Assessment of Tertiary Educatioin is a project sponsored by UNDP under a grant signed with HMG in August 1992 and executed by the World Bank in collaboration with HMG and Tribhuvan University. It is designed as a self-study focussed on five major areas: structure, management, financing, quality and the physical facilities of tertiary education. Its main objectives are:

1. to make tertiary education cost-effective and relevant to the national goals of development of human resources and macro-economic growth.
2. To prepare a policy framework for the next decade for tertiary education sector in Nepal, including affordable and alternative financial and policy scenarios for implementation by HMG and the universities.

The self-study is designed to address specific policy-related issues and deliberate on and disseminate their findings among the policy-makers, planners, the university faculty and management.

All the studies are conducted almost entirely by national experts from the Tribhuvan University faculty.

The list of major studies sponsored by the project is given in the inside front cover.

A STUDY ON INSTRUCTIONAL PROCESS IN TRIBHUVAN UNIVERSITY

EXECUTIVE SUMMARY

1995
Assessment of Tertiary Education
A HMG/Tribhuvan University/UNDP/World Bank Project
NEP/91/011
Kathmandu, Nepal

List of the Studies Conducted by the Project

1. Manpower Needs of Nepal: A Review and Synthesis of the Literature
2. A Study on Current Tution-Fee Waivers and Scholarships in Tribhuvan University
3. A Study on Financing of Higher Education in Nepal
4. Decentralization of the Management of Higher Education in Nepal
5. A Study on Regionalization of Higher Education in Nepal
6. A Study on Internal Efficiency in Tribhuvan University
7. A Study on Instructional Process in Tribhuvan University
8. An Inventory of Tribhuvan University Real Estate
9. Facilities Rationalization in Tribhuvan University
10. Space Survey in the Secondary Schools of Nepal
11. Teacher Availability Study
12. Feeder Schools Survey
13. Civil Works for Higher Secondary Schools
14. Facilities Required for Secondary Schools Upgradation
15. The Transition Plan for the Implementation of Higher Secondary Reform
16. Continuous and Comprehensive Evaluation for Higher Secondary Education
17. Curriculum Framework for Higher Secondary Education
18. SLC Results (1982-1991) Data by Districts and Projections for the Coming Decade

PREFACE

This Executive Summary consists of the findings and recommendations made by a team of specialists who were commissioned by this project to undertake the study at the request of His Majesty's Government and Tribhuvan University to help the university as well as the Government to initiate institutional reforms and policy changes in tertiary education. This is one of the several policy-related studies sponsored by the project.

The Terms of Reference as well as the team of experts who conducted the study are given at the end of this publication. The full text of the report is, of course, voluminous and much longer than this summary. Those who are interested in the complete report may find copies of the report with the Planning Division of Tribhuvan University, the Higher Education Project, Tribhuvan University, Kirtipur, the Resident Mission of the World Bank in Nepal at Kathmandu and the United Nations Development Programme Library at Pulchowk.

10 December 1995

Kamal P. Malla
National Project Coordinator

A STUDY ON INSTRUCTIONAL PROCESS IN TRIBHUVAN UNIVERSITY

EXECUTIVE SUMMARY

1.1 BACKGROUND

Tribhuvan University (T.U.) and its campuses are at the crossroads today facing unprecedented challenges in their attempt to keep themselves abreast of the times. The university is at present facing a difficult task of striking a balance between its quantitative expansion and qualitative growth. Instructional process at the university campuses is being much criticized for teachers' unpunctuality, irregularity and poor performance in the classroom, lack of educational facilities and misuse of instructional materials, students' erratic attendance, lack of motivation towards learning and their indiscipline, and poor performance in the examination. These problems and issues urgently call for a study to suggest tangible measures in order to raise the quality of instruction in the classrooms. Hence, this study was undertaken to investigate the factors that led to such poor instruction.

1.2 OBJECTIVES

The present study had three major objectives:

a. to find out the actual instructional process that takes place during the course of the academic year,

b. to ascertain whether instructional process affects student attendance in the class and performance in the examinations, and

c. to recommend measures that can be used to improve the quality of instruction in the T.U. campuses.

1.3 PROCEDURE OF THE STUDY

This study adopted non-experimental study design to critically examine the nature of instructional process subsisting in the campuses. A stratified random sampling procedure was followed to select campuses located in different regions of the country as well as classes for observation from these campuses .

The sample included altogether 52 classes i.e. 481 lessons of 52 teachers at a rate of about 10 lessons per teacher, from 16 T.U. campuses, 14 private campuses and 1 private coaching centre with both Proficiency Certificate and Bachelor levels. Classroom observation forms were developed to record relevant classroom behaviour of both teachers and students. With a view to eliciting opinions regarding basic issues in instructional process and related components, opinionnaires were framed and administered.

Opinions regarding students' participation in teaching-learning process, teachers' performance and quality of classroom teaching, and suggestions for improving instruction were collected from 35 Instructional Heads, 52 teachers and 743 students of the observed classes.

A high level seminar of T.U. personnel was organised in Kathmandu with a view to bringing the issues of instructional process into focus and seeking suggestions from them to raise quality of instruction at the T.U. campuses. In this way, both quantitative and qualitative data were obtained for analysis.

The data gathered from the field were tabulated and coded for computer data processing. Data obtained from classroom observation forms were put on a matrix and activity ratio was computed. Teachers' regularity and punctuality, students' attendance and entry/exit behaviour were calculated on a simple percentage basis. Correlation coefficient was calculated to relate teaching time with students' attendance. Analysis of variance was run to compare punctuality between teachers of T.U. and private campuses. Weighted means were used to examine instructional qualities and approaches employed by the teachers in the observed classes.

1.4 MAJOR FINDINGS

The major findings of this study are presented as follows:

Teachers' Instructional Time

1. Of the 52 classes of both T.U. and private campuses, the teachers were found to be regular only in 25 classes during the visits for class observation.

2. The percentage of no-classes was found higher in science-oriented classes of T.U. campuses than that of science-oriented classes of private campuses whereas this situation was reverse in general classes of T.U. and private campuses.

3. The allocated time for a class period varied from a minimum of 30 minutes to a maximum of 60 minutes (one hour) in T.U. and private campuses. As such, 71 percent of the observed classes were found to have assigned 40 to 45 minutes for one period of class instruction.

4. The actual instructional time was found less by 8 minutes, on an average, than the allotted time for class instruction in both T.U. and private campuses due to teachers' late entry into and early exit from the classroom. In the same way, it was also noted that about 70 percent of the teachers did not stay in their classes for the allotted time for instruction.

Teachers' Performance

5. The instructional qualities of teachers such as clarity and fluency of language, eye-contact and movement in the classroom were rated as good while the traits like questioning techniques and non-verbal communication were noted as poor in all the observed classes of T.U. and private campuses.

6. It was found that teachers used more recall type questions than critical ones in the observed classes. Teachers of science-oriented classes of both T.U. and private campuses were relatively better in asking critical questions.

7. Majority of instructional heads (86%) and teachers (78%) reported that courses were completed in time whereas majority of the students (61%) stated that courses were not completed in time.

8. Majority (66%) of the respondents (instructional heads, teachers and students) stated late and continued admission of students and conduction of final examinations in the campuses as reasons for not completing the courses in time.

9. Majority of the students emphasized mainly on training for teachers, provision of instructional materials and teachers' regularity in the classes to improve teachers' performance.

10. It was found that about 60% of the teachers were teaching in other shifts on the part-time basis besides their regular teaching assignment.

Instructional Activities in the Classroom

11. Classroom instruction in both T.U. and private campuses was more teacher-centered (about 85% of class time in teacher talk) than student-centered (about 15% of class time in student talk).

12. Of 481 observed classes, only six classes were found to have used instructional materials. The rest of the classes used blackboard only as the instructional material.

Students' Behaviour

13. Out of total enrolled students, about 42 percent were found not to have attended their classes after admission in the sample T.U. and private campuses.

14. Out of 52 classes observed, late entry behaviour of the bulk of students within the first 10 minutes of the class period was found to have interrupted 50 classes. Further, T.U. science-oriented classes (60%) were found to be more interrupted than private science-oriented classes (36%) while T.U. general classes (56%) were less interrupted than private general classes (61%).

15. About 25 percent of students, on an average, demonstrated negative behaviours like reading other materials (movies, film magazines etc.) performing disturbing activities and not listening to teachers in the observed classes.

16. The reasons for students' not attending classes were identified as lack of educational environment (undisturbed, disciplined and quiet classroom with minimum physical facilities), incomprehensible class lecture and slackness in implementing attendance regulations. Moreover, an increase or decrease in instructional time does not seem to have affected students' regular classroom attendance.

17. The respondents suggested such measures as enforcement of attendance regulations, teachers' regularity in taking classes, use of interesting teaching methods, regular roll call in the class and need of job-oriented courses for the improvement of students' attendance.

1.5 RECOMMENDATIONS

The following recommendations are made on the basis of the findings of this study:

1. Regarding the irregularity and unpunctuality of the teachers in the classroom, it is recommended that effective monitoring system at the central level be established with authority to look after and take disciplinary actions against teachers with such behaviours. Campus authority should strictly supervise the instructional process at the campus. To promote teachers' regularity in the classes, measures such as providing monetary incentives to teachers, seeking their participation in professional decisions, increasing their salary and strictly implementing the reward and punishment system should be taken by the central authority.

2. In order to raise the instructional quality of the teachers, it is imperative that periodic seminars/workshops should be organised by faculties/institutes so as to keep teachers informed of new technologies of teaching and enable them to apply these technologies effectively for instruction.

Implementation Strategy. Establish a University Staff Development Center at the Tribhuvan University from the coming session with a view to providing two months' training to the beginning teachers on the use of instructional strategies and one-month's orientation training to the other teachers on both new instructional strategies and recent developments in their respective subject areas.

3. Since the main reasons for not completing the courses by teachers in time are protracted admission and conduct of final examinations during the regular instructional period, it is recommended that regular instruction period be exclusively fixed so that instruction hours as demanded by the course can be carried out within the stipulated time without being disturbed by students' admission, conduct of final examinations and students' union activities.

Implementation Strategy. The calendar of operations should be so designed that students' admission and final examinations be conducted preferably during the vacation with minimum loss of teaching days.

4. Since majority of the teachers are working in other shifts or campuses on part-time basis, quality classroom instruction is suffering. It is, therefore, recommended that policy be made to replace shift system by other more economical and practical system such as continuous scheduling. For this, a comprehensive feasibility study should be conducted.

Implementation Strategy. Feasibility study regarding the practicality of continuous scheduling should be carried out within the academic year of 1996.

5. Since the classes in the morning and evening shifts are conducted for a few hours (around 3 hours) with a period of 30 to 35 minutes, it is suggested that the instruction days should be increased to complete the courses.

Implementation Strategy. The duration of class-period in the morning and evening shifts should be made 60 minutes a period. If the class period in these shifts cannot be extended to 60 minutes, the academic session of these shifts should be extended from two years to three years and from three-years to four years. Implement this strategy from the academic session of 1996.

6. Considering the existing status of the use of instructional materials for instruction, it is recommended that educational technology such as slide and overhead projector, filmstrips, videos and computers be introduced to make the instruction more meaningful and interesting. For this, T.U. should take initiative towards establishing Educational Technology Resource Centre in the campuses. It is also suggested that reading materials such as hand-outs be made available to the students.

Implementation Strategy. The suggested Educational Technology Resource Center should be established and fully equipped for its efficient operation within a period of five years from now.

7. Considering tne importance of library in the higher education system and, at the same time, little use of library by the students and teachers, it is suggested that library study be made a part of classroom instruction. For this, libraries in the campuses need to be adequately equipped with relevant and recent editions, research and professional journals and with reading rooms.

Implementation Strategy. Concerned Subject Committees should prepare a list of course-related books, journals and reference materials for its timely circulation to the campuses so that they can purchase these materials for the libraries in time. Start strengthening of existing campus libraries by implementing this strategy from the coming academic session.

8. In T.U. no specific book is generally found to have been prescribed as a basic single textbook for any of the courses developed in the faculties though reference books are listed in the courses. Therefore, a basic textbook covering all the units of the courses should be prescribed, and such single textbook should be available for each course. If such comprehensive text books are not available, concerned teachers should be encouraged to write them.

Implementation Strategy. Encourage senior, experienced and competent teachers to write a standard and comprehensive textbook for each course for each level. For this purpose, establish Textbook Development Centre by 1998.

9. Since students' participation was negligible in the instructional process, it is recommended that courses be so developed as to ensure their active participation in teaching-learning activities through works such as library

work, field visits, group work, paper presentation, book reviews and case studies.

Implementation Strategy. While developing courses for the three-year Bachelor's Program, practical activities such as report writing, reviews, class presentation, group work should be incorporated to ensure students' active participation and these activities should be allocated 20 percent weightage of the full marks. Further, orientations and workshops should be organised by the concerned faculties/institutes for the teachers before the development and implementation of the courses for the three-year Bachelor's Program.

10. Regarding the disciplinary problems during instruction inside the classroom, it is suggested that teachers and students should establish good rapport through regular organization of co-curricular and extra-curricular activities in the campus.

Implementation Strategy. Incorporate co-curricular and extra-curricular activities in the calendar of operations prepared by the campus so as to organize these activities at least once in a month. This should be initiated from the academic session of 1996. For this, student unions should be given the responsibility of initiating such activities with regular involvement of teachers.

11. Taking into consideration the low level of understanding of the students and their inattentive behaviour to classroom instruction, it is recommended that students should be admitted on the basis of their aptitude and ability to pursue higher education.

Implementation Strategy. Develop aptitude and ability tests and administer them as admission tests. Implement these tests in the technical institutes first with a gradual switch to professional faculties from the academic year of 1996.

12. The present examination system of T.U. does not assess what goes on in the classroom. If improvement in the instructional process is desired, student evaluation should focus on classroom teaching. In this light, it is recommended that existing examination system of T.U. be reformed so as to base it on the total instructional process. The reformed system should emphasize on both formative and summative evaluation in providing feedback to students and teachers to improve their teaching-learning activities.

Implementation Strategy. Formative evaluation should be conducted as internal assessment with the weightage of 20% of the full marks and summative evaluation as final examination with the remaining 80% weightage. The tests developed for both of these evaluations should demand the application of higher cognitive abilities. This strategy should first be implemented at Master's level in all the faculties in the year of 1996 with a gradual switch to Bachelor's level in the successive years.

TERMS OF REFERENCE
HOW DOES THE INSTRUCTIONAL PROCESS AT TRIBHUVAN UNIVERSITY INFLUENCE STUDENT ATTENDANCE AND PERFORMANCE?

Background

The instructional process in Tribhuvan University seems to be quite problematic. Professors are often tardy or absent from classes. For various reasons, textbooks are not used and students seem to rely on personally or commercially available notes. As a result, students find little use in attending university classes, but may attend private coaching classes instead. The outcome is that the university has become a distance education institution that delivers very low quality education at a very high cost.

Objective

The purpose of this study is to find out exactly what instructional processes take place during the course of the year, how they affect student attendance and performance in examinations, and what interventions can be realistically made to increase time spent on instruction and its quality.

Methodology

Classroom observations should take place in a random sample of specialties, years, shifts, professors in Kathmandu valley campuses as well as outside. Private campuses should also be included. For comparison, some private coaching classes should be selected. About 50out 50 classrooms should be selected for about 10 repeat visits over time. (Alternately, more classrooms could be sampled with fewer visits, depending on the discretion of researchers.)

A specific schedule needs to be worked out. Observers should probably sit in the class the entire time, but may instead choose to cover more classes and spend less time in them. Ideally, observation should start from the beginning of the school year and continue to the end.

The researchers should develop an observation instrument to record what takes place during classes. In order to formulate it, they should attend some classes, consider variables of interest, and think how they can measure them. Then they should test the instrument to find out the events they witness can succinctly be recorded. These could be:

Attendance

- whether the professor was present
- number of minutes professor was late (if any)
- number of students present
- number of minutes the bulk of students entered
- student entries and departures from class during different time segments
- how many minutes early the class was dismissed, if any

Instructional activities

- how much time was spent on various activities: (a) lecturing, (b) questioning students (just factual questions or comprehension?), (c) receiving answers from students, (d) doing some assignment, such as solving exercises, (e) discussing matters not pertaining to the subject, (f) other types of activities

Student behaviors

- What were students doing during class? eg., attending to the professor, chatting, sleeping, reading other material

- How many students brought textbooks to class? How were they using them during class? How much note-taking was taking place?

Interviews with students and professors should take place before or after class on specific occasions (e.g. beginning, middle, end of course). Students should be asked questions such as:

- why they come to class, why they do not;
- how useful they find classes in passing examinations;
- how interesting the classes are to them;
- what suggestions they have for improvement;
- how they view professors' performance;
- if they plan to sit for the examinations;
- do they study the books of the reference list found in the syllabus? If not, what materials do they study? Only one or two books from the reference list or entirely different materials? (other books, bazaar notes, etc.)
- how do they compensate for lack of classroom teaching (or low quality) if that is the case?

Professors might be asked what they would ideally like to do in the class, why they cannot, what obstacles they face in coming to class, etc. An interview guide should be developed and pilot-tested. It should be done so that interviewers can record answers succinctly.

At the end of the academic year, the researchers should find how many students sat for the examinations of the various courses they have observed and eventually get grades of the students. They could compare those with classroom attendance and behavioral indicators by running simple correlations and/or analysis of variance by computer.

Researchers should also compare the list of references listed for each course in the syllabus with the list of actual materials reportedly studied by students. On

that basis, they should make recommendations on how textbooks for courses should be determined.

Results

The research should demonstrate how attendance and classroom behavior changed during the course of the year. In what ways are classes in (a) public campuses, (b) private campuses, and (c) private coaching different? How do science-oriented classes differ from humanities classes? How do certificate-level courses differ from bachelor-level courses?

The study should be quantitative as well as qualitative. Simple statistics (averages, frequencies, correlations) should be used to indicate: (a) time spent on various activities in class, (b) number of students present, (c) percentage of students present as time passed, (d) number of classes cancelled due to professor no-shows, (e) tardiness pattern of professors, and (f) all other measurements that researchers will consider important. Simple statistical tests should be used as necessary. For easiest analysis, data should be entered on computer. These statistics should be interpreted in the report.

The qualitative part of the study should focus on student and professor interviews as well as on comments, impressions, and other issues that cannot easily be represented with numbers. The final product will be a set of recommendations on what must be done to increase meaningful instructional time in class.

This piece of research would be ideal for the involvement of graduate students in education, who could act as observers. Besides providing information to the university, it should serve as a subject of study in methodology and educational research classes.

Research Team and Budget for the study on
Instructional Process in Tribhuvan Univeristy
Executed by Department of Foundations of Education,
Faculty of Education

Budget : NRs 885,700

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STUDY TEAM

Principal Researchers

1.	Prof. Dr. Sarbagya B. Malla	Dean, Faculty of Education, Kirtipur
2.	Prof. Dr. Bajra Raj Shakya	Executive Director, CERID, Kirtipur
3.	Prof. Dr. Ganesh B. Mali	Freelance Researcher

Consultants

1.	Prof. Dr. Panna Lal Pradhan	Chief Planning Division, TU
2.	Prof. Harsha Narayan Dhaubhadel	Faculty of Education TU, Kirtipur
3.	Prof. Dr. Rajendra Kumar Rongong	Freelance Researcher

Advisers

1.	Dr. Kedar M. Pradhan	Faculty of Education TU, Kirtipur
2.	Dr. Madan M. Shrestha	Faculty of Education TU, Kirtipur

Research Associate

1.	Mr. Basu Dev Kafle	Faculty of Education TU, Kirtipur

Assistant Researcher

1.	Mr. Prakash Man Shrestha	Sanothimi Campus, Sanothimi

Support Staff 6 persons