be manageable owing to the "balanced" financial position, regular grants from the University Grants Commission; the affluent student clientele which could make contributions and the community support enjoyed by the college. "Applied Science Programme" was reported to be self-sustaining. The initial seed money was provided by the college management and the entire recurring cost was met from the income generated by the services rendered to the clients.

The major item of expenditure was the salaries, remuneration for part-time consultants and technical staff drafted for specific work, maintenance of hardware and overheads. Self-reliance was achieved by stringent financial management; cost-effectiveness; the practice of charging for even the smallest service; restricting the number of the permanent staff and using a 'floating staff' from the college personnel; and the avowed policy of not soliciting or accepting donations. The sources of funding were the clientele including the college, which got the computer service; various Departments that got maintenance and reprography services; industries for which apparatus and repair facilities were

provided; and course fees from participants in training programmes. Shortage of funds was always there but it did not constrain the activities; on the other hand it made the Programme search for funds by creative and planned means of fund-raising, through the marketing of its services. The innovation ' Restructuring of the First Degree Course' entailed additional cost on transport of students for field work, books, staff development, purchase of livestock, farming, purchase of equipment etc. The additional staff were taken care of by the university and the grant of Rs. one lakh from the University Grants Commission was used for the above mentioned cost items. However this amount was found to be inadequate. The local community and the students being indigent, contributions therefrom in cash were hard to come through. The college management made available the resources of the campus and its farms for the courses in agriculture and animal husbandry. The financial position of the college was "weak". The recurring expenses were to be met from other sources. When such sources were not available or were dry, the innovation was constrained "to some extent". The programme 'Communicative Teaching of English' incurred an annual expenditure of approximately Rs.10,000/- mainly on purchase of books, teaching materials, refreshments, staff development and travel of resource persons.

This was met from the grant for autonomy sanctioned by the University Grants Commission; and the contribution from the college management. The financial position of the college and its ability for resource mobilisation were high as was evident from the grants it obtained regularly from various sources. The constraints of the programme did not include the financial aspect. In the case of the 'Social Ethics' programme the items of expenditure were staff development, books, stationery, printing of teaching materials and stationery; and the additional outlay required was drawn from the grant sanctioned by the University Grants Commission for the autonomy programme, voluntary educational bodies , and the college management. The college's financial position was 'weak' because sufficient additional funds were not forthcoming to meet the expenses on the new activities started under autonomy and hence shortage of funds constrained the development of the Programme, especially training of staff and publication of teaching materials. 'College Preparatory Course' cost the college about Rs. 5000 annually on stationery, refreshments, books and teaching materials and this amount was contributed by the college management which had a 'balanced' financial position. Self-Evaluation Programme had an outlay of Rs. 5000/- on typing, stationery, travel of external evaluation team and orientation programme.

This amount was raised by the college by organising a cultural programme in which students and the public participated. The college's financial position was just 'balanced', but it was capable of mobilising modest amounts for such purposes. With regard to college autonomy the additional expenditure was ₨. 2,28,825 in 1981-82, ₨. 2,41,950 in 1982-83 and ₨. 2,19,100 in 1983-84 on items such as, salaries of teaching assistants and extra administrative staff, conduct of examinations, books and journals, equipment and chemicals, teaching aids, instructional materials, meetings of various administrative bodies etc. The sources of funds were the University Grants Commission,the management and voluntary educational bodies. The college was just making both ends meet and the inadequacy of funds was a constraint on the innovation "to a considerable extent".

From the table it is seen that the major items of additional cost on the introduction of innovations were staff development in all the eight colleges; purchase of books in five; teaching materials in five; resource persons in seven; stationery in five; salary of extra staff in four; and equipment in three. Funds were required for the training or retraining of staff; new books; printing and stationery; teaching materials; and honoraria and hospitality to resource persons. Except for the Applied Science programme, the comprehensive

innovation of autonomy and the Restructuring of First Degree Course, the quantum of expenditure was below Rs.10,000 annually which was manageable for the colleges. The constraint occurred owing to the changes involving the creation of new structures, posts and teaching methods. The University Grants Commission was the chief donor, supporting five innovations with substantial sums. The role of the management in all the innovations was to provide the seed money and to meet deficits by its own contributions which were not large but useful to sustain the experiments. The public and students continued to support the new activities on a modest scale from time to time.

Other sources of income included donations from benefactors, beneficiaries of the innovations' output, contributions from alumni, the local community and voluntary organisations. Five of the innovations were not constrained by financial shortage while three were, ' to a considerable extent'. They were major innovations of relatively greater complexity than the others. An invisible component in all the change efforts was the motivation and labour of the adopter group, mainly the staff of the college. Many of them worked beyond the required workload and the normal hours of duty. This unquantified factor absent in the cashbooks and ledgers, was an important item of investment in the innovation process.

It was noticed that in the case of all innovations except the 'Applied Sciences Programme' , nothing monetary

was paid to the staff for extra work. Still they were willing to work and to take responsibility for the tasks involved, out of their own motivation, possibly for their own self-actualisation.

From the foregoing analysis the following findings emerged:(i) Money is not the major instrument for educational change; given commitment, conviction and performance, changes in education can be brought about with minimal financial inputs. Innovations do not grow by grants alone. (ii) Self-reliant innovations have greater staying power. (iii) Colleges are embarking on innovative activities even with no financial support, from external sources. (iv) The extra work done by the staff to implement innovations is an unquantified investment in educational change. (v) Academic innovations are being introduced in colleges on a small scale, without heavy expenditure and external support, and with the internal resources mobilised and applied through effective strategies. (vi) Colleges are relying for resources, on alumni, industries and the local community. (vii) Implementation of major innovations in colleges requires additional financial inputs, for the appointment of new personnel, staff development, instructional materials and supportive services.

(viii) Major innovations in colleges need adequate and timely financial support from agencies such as the University Grants Commission and the Universities.

(ix) College managements give modest but steady support to innovative activities undertaken by the colleges. Voluntary efforts in education supplement governmental assistance.

(x) Resource systems such as the universities and the University Grants Commission are willing to support genuine educational innovations; however they and the colleges need to strengthen their linkages and communication channels so as to avoid delay in the disbursement of funds.

15. Acceptance/Resistance

The attidudes of the staff to the new ideas or practices involved in the innovations were of decisive implications for the fate of the new experiments and the managers of change had to employ diverse strategies to promote acceptance and/or to reduce resistance. These aspects were studied with the help of items IX (b), (c) (d) of Interview schedule and item 8 of the Questionnaire and the relevant information is presented in Table 9 (shown on next page).

TABLE 9 : ACCEPTANCE OF/RESISTANCE TO INNOVATIONS

INITIAL REACTION TO PROPOSAL FOR ADOPTION, MEANS USED TO PROMOTE ACCEPTANCE AND STRATEGIES TO HANDLE RESISTANCE

Sl No.	Items	Innovations							
		1	2	3	4	5	6	7	8
1.	Attitude of majority of the staff to innovation proposal								
	- Indifference	-	-	-	-	X 25%	-	-	-
	- Initial Resistance	X	-	-	X	-	-	-	-
	- Cautious Reservation	-	X	-	-	X 50%	-	-	-
	-Half hearted agreement	-	-	-	-	-	-	-	-
	- Cooperation	-	-	X	-	X 25%	X	X	X
2.	Means used to promote acceptance/reduce resistance								
	- informal discussion	X	X	X	X	X	X	X	X
	- staff meetings	X	X	X	X	X	X	X	X
	- opinion leaders	-	-	-	-	X	X	X	X
	- Orientation/Training	X	X	X	X	X	X	X	X
3.	Strategies used to handle resistance:								
	- Authority	X	-	-	-	X	-	-	X
	- Value	X	X	X	X	X	X	X	X
	- Psychological	X	-	-	X	X	X	X	X
	- Training	X	X	X	X	X	X	X	X
	- Rational	X	X	X	X	X	X	X	X
	- Economic	-	X	-	-	-	-	-	-

(The Symbol 'X' denotes a positive response and '-' a negative one.)

It was seen that three of the innovations, the Restructuring of the First Degree Course, the College Preparatory Course and Self-Evaluation Programme met with full acceptance from the very beginning, owing to (a) their compatibility with the aims of the institution, (b) intrinsic value , (c) practicability, (d) potential usefulness for the students and the support received from the University Grants Commission (for innovations 3 and 8). Initial resistance was encountered from 95% of the staff by the proposal for Preferential Admission to the Students from Lower Income Group, because they feared that the academic standards of the college would deteriorate with the entry of such students in the institution. The proposal to start the Communicative Teaching of English also met with initial resistance from the majority of the teachers of the Department of English.The Social Ethics Programme generated indifference on the part of about 25% of the staff, full support from another 25%, and attitude of " cautious reservation" in the remaining 50%. " Cautious reservation" was the response to the proposal for starting the Applied Science Programme. College Autonomy was an innovation for which the institution was preparing for over five years before its adoption and therefore the majority of the staff were affirmative in

their support to the proposal.

In all the eight cases the leaders of the innovation used techniques such as informal discussions with individual staff members, staff meetings and orientation/training programmes for the staff. Opinion leaders were used in the Social Ethics Programme, College Preparatory Course, Self Evaluation and College Autonomy.

The reasons for the 'cautious reservation' in the case of Applied Science Programme were the scepticism expressed about its practicability and viability and the lack of confidence in its eventual success and self-sustainability. The Social Ethics Programme faced 'cautious reservation' from 50% of the staff since they were sceptical of the success of making value education compulsory.

Twenty five percent of the staff were indifferent to the proposal, probably because the subject did not have any truck with their respective disciplines and they did not feel it necessary to respond to it either positively or negatively.

The above analysis relates to the initial staff reactions to the proposal for adoption and how resistive or lukewarm attitudes were handled or a spirit of acceptance promoted. After the adoption of the programmes during implementation, occasional feelings of frustration,

intergroup tensions, differences of opinion about the course of action to be taken, complaints of heavy workload, nostalgic longings for the earlier practices and fear of eventual failure used to haunt the innovations from time to time, which was quite natural as in any human collective effort. The leaders of innovations employed various strategies and tactics to handle such situations.

(i) The authority strategy was used to enforce the new admission policy in the case of Innovation 1. The few teachers and a section of the students who were opposed to it were made to realise that the new policy was endorsed by the Governing Body, that it was the official college policy and that there was no likelihood of withdrawing or diluting it. Similarly despite a students' agitation against its implmentation, the Social Ethics Programme ran its pre-determined course on the strength of the official policy of treating it as an obligatory component of the curricula. Those who failed in the examination relating to the course or did not have the required attendance did not qualify for the degree, a punitive manifestation of authority strategy. In the case of autonomy, the new status was conferred on the college officially by the university with governmental support and this factor invested it with the strength of the authority.

(ii) In the case of all innovations the leaders made appeals to the sense of values of the personnel involved. Those values had a bearing on factors such as social justice to the underpriviledged; linking science to the needs of the community; using higher education for the benefit of the rural poor; giving basic communication skills to under-achievers; education in social, moral and spiritual values; imparting study skills to students from deprived school background; organisational renewal for better service to women; and, the emergence of 'autonomous women' through socially relevant education.

(iii) The adopter group's needs for acceptance, involvement and inclusion were sought to be fulfilled through psychological strategies in the case of six innovations (1,4,5,6,7,8). Teachers were involved in need-analysis, search for solutions, choice of the solution, decision on adoption, problem-analysis, evaluation as well as formulation of follow-up actions. Those who were perturbed by fears of failure, insecurity or loss of prestige by low-level performance were counselled by the Principal or the Head of the Department. Those who felt marginalised in terms of meaningful roles and functions were, included in various task groups and made part of the team.

(iv) Many teachers felt unprepared or ill-equipped to carry out the new functions expected of them, such as remedial

education, maintenance of equipment and their repair, participation in rural development, preparation of new teaching materials, discussing the ethical dimensions of social issues, teaching study and communication skills, evaluating the institution, preparing curricula for courses and conducting internal assessment, etc. in connection with the eight respective innovations. Such feelings of inadequacy and lack of training were recognised by the leaders of the innovations and they organised appropriate staff development programmes as described in the case studies, using the training strategy.

(v) Reasoned and logical arguments were employed with the support of data to convince the sceptical and the hostile individuals and groups from time to time, so as to gain their co-operation in the implementation process, in the case of all the innovations, as described in detail in the case studies.

(vi) Seven out of the eight innovations were implemented without payment of any extra remuneration or compensation to the staff in financial terms. In the case of the Applied Science Programme, the extra work done by the teachers was paid for. In other cases the teachers were motivated by their concern for students, the need to improve academic standards, the desire to improve the

quality and level of their own professional performance and their cooperative attitude to the Principal/Head of the Department. Despite the heavy workload and lack of economic rewards many of them slogged in late hours out of a spirit of adventure and joy in participating in innovative activities. Such a sense of professionalism and pride in one's work could emerge only out of a value system that prioritised service above self, as a teacher observed during interviews. Genuine and publicly expressed appreciation of good performance and positive affirmation of the institution's gratitude to those who put in hard work, helped to reinforce sagging morale and confidence, it was pointed out during interviews. The reward that the teachers valued most was the usefulness of their work for the students' achievement, whether verbally expressed or not, it was pointed out by interviewees.

The above analysis and the content analysis of the studies , lead to the following findings:

(i) The members of the faculty of a college tend to offer cooperation and support to academic innovations when they:

(a) have, clearly defined educational objectives conforming, to the tradition and ethos of the college;
(b) are aimed at fulfilling genuine student needs;
(c) are recognised/supported by agencies such as the University Grants Commission and the University;

(d) are led/promoted by the Principals or Departmental Heads.

(ii) Innovations that affect the power equations and structures existing in the college beget resistance.

(iii) Preparatory and sequentially planned staff development programmes enhance the knowledge, and skills of the faculty; and progressively reduce the resistance to innovations.

(iv) The Principal's /the Head of the Department's ability to inspire confidence, remove fears and resolve conflicts, helps in overcoming the initial resistance of the faculty to adoption of innovations.

(v) Regular and participative staff meetings facilitate the reduction of resistance to innovations, when they are conducted in an atmosphere of freedom, respect for dissenting viewpoints and participative decision - making.

(vi) Student leaders, Departmental Heads and the leaders of teachers' organisations function as opinion leaders in respect of innovations. They influence their peers and colleagues for or against the innovation. They need full, correct and objective information about the objectives and implications of attempted change efforts in a timely manner. Effective innovators keep in frequent contact with opinion leaders.

(vii) Economic rewards are not given to the faculty to promote acceptance of/or reduce resistance to, innovations in colleges, except in rare cases.

(viii) Appreciation of hard work done, sincere praise of successful efforts, positive strokes during interactions and similar other reinforcements from the leaders encourage and enthuse the participants in the process of innovation.

(ix) Collaborative exercises in goal-setting, strategy-planning and task performance generate team spirit, sense of involvement and shared commitment among the personnel working for the innovation.

(x) Appeals to the values of participants stimulate motivation for change efforts.

(xi) When required successful leaders do not hesitate to use authority strategies to safeguard the continuance of innovations or enforce accountability.

(xii) Perceptive innovators take note of the constructive and functional content of resistive attempts or postures and take corrective measures. They look at the mirror of resistance to see the self image of innovations.

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16. Evaluation of Innovations

Ongoing evaluation of the implementation of innovations is a valuable exercise for identifying the possible areas for improvement and the likely trouble spots. Another kind of evaluation is the one that seeks to judge whether an innovation has been a 'success' or 'failure' and to use the results for publicity campaigns for or against it or to continue or discontinue it. The latter type of evaluation has a regulatory function, within the system, of promoting the successful ones and weeding out the unsuccessful ones. But in the educational sector it is very difficult, to judge whether an innovation has succeeded or failed in its educational objectives and also to attribute the failure to any particular factor. It may also so happen that the criteria of 'success' used in other contexts may be foreign or antithetical to the funda-fundamental objectives of the educational system. Earlier studies of innovations had pointed out the lack of provision for evaluation in the management of innovations in education. The investigator used item XX, XXI and XXII of the Interview Schedule to collect information on this point and the data is summarised in Table 10.

TABLE 10 - EVALUATION OF INNOVATIONS IN COLLEGES: FREQUENCY, BY WHOM AND USE OF FEEDBACK

Sl.No.	Items	Innovations							
		1	2	3	4	5	6	7	8
01	Frequency of Evaluation:								
	- Daily	-	-	-	-	-	x	-	-
	- Weekly	-	-	-	x	-	x	x	-
	- Monthly	-	x	x	x	x	-	-	x
	- Semester	-	x	x	x	x	-	-	x
	- Annual	x	x	x	x	x	-	-	x
	- Any other	x	-	-	x	x	x	x	x
02	Nature of Evaluation:								
	- By internal team	x	x	x	x	x	x	x	x
	- By external team	-	-	-	x	-	-	x	x
03	Feedback used for :								
	- in-process correction	x	x	x	x	x	x	x	x
	- Discontinuance	-	-	-	-	-	-	-	-
	- Continuance	x	x	x	x	x	x	x	x
	- Institution-alisation	x	x	x	x	x	x	x	x
	- Staff training	x	x	x	x	x	x	x	x

(Note: 'X' - Yes
'-' - No.

From the table it was seen that the Preferential Admission of Lower Income Group Students was "periodically" evaluated in the Staff Meetings and "informally" in conversation with students in an ongoing manner and "annually" by the Governing Body of the College. Only internal evaluation was resorted to and the feedback was used for in-process correction/modification. The results of the evaluation helped in the institutionalisation and continuation of the new admission policy and in planning the required staff training. The Applied Science Programme was evaluated in monthly meetings of the staff and in the meetings of the Directors annually. The results of the evaluation were used for continued correction/ modification of the Programme and for adding necessary additional inputs. The evaluation helped the continuance of the programme and the planning of staff training. The Restructured Course was evaluated at the end of every semester and annually by the Governing Body of the College, besides the periodic review by the Departmental staff in an ongoing manner. The results of the evaluation were used for effecting changes and improvements. The Communicative Teaching of English was evaluated every week by the staff in 'project discussions', at the end of every semester, annually and in an ongoing manner by the visiting resource persons. In this case experts were requested to give written 'testimonies' on the experiment which were used for gaining credibility for the programme in professional

circles and before the university and the governmental authorities. External resource persons participated in the evaluation.

The feedback from evaluation was used for in-process corrections, staff training, improvement of teaching materials and for the institutionalisation of the experiment. In the case of Social Ethics Programme, the experiment was evaluated at the end of every semester; annually by the staff and students; and by the Governing Body in its periodic meetings. The feedback was used for modification and continuance of the Programme, as well as staff training. The College Preparatory Course was evaluated at the end of every day by the participating teachers and at the end of the fortnight summatively by the students. The feedback was made use of, for extending the Programme to the Science students also, and for adding counselling to the agenda of the course. Continuance of the innovation was also based on the evaluation. Self Evaluation Programme was monitored in the weekly meetings of the Steering Committee and evaluated summatively after the Programme was over. An external team helped in assessing the success of the entire activity. The feedback was utilised for improving the quality of the programme and removing bottlenecks detected from time

to time during the implementation process. College autonomy was evaluated at the end of every semester and annually; ongoing evaluation continued in the various, new administrative and academic bodies created under autonomy. An external team appointed by the university evaluated the performance of the college in the new system after the first three years in 1981 and its report, referred to in the case study, was basic to the continuation of the innovation.

Feedback mechanisms were built into the structures and activities under autonomy and their findings were used to make corrections during the implementation process; to plan staff development programmes; and to counter the propaganda campaign against the innovation, originating from outside the college system.

All the eight innovations under study had provision for evaluation. All of them were found to be using the feedback for in-process correction, staff training, and the continuance/institutionalisation of the innovation.

This analysis leads to the following findings:

(i) Provision for formative and summative evaluation, when built into the innovation process, helps in : (a) making in-process corrections; (b) making modifications in

the directions or contents; (c) extending or restricting the clientele of the innovation; (d) planning staff development programmes; (e) projecting accurate information about the innovation; and (f) continuing and institutionalising the innovation.

(ii) Managers of innovations use varying peridoicity for the evaluation process ranging from 'daily' to 'annually' and the agents of evaluation include students, staff, administrators, the public, change agents, Governing Body members and external teams.

(iii) The University Grants Commission and the Universities use the findings of their evaluation committees to assess the value of the innovation sponsored by them and to continue/discontinue them.

(iv) Colleges are seeking help from trained project analysts/evaluators to prepare methodological tools/instruments of evaluation and to analyse the findings of evaluation.

(vi) Innovations supported by formative and summative evaluation on a planned basis, conducted with the help of trained personnel get institutionalised. Planned evaluation helps the persistence of innovations.

(vii) Colleges are utilising the feedback from evaluation for identifying problem areas in implementation and administering remedial action.

(viii) It is difficult to assess the educational benefits of innovations introduced in the college system on the basis of technical criteria employed in other disciplines. The success or failure of an innovation in achieving its objectives can hardly be decided on the basis of opinion polls or 'counting heads' because its true value may not be necessarily related to its acceptability to the majority of the target group who may be influenced by considerations other than academic. The adopter group is best suited to make a final judgement on this point on the basis of opinions and assessment received from all segments of the population that was impinged by the innovation.

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17. Change Agents and their Role

A variety of professionals assisted the innovating colleges in the planning, shaping, preparation and installation of innovations. Their involvement aided the adopter system's linkages with resource systems. They promoted, informed, demonstrated, trained, helped and nurtured as the need arose. Item X (a), (b) and (c) in the Interview schedule and item 6(a) in the Questionnaire along with unstructured probes during the interviews elicited data from the respondents in colleges about the identity and role of the change agents.

Table 11 indicates the resource systems from which the change agents, mostly consultants, resource persons or experts were drawn and the type of service they rendered.

Table 11 - CHANGE AGENTS IN THE PROCESS OF INNOVATION: SOURCES AND ROLES

Sl. No.	Items	Innovations 1	2	3	4	5	6	7	8
1.	Organisations that Change Agents belonged to:								
	- N.I.E.P.A.	-	-	-	-	-	-	-	x
	- Other Colleges	-	-	x	x	x	-	x	x
	- Universities	-	x	x	x	x	-	x	x
	- Central Instt. of English	x	-	-	x	-	x	-	x
	- Counselling Centres	x	-	-	-	x	x	-	x
	- Voluntary bodies	x	x	x	x	x	x	x	x
	- Other bodies	-	x	x	x	x	x	x	x
2.	Role of Change Agents was as-								
	- Knowledge-builders	x	x	x	x	x	x	x	x
	- trainers	x	x	x	x	x	x	x	x
	- solution-givers	-	x	x	x	x	x	x	x
	- process-helpers	-	x	x	x	x	x	x	x
	- resource-linkers	-	x	x	x	x	-	x	x
	- evaluators	x	x	-	x	x	-	x	x

(The symbol 'x' denotes a positive response and '-' a negative one).

From the table it can be gathered that most of the resource persons were drawn from the voluntary educational organisations, local universities, other colleges, the Central Institute of English and other bodies. The 'other bodies' included centres of management education, various religious organisations, developmental agencies, political organisations, the Education Wing of the British Council and industries. The areas they dealt with included teaching methods, evaluation and assessment, curriculum development, Remedial English, Communicative Teaching of English, value education, effective communication, counselling, evaluation of projects, rural development, political education, inter-faith dialogue and financial management. Though the travel from distant places was costly, colleges seemed to have secured the services of resource persons from other parts of the country for important assignments. But 'proximity' and 'economy' were also guiding principle in the selection of experts, as five colleges had invited experts from other colleges and six from the parent and neighbouring universities. All colleges made use of experts from voluntary educational organisations. During interviews it was shared with the investigator that the remuneration paid to the resource persons, if at all paid, was very modest and many of them did honorary work out of a spirit of service. The colleges were responsible for their travel and hospitality.

It is found from the table above that the change agents' role was as 'knowledge-builders' in the case of eight innovations; as 'trainers' in all cases; as 'solution-givers' in seven cases; as 'process helpers' in seven cases; as 'resource-linkers' in six cases; and as 'evaluators' in six cases. Their characteristics- they were, (a) having a higher intellectual/academic status than the college personnel in their respective area of expertise; (b) helpful and collaborative; and (c) committed to educational change. One difficulty experienced by the colleges, it was pointed out during interviews, was the scarcity of trained change agents in various areas. Some suggested that 'change agentry' should be developed in colleges and that regular training courses for change agents should be organised. Many of the college teachers had the skills and potential to grow in this area, it was felt.

On the basis of the foregoing analysis the following findings were arrived at:

(i) The colleges introducing innovations rely on neighbouring colleges, academic bodies, universities and voluntary organisations as well as national educational agencies for securing the services of change agents.

(ii) The major functions performed by the change agents are as trainers, knowledge-builders, process-helpers, solution-givers, resource-linkers and evaluators.

(iii) Involvement of professional experts of high standing in the ongoing and summative evaluation of innovations, lends credibility and legitimacy to such innovations and enhances their acceptability in the eyes of the adopter system and outer systems.

(iv) The effective change agents in college systems have respect for the values of other people, concern for the academic community and willingness to face dissent and opposition.

(v) The successful change agents in college systems possess the ability to convey to others the knowledge, values and skills that they possess; to build collaborative teams for change; to resolve misunderstandings and conflicts; and to convey to others a feeling of power to bring about change.

(vi) There is a dearth of change agents in the country, especially in education.

(vii) Change agentry as a profession is still in its infancy in India.

(viii) There is a felt need for structured training programmes for change agents in education, with focus on, creating self-renewal capacity in college systems; linking of college systems to resources; and training of trainers from among the college teachers.

18. Consequences of Innovations

The results or outcomes of change efforts are expected to justify their objectives and thereby benefit the target groups. The consequences of the eight selected innovations have been described in detail in the case studies. Their main beneficiaries were the following groups:

- Students
- Teachers
- Local community
- The adopter college organisation
- Other colleges.

The Preferential Admission Policy benefitted students from underprivileged sections. The Applied Science Programme provided job-oriented training to unemployed graduates. The Communicative Teaching of English was oriented to the student needs, especially according to their ability levels; the students with constraints in communication skills were given special attention. The College Preparatory Course was tailored to suit the needs of students from a deprived school background; and under autonomy the college gave special attention to

education for under-achievers. The Social Ethics Programme was oriented to generating social consciousness and commitment to social justice. The Restructuring of the First Degree Course emphasised rural development and uplift of the poor subsisting below the poverty line. Thus it is found that seven programmes were, among other things, intended to directly benefit the deprived sections of society and/or to inculcate a concern for them. In terms of consequences this orientation to social justice was a discernible trend. Simultaneously other sections of the student population also derived the benefits of Applied Science Programme, Communicative Teaching of English, Restructured Course, Social Ethics, Self Evaluation and College Autonomy. The main dysfunctional consequences of the innovations were:

- Heavy work load for teachers (in cases 4,5,8)
- Heavy workload and 'examination-stress' for students (in cases 4,5,8)
- Student agitation (in case 5)
- Opposition from teachers' union (case 8).

The indirect consequences of the various innovations were:

(i) Professional development of teachers in various new skills as remedial education; maintenance of equipment, internal assessment etc.

(ii) Research undertaken by some of the teachers on the various components of the innovations.

(iii) The establishment of 'ELT Resource and Research Centre' to promote the Communicative Teaching of English.

The case studies and the above analysis led the investigator to the following findings:

(i) Innovations which are student-oriented have a greater chance of continuance.

(ii) Innovations which seek to benefit the under-achievers and those hailing from a deprived background, are getting institutionalised in innovative colleges.

(iii) Some results of educational innovations are neither manifest nor quantifiable. Therefore judging an innovation from the visible consequences only, may lead to an incomplete estimation of its true impact.

19. Communication and Replication of Innovations

An institutionalised innovation transmits its message in the enveloping social environment, through communication channels that open up automatically or are consciously created by the managers of the change effort. By networks of communication an innovation pervades the educational system and attains the status of a reform. Such dissemination is related to the factors of linkage, structure, openness, capacity, reward, proximity and synergy. Colleges which successfully adopt and instal new ideas, practices or programmes become the objects of attention for change-seeking individuals and institutions around. Enquiries and visits follow. But has an innovating college any responsibility to disseminate the results of its experiments? If the answer is 'yes', was it done? How? Through the media, professional gatherings or personal conversations with other educators? Did the leaders of the innovations help other institutions in replicating them? These were the questions implied in item XXIII of the Interview Schedule and related querries as well as item 6 of the Questionnaire. The data collected in this connection are presented in Table 12.

TABLE 12 - DISSEMINATION AND REPLICATION OF INNOVATIONS : ACTION TAKEN BY ADOPTER COLLEGES

Sl. No.	Items	Innovations							
		1	2	3	4	5	6	7	8
1.	Target of Dissemination:								
	- Other Colleges	-	x	x	x	x	x	-	x
	- Parents/Public	x	x	x	-	x	x	-	x
	- U.G.C.	-	-	x	x	x	-	-	x
	- University	x	x	x	x	x	x	-	x
	- Any other	x	-	x	x	x	x	x	x
2.	Mode of Dissemination :								
	- College Publications	-	x	x	x	x	x	-	x
	- Papers in Conferences	-	x	x	x	x	x	-	x
	- Talks in Conferences	-	x	x	x	x	x	-	x
	- Books/Journals	-	x	-	x	x	-	-	x
	- Newspapers	x	-	-	-	x	-	-	x
	- Reports	-	-	x	x	x	x	x	x
	- Radio/T.V.	-	-	-	-	-	-	-	-
	- Visitors to Campus	-	x	x	x	x	-	-	x
	- Any other	-	-	-	x	x	-	-	x
3.	Mode of help in Replication:								
	- Consultancy	-	x	x	x	x	x	x	x
	- Training	-	x	x	x	x	-	-	x
	- Sharing of Materials	-	x	x	x	x	x	x	x
	- New structures	-	-	-	x	x	-	-	-

(Note: The symbol 'x' denotes a positive response and '-' a negative one.)

The table reflects the following points about the process of dissemination and replication:

(i) The outcome and results of the innovations were communicated to other colleges, parents, the public, the university, the University Grants Commission, the founder societies and the state governments. The modes of dissemination were college magazines, college prospectus, college calander, papers presented in professional conferences, books, journals, monographs, newspapers, reports and dialogue with the visitors to the campus. The modes of assistance given in the replication of the innovations were - consultancy, advice, training of staff from other colleges, sharing of teaching materials and the creation of new organisational structures for helping others in the areas of expertise gained by the college through the implementation of the innovation.

The facts about 'Preferential Admission to Lower Income Group' students were communicated to the University and to the founder society. The criteria and procedures for the new policy were published in local newspapers as an advertisement so that the parents belonging to the particular group would come to know about them. The norms

and rules were published in the college prospectus also for the information of applicants. The college did not believe in publicising it to other institutions, because:- (a) the innovation was specific to the conditions of the adopter college and might not suit others; (b) it was for each college to choose and determine its own ways of being socially relevant; and (c) the achievement was felt to be too modest to be publicised. The Applied Science Programme was not inhibited by any such modesty. Its results were communicated to other colleges, the public, the local community, University Grants Commission, universities, industries, scientific laboratories etc. The modes of dissemination were college publications, papers and talks in conferences, a monograph, an article in a scientific journal, and dialogue with visitors to the campus. The leader of the Programme helped other colleges in replicating the innovation and wanted many more institutions to follow suit. The Restructuring of the First Degree Course was officially reported to the University Grants Commission, the university and the Director of Collegiate Education, and informally to other colleges, the public in general and the local community. The modes of dissemination were college publications, papers and talks in conferences, reports and dialogue with visitors to the campus. The Principal of the college

assisted a neighbouring college in starting the restructured course in Rural Development Science. The details of the Communicative Teaching of English were transmitted to the University Grants Commission, the University, other colleges and the professional association of teachers of English. The modes of dissemination included college publications, papers and talks in professional meetings, a book entitled, 'Innovations in E.L.T.', reports and briefing of visitors to the campus. The Head of the Department was invited to to be a member of the National Curriculum Development Cell (English) and the Department helped the University of Pondicherry in starting the Communicative Teaching of English, through consultancy, training, and sharing of materials. Moreover the Department set up a new organisational structure to assist other colleges and teachers in improving the quality of language teaching, 'E.L.T. Resource and Research Centre'. The 'Social Ethics' Programme was disseminated to other colleges, the University Grants Commission, the university, the parents and the public, through a variety of modes including the publication of the teaching materials used in the Programme. The college organised workshops in value education for the teachers of other colleges and provided consultancy and guidance in the subject. The Director of the Programme was

contemplating a journal on value education for the wider dissemination of the outcomes of the experiment. The College Preparatory Course was made known to other colleges, the parents, the university and resource systems such as the Central Institute of English and Foreign Languages, Hyderabad. The Principal presented a paper on the experiment in a national conference and helped other colleges in initiating it. The results of the Self Evaluation were communicated to the founder society's corporate management by a report for follow-up action and the University was informed about it. The Principal and Professors of the college assisted other institutions in conducting the self-study. College autonomy was systematically publicised to the University Grants Commission, the university, the state government, resource systems and educational development organisations. Special publications on autonomy were published and the faculty and Principal presented papers on it in various conferences. The Principal and teachers assisted other colleges in the planning and preparation for autonomous status. It was noticeable that official reports, papers/talks in conferences, college publications and dialogue with visitors were the modes of dissemination

most frequently resorted to. None used the radio and television.

From the analysis of data relating to dissemination of innovations the following findings emerged:

(i) The colleges which implement successful innovations communicate their results and impact to resource systems, other colleges, the public and governmental agencies.

(ii) The major modes of communication employed by the colleges for disseminating the results of innovations are: the college publications, talks and papers in professional conferences, books, journals, newspapers, reports and dialogue with visitors to the campus.

(iii) Successful innovators help other colleges in replicating the innovations in other institutions by means of consultancy, training of staff and sharing of materials.

(iv) Dissemination and replication are signs of the success of an innovation in achieving its objectives.

(v) A highly successful innovation attracts visitors from far and near seeking guidance on its replication. They are the potential adopters.

(vi) Colleges which have many successful innovations create special mechanisms to perform the task of dissemination and facilitation of replication.

(vii) The radio and television networks give inadequate publicity to educational innovations.

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20. Factors which facilitated/constrained the Innovations

One of the objectives of the present study was to ascertain the factors which facilitated or constrained the process of educational innovation. The case study method offered a suitable mechanism to identify such characteristics embedded in the innovation phenomena because close and focussed attention could be devoted to the context, inputs, process and outputs of each innovation. Not only were the opinions of those who were involved in the adoption and implementation of innovations examined, but they were cross-checked with the actual reality of each change effort during the investigator's visits to colleges, and the interviews with adopter group. This approach was pursued on the assumption that the opinions held by individuals about the question which factors were facilitative or inhibitive, would be relative. The extent to which each factor facilitated or constrained the innovation would also be viewed differently by various individuals. Therefore the investigator adopted the approach of, (a) examining the innovation in its domestic context first; (b) seeking the views and opinions of those who worked on its implementation; and (c) cross-checking each other to evolve appropriate

findings about the helpfulness or constraint of each factor in the implementation process. Item 8 and 9 of the Questionnaire and items XVIII and XIX of the Interview Schedule were designed to study this aspect; and the results thereof are presented below.

Fiftyeight factors were enumerated as helpful in the innovation-process by the Principals and teachers who were involved in the conceptualisation, planning, adoption implementation and institutionalisation of the eight selected change efforts. The total number of persons whom the researcher consulted on this point were 123 of which 8 were Principals 30 were Heads of Departments and 85 were faculty members. The common feature characterising all of them was that each of them was actively involved in the implementation of one or other of the eight selected innovations. They were familiar with the life cycle, objectives, problems, achievements and consequences of the respective innovation and therefore competent to comment authoritatively on the question. Out of the 58 factors originally suggested by the respondents some were too localised to be of wider relevance and generalisability, or too impressionistic to be objectively correct. After checking every item with the leaders of the eight innovations, as to its

accuracy and soundness, the investigator identified fortyone factors which facilitated innovation in colleges to a considerable extent.

i) Clarity and focus of institutional aims and objectives.
ii) Compatibility of the innovation with the aims and ethos of the college.
iii) Importance given to educational change in the value system of the college.
iv) Supportiveness/encouragement from Governing Body.
v) Academic standards of the college.
vi) College's contacts with resource systems.
vii) Autonomous status.
viii) Discipline and peace on the campus.
ix) Financial resources of the college.
x) Physical facilities of the college.
xi) Efficiency of the college administration.
xii) Adequacy of library facilities and their usage by the staff.
xiii) Clarity of the innovation's conceptual basis and programmes structure.
xiv) Students' perception of the usefulness of the innovation.
xv) Relevance of the innovation to social needs and social justice concerns.
xvi) Systematic planning of the implementation process, with specified goals, division of labour, accountability.

xvii) Orientation given to the staff and to the students.

xviii) Formative and summative evaluation of the innovation process by internal and external evaluators and the use of feedback for in-process corrections and improvement.

xix) Prudent financial management and planned fund- raising for the innovation.

xx) Unity and teamwork of the staff.

xxi) High motivation of the staff.

xxii) Academic competence of the staff.

xxiii) Willingness of the staff to do hard work.

xxiv) Continuing professional development of the staff.

xxv) Awareness and sensitivity of the staff to student needs.

xxvi) Discussion of new ideas in staff meetings and the regularity of staff meetings.

xxvii) Recognition/Appreciation given to hard-working staff.

xxviii) High motivation of the Principal.

xxix) Leadership qualities of the Principal.

xxx) Principal's contacts with resource systems.

xxxi) Principal's openness to new ideas.

xxxii) Delegation of authority and responsibility by the Principal to the staff.

xxxiii) Educational philosophy of the Principal.

xxxiv) Participative decision-making by the Principal.

xxxv) Advice and guidance from the University Grants Commission.

xxxvi) Grants from the University Grants Commission.

xxxvii) Assistance from the University.

xxxviii) Cooperation and help from change agents.

xxxix) Dissemination of the results and outcome of innovative efforts and help given to other institutions in replication of the institutionalised change efforts.

xxxx) Support from the local community.

xxxxi) Useful consequences of the innovation for the target group and the college in general.

It can be noticed that these factors relate to the institution, the innovation process, the staff, the Principal and the other allied aspects of the change efforts.

There was comparatively greater uniformity with regard to the factors which constrained or inhibited the innovations. It appeared that while innovations were facilitated by a variety of factors in each college, they were constrained by almost the same problems and difficulties, fewer in number. Out of the 36 inhibitive factors suggested by the respondents, the investigator found twenty one to be of wider relevance and applicability. They are enumerated below:

i) Lack of clear perception of the institutional aims and objectives by the teachers and students.

ii) Incompatibility of the innovations with the personal objectives of students, especially high achievement in examinations.

iii) Lack of freedom for experimentation and innovation within the affiliating system.

iv) Inadequacy of facilities in the college, in terms of classrooms for group work, reprographic facilities, transport for field work etc.

v) Financial shortage due to which the college is unable to secure additional staff, library materials, audio-visual equipment, etc., and to organise staff development programmes.

vi) Lack of motivation on the part of some staff members.

vii) Heavy workload for the staff, for which adequate relief is not given by the rationalisation of the staff pattern.

viii) Inadequate recognition/appreciation given to those who work had.

ix) Tendency of some leaders of innovations to appropriate all credit for success to themselves.

x) Exclusive concern of some staff members, and most of the students, with high examination results.

xi) Group rivalries and divisions among the staff and students.

xii) Resistance from students to new experiments.

xiii) Lack of student participation in the various stages of the innovation-process.

xiv) Refusal of some college managements/Principal to send teachers to participate in professional development programmes.

xv) Traditional attitudes and policies of the University.

xvi) Opposition from teachers' unions.

xvii) Lack of job satisfaction among the staff.

xviii) Large enrolements in the college and the consequent unsatisfactory teacher-student ratio.

xix) Excessive and violent political activism on the campus and the consequent disruption of peace and work.

xx) Shortage of time for Principals and teachers to read, reflect and dialogue on new ideas and programmes, owing to heavy administrative responsibilities and routine preoccupations.

xxi) Maintenance-oriented ethos on the campus, in which efforts for renewal are deemed incongruent and superfluous

21. Model of the Change Process

The process of change in a college, which is functioning in interactive linkage with the external systems in society and containing within itself a group of highly sensitive, intelligent and volatile youth and academics, is too protean a phenomenon to be encapsuled in preconceived models. However, to understand the meaning and implications of the attempted change efforts, the investigator tried to view the selected innovations in the light of the four models of change proposed in theories of innovation - Research, Development and Diffusion (R,D&D); Problem-solving; Social Interaction;Linkage. Table 13 indicates the models of change allied to the selected innovations under study.

TABLE 13 - MODEL OF THE CHANGE PROCESS

Sl. No.	Name of the Innovation	Model of change
1.	Preferential Admission to Students from the Lower Income Group	PS
2.	Applied Science Programme	PS
3.	Restructuring First Degree Course	R,D&D
4.	Communicative Teaching of English	PS
5.	Social Ethics Programme	PS
6.	College Preparatory Course	SA
7.	Self Evaluation Programme	R,D&D
8.	College Autonomy	R,D&D

PS = Problem-solving Model

R,D&D = Research, Development and Diffusion Model

SA = Social Action Model

From the table it could be noted that four of the innovations under study were predominantly problem-solving processes; three exhibited characteristics of the Research, Development and Diffusion Model and one conformed to the Social Action Model. In which manner each innovation conformed to the respective model has been described in detail in the case studies.

In the case of the Restructuring the First Degree Course, and College Autonomy, the University Grants Commission functioned as the main agent of Research, Development and Diffusion. The original concept of the idea of autonomy, and its theoretical formulation and articulation were the contributions of the Education Commission (1964-66) and therefore a part of the research function could be attributed to that learned body. The concept of autonomy was later refined, clarified and worked out in operational terms by the expert committees appointed by the University Grants Commission. This stage represented further investigations forming part of the research process. The design, engineering and package of an autonomous model that could implemented in a college-setting, marked the 'Development' stage. When the Commission announced the proposal for conferment of autonomy on selected colleges on the basis of certain criteria, it represented the stage of 'Diffusion' of the innovation. The guidelines given by the Commission.

to the universities and colleges were meant to promote, inform, demonstrate and nurture the innovation.

Similarly, at the next stage, the State Government and the university further extended the development and diffusion process by taking the necessary legislative and administrative measures for making the innovation practically adoptable. Thus the State Government and the parent university were partners in the development and diffusion processes. Similarly the principles and purposes of Restructuring the First Degree Course were proposed by the Education Commission (1964-66), and it was developed and diffused by the University Grants Commission as described in the case study. In both cases the colleges adopted the innovations after passing through stages such as awareness, interest, evaluation and trial.

An important distinction to be made while considering these two innovations as R,D&D models, is that they were not imposed on the colleges by administrative fiat, but were totally optional for them to accept or reject. Similarly the colleges were themselves preparing for their adoption, visualising them as possible solutions to their own internal needs and problems. They were not just passive recipients but willing, solicitous acceptors. The Self Evaluation Programme was researched, developed and diffused by the corporate educational society of which

the college was a member and the innovation was adopted on its own will and desire, without any imposition or coercion.

The four innovations conforming to the Problem-Solving model of change were Preferential Admission of Lower Income Group Students, Applied Science Programme, Communicative Teaching of English and the Social Ethics Programme. In each case the college sensed and diagnosed a need/problem, searched for solutions, retrieved a solution, tried and applied it, with the help of change agents. They went through later stages such as installation, evaluation, revision and institutionalisation. Here the solution was internally fabricated with indigenous resources, by linkages with resource systems and catalysed by change agents, as narrated in detail in the case studies.

The only example of the Social Interaction Model, College Preparatory Course passed through stages such as awareness, interest, evaluation, trial and adoption. The cosmopolite Principal's openness to new ideas; frequent social interactions especially in conferences and seminars; and contacts with change agents, helped him to shape an innovation relevant to the needs of his students. Here the new idea was neither researched, developed and diffused by any resource system outside nor imposed on the college. What the Principal had heard about, and known

as an effective answer to the student needs was adopted. What was significant here is the effect of the inter-personal networks of communication, personal contact, and the osmosis of new ideas from one college system to another.

From the foregoing discussion and the analysis of the case studies the following findings were framed:

i) The innovations adopted in colleges reflect mainly the Research, Development and Diffusion model and the Problem-Solving Model of the change process.

ii) At the national level the chief resource system engaged in the research, development and diffusion of innovations in higher education is the University Grants Commission.

iii) Voluntary educational bodies also research, develop and diffuse innovations for adoption in the institutions in their network.

iv) Problem-solving experiments in colleges are organised and executed largely with internal resources, both human and material.

v) College autonomy creates a climate of freedom conducive to educational innovations, especially of the problem-solving variety.

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vi) When an innovation of the R,D&D model adopted by the college simultaneously helps in solving a felt need of the adopter, the effectiveness of the innovation multiplies.

vii) In the case of the R, D&D models of innovations, the adopter is dependent on the R, D&D agency in respect of operational rules, funds and the continuance of the experiment. Problem-solving models of change are relatively self-directed and autonomous in these respects.

viii) Innovations of the R,D&D model are subject to evaluation by external teams at periodic intervals.

ix) Social interaction promotes the dissemination and discovery of new ideas and practices. Professional conferences and peer group assemblies help educators in social interaction.

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