Attitude of Science Faculty Teachers of The M. S. University of Baroda Towards Choice Based Credit System (CBCS)

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Abstract

Our higher education system has undergone quite a lot of transformation over the years. The UGC Committee in 2008 has made several important recommendations with regard to academic reforms in university and college system for enhancement of quality and excellence in higher education. CBCS was one of the proposed aspects of reforms which is revolutionary innovation in education. A number of universities and institutes of higher learning in India have adopted CBCS and CAGP as per the advocacies by UGC and NAAC. Through the present study, the investigators attempted to study the attitude of university teachers towards the CBCS who are involved in the system. Science faculty of the M. S. University of Baroda who was the first to implement the CBCS has been selected for the study and all the teachers of Science faculty were selected as a sample for the study. The constructed attitude scale was implemented on all the teachers of the Science faculty of the M. S. University of Baroda. This paper highlights the major findings of the study alongwith its discussion.
KEYWORDS: Higher education, CBCS, Attitude, University teachers

INTRODUCTION

The role of Higher Education in National Development is well established as it is at this level of Education which provides top level manpower who is responsible for accelerating the process of development further. A recent survey shows that the market prefers those graduates who have practical application of knowledge and willingness to learn the amount of information they are exposed to. In such a scenario, the basic consideration will be the quality of higher education. Quality and relevance are important criteria by which society measures university's performance. Improving the quality of higher education is now the primary concern of countries of the world. Thus there is a dire need for redesigning existing curriculum to meet the demands of the day.

Our higher education has undergone quite a lot of transformation over the years. After the Education Commission report (1964-66), discussions on college autonomy started and a few colleges became autonomous since 1978 and a few of them have completed 25 years of such a freedom. Academic freedom under autonomy, helped many colleges to innovate new curricula, design relevant courses, frame new syllabi and introduce new evaluation methods. But the required flexibility for the students to have a greater choice of courses appropriate to their interests, needs and long-term goals is not available even in autonomous colleges; rather a rigid and compartmentalized system is perpetuated. Quality higher education should make sound personalities shaped by ideals of integrity, character, transparency, forthrightness and compassion for the helpless.

Nevertheless through the early Five Year Plans, Science Technology, Commerce and Management found their way into an otherwise linguistic and humanities curriculum. The curricular structure and transactions still remained essentially the same. The summative terminal examinations (Annual Examinations) being the only method of assessing student work. The University education at undergraduate is by and large an obsolete system with little hope of rising to levels of excellence in either leadership or performance. The launching of the NPE (1986) and POA (1992) initiated qualitative change. The concern for raising the quality of undergraduate and postgraduate education in Arts, Commerce and Science colleges became the responsibility of UGC-Sponsored NAAC since 1990. Such a retrospect, skeletal no doubt made it clear that the need for change is both recognized and acted upon.

The UGC (1976) prepared Plan of Action as guidelines for examination reform with a view to bring reforms in the examination system. As a result, examination Reform Unit in many universities has been established. The UGC Committee (1976) had recommended the desirability of periodically testing of students. It had also suggested that the work of the students should be regularly evaluated and some credit should be given for it. The UGC had set up a committee in 2008 on Academic and Administrative Reforms, with Prof. A. Gnanam as the Convener with several educationists from a diverse range of disciplines. The committee, in its report, has made several important recommendations with regard to academic reforms in universities and college system for enhancement of quality and excellence. The committee proposed four key aspects of reforms, viz., Semester System, Choice Based Credit System, Continuous Assessment and Grading. Based on the report, the UGC has developed an Action Plan for Academic and Administrative Reforms. This Action Plan outlines the main steps, the central and state universities, colleges and other education institutions of higher education need to consider and adopt in respect of Semester System, CBCS, Curriculum Development, Admission Procedures and Examination Reforms.

CBCS is a revolutionary innovation in education. This system, if implemented properly, will make it very easy for students to migrate from one system to another, learn a variety of courses in different colleges, and move out from their field of specialization to various other fields simultaneously. This system has several unique features such as enhanced learning opportunities, ability to match students' needs, aspirations and interests, inter and intra institution transferability of students, improvement in educational quality and excellence and flexibility to the students, standardization and comparability of educational programmes across the state, etc. The credits can be accumulated based on the number of courses. The CBCS will provide options for foundation (compulsory) courses, core and allied courses, elective and inter-disciplinary courses, social orientation courses and extension activity courses. CBCS offers better learning opportunities, can meet students' scholastic needs and aspirations, and allow inter-institution transferability of students. It also allows part-completion of an academic program in the institution of enrolment and part-completion in a specialized institution. The working students can have flexibility to complete the program over an extended period. CBCS or a cafeteria like system is the solution for the type of transformation from the traditional teacher

oriented education to a student-centered education. Taking responsibility for their own education in this way, students can benefit the most from all the available resources. Academic commissions and committees such as UGC, and NAAC recommended CBCS for higher education. It is a flexible system of learning wherein one has a liberty to take up the education and courses as per his choice and earns the credits for various courses.

Commensurate with the times and taking into account the challenges the age of globalization and knowledge-societies pose, the M. S. University of Baroda is aware of the urgent need to move towards semesterized CBCS and CAGP. A number of universities and institutes of higher learning in India have already adopted CBCS and CAGP as per the advocacies by the agencies like UGC and NAAC. Though the M. S. University of Baroda has accepted and implemented semester system by the academic year 2010-11 and has encouraged Choice Based Syllabus (CBS) in all departments of the faculty of science at first year B. Sc. level and thereby planned to implement in departments of other faculties. Prior to implementation of the CBCS in entire university, there is need to study the attitude of the teachers towards this implemented system so that the positive and negative points of the system can be obtained along with the lacunas and as per it, necessary modifications could be done in order to keep pace with the system. So it is needed to study the attitude and opinions of those who are involved in the system, and to find an answer to questions like how far their heterogeneity can influence the system. Therefore, keeping these in mind, the present study has been undertaken.

OBJECTIVES OF THE STUDY

1. To construct the scale to measure attitude towards CBCS.
2. To measure the attitudes of the Science faculty teachers of the M. S. University of Baroda towards CBCS.

HYPOTHESES

1. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards time consumed in CBCS.
2. There will be no significant difference in the expected and observed frequencies against the attitude o-f Science faculty teachers of the M. S. University of Baroda towards the minimization of the limitations of traditional system in CBCS.
3. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards scope of more creativity to students in CBCS.
4. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards more time to extra-curricular activities in CBCS.
5. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards minimization of examination phobia in CBCS.
6. There will be no significant difference in the expected and observed

frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards reduction of anxiety in CBCS.

7. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards deterioration of interest in CBCS due to much work load.
8. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards activity and vigilantly of students in CBCS.
9. There will be no significant difference in the attitude of teachers of Science faculty of the M. S. University of Baroda towards prejudiced assessment in CBCS.
10. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards the opportunity for self improvement in CBCS.
11. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards more interaction of students in classroom teaching learning in CBCS.
12. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards discouragement of private tuitions in CBCS.
13. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards minimization of busyness of the students in teaching learning due to CBCS.
14. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards inculcation of healthy study habits in students due to CBCS.
15. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards motivation for regular study in CBCS.
16. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards accurate assessment in CBCS.
17. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards faster declaration of result in CBCS.
18. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards the improvement in teaching schedule as per students' need in CBCS.
19. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards diagnostic and remedial help to students in

CBCS.

20. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards greater choices for appropriate courses as per interest and ability of students in CBCS.
21. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards more freedom to students in CBCS.
22. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards encouragement to students to take courses as per their choice, interest and pace in CBCS.
23. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards scope for independent study to students in CBCS.
24. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards offer of flexible and open system in CBCS.
25. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards Flexibility of Syllabus in CBCS
26. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards the encouragement and support for faster learning due to semester system in CBCS.
27. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards distressed learning environment for students in CBCS.
28. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards challenge to students for acquiring and creating knowledge in CBCS.
29. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards holistic manner teaching of theory and practice in CBCS.
30. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards decrease of rote memorization among students due to CBCS.
31. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards scope for using different teaching methods in CBCS.

32. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards increment in teachers' performance due to CBCS.
33. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards Betterment of CBCS than Traditional System.
34. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards the quality improvement of higher education in CBCS.
35. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards future support for CBCS.
36. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards affection of daily teaching schedule due to CBCS.
37. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards benefit to higher education system due to CBCS.
38. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards increase in interfaculty interaction due to CBCS.
39. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards regular attendance of students due to CBCS.
40. There will be no significant difference in the expected and observed frequencies against the attitude of Science faculty teachers of the M. S. University of Baroda towards more workload in CBCS.

EXPLANATION OF THE TERM

CBCS: It is a flexible system of learning wherein students have a liberty to take up the education and courses as per his/her choice and earns the credits for various courses. It is a systematic system which follows grading, semester and continuous and comprehensive evaluation systems.

OPERATIONALIZATION OF THE TERM

Attitude towards CBCS: It is the perception, thinking and feeling of science faculty teachers of the M. S. University of Baroda towards implemented CBCS.

METHODOLOGY OF THE STUDY

Design of the Study

The present study was survey kind of descriptive study.

Population

All the teachers of the science faculty of the M. S. University of Baroda for the academic year 2011-12 constituted as the population for the present study. There were 172 teachers working in the Science faculty of the M. S. University of Baroda during the academic year 2011-12. Out of the total 172 teachers, 29 were Professors, 45 were Associate Professors and 98 were Assistant Professors. Further, out of the 172 teachers, 48 were male and 57 were female.

Sample

Since the problem under study is mainly confined to the teachers of the Science faculty of the M. S. University of Baroda only and the population i.e. 172 teachers of Science faculty being small, the entire population of the teachers was taken for the sample. Thus, 172 teachers of the Science faculty of the M. S. University of Baroda constituted as a sample. But out of the 172 teachers, 105 teachers had responded whereas other teachers did not respond despite of requesting them several times. Thus, the size of the sample remained to 105 teachers of the Science faculty of the M. S. University of Baroda.

Tools

To measure the attitude of the science faculty teachers towards CBCS, a five-point Likert type *Attitude Scale* was constructed by the investigators. The scale was constructed after reviewing materials regarding the CBCS and a number of attitude scales constructed earlier. The investigators arrived at four dimensions of attitude towards the CBCS viz. Impact of CBCS, Teaching-Learning process, Evaluation and Limitations of the CBCS. After identifying the dimensions the statements were formed according to the behaviour exhibited under each dimension. The statements were referred to the experts in the field in terms to collect their opinion. Considering the suggestions of the experts, required changes were made and final attitude scale containing forty items was prepared.

Along with the attitude scale, 5 Open-ended Questions were also asked in terms of to get additional responses regarding their opinions about CBCS, problems and suggestions for improvement (if any) from the teachers.

DATA COLLECTION

The investigator had visited to Dean of the Science faculty of the M. S. University and submitted the forward letter depicting the purpose of the study and its importance. After getting the permission from the faculty Dean, the investigators visited to each and every Head of the Departments of the Science faculty along with the forwarding letter and decided the time schedule to collect the data from the teachers of the respective department. After that, the investigator had visited personally to every teacher of all the departments of the Science faculty and submitted the tools to them. After submitting the tools, investigator had personally visited all the teachers to get the completely filled tools back. So, the data were collected from all the teachers of Science faculty of the M. S. University of Baroda during the November, 2011 to March, 2012.

DATA ANALYSIS

The collected data were analyzed both quantitatively as well as qualitatively. Chi-square was employed in terms to test the null hypotheses. Frequency and percentage were also

counted to study the attitudes of the teachers. Content analysis was done for the open ended questions. The subjective answers of the respondents supporting their choice were qualitatively analysed.

MAJOR FINDINGS

The major findings that emerged from the present study were:

- There is significant difference between observed and expected frequencies of science faculty teachers' attitude towards all the forty items regarding the CBCS as the calculated chi-square values are found higher than the table value so all the hypothesis from $H_0$1 to $H_0$40 are rejected and difference found in the attitude of Science faculty teachers of the M. S. University of Baroda.
- Forty six (43.80 percent) teachers felt that CBCS is consuming lot of time.
- Sixty one (58.09 percent) teachers agreed that CBCS minimizes the limitations of traditional system.
- Sixty eight (64.76 percent) respondent felt that CBCS has no scope of providing more creativity to students than the traditional system.
- Thirty nine (37.14 percent) teachers disagreed that CBCS gives more time to extra-curricular activities.
- Fifty five (52.38 percent) teachers agreed that CBCS minimizes examination phobia in students.
- Thirty eight (36.19 percent) teachers agreed that CBCS reduces anxiety in students.
- Forty six (43.80 percent) teachers felt that too many tests, assignments and other workload deteriorate interest in CBCS.
- Fifty (47.61 percent) teachers agreed that students become active and vigilant in CBCS.
- Fifty one (48.57 percent) teachers agreed that in CBCS, assessment is done with a prejudice mind.
- Majority i.e. sixty four (60.95 percent) teachers felt that CBCS gives more opportunity for the self improvement than the traditional system.
- Thirty seven (35.23 percent) teachers agreed that in CBCS, students are more interactive in classroom teaching-learning.
- Thirty eight (36.19 percent) teachers felt that CBCS discourages private tuitions.
- Majority i.e. sixty nine (65.71 percent) teachers agreed that CBCS keep students busy in teaching-learning.
- Fifty four (51.42 percent) teachers felt that healthy study habits can be inculcated in students through the CBCS.
- Forty (38.09 percent) teachers agreed that CBCS helps in motivating for regular study.
- Majority i.e. seventy five (71.43 percent) respondent teachers agreed to the statement that assessment can be more accurate in CBCS than the traditional system.
- Majority i.e. sixty three (60 percent) teachers disagreed that result declaration is faster in traditional system then CBCS.
- Fifty one (48.57 percent) teachers felt that CBCS enables teachers to improve the teaching schedule as per the need of students.
- Forty six (43.80 percent) teachers agreed that CBCS helps students to diagnose and

remediate their learning difficulties.

- Most of i.e. eighty eight (83.81 percent) teachers agreed that CBCS gives greater choices of appropriate courses as per the interest and ability of the students.
- Majority i.e. seventy one (67.62 percent) teachers agreed that students are having more freedom in CBCS.
- Majority i.e. seventy nine (75.24) teachers felt that CBCS encourages students to take courses according to their interest, abilities and pace.
- More than half i.e. fifty nine (56.19 percent) teachers agreed that CBCS gives more scope to students for independent study.
- Majority i.e. seventy (66.67 percent) teachers felt that CBCS offers very flexible and open system than a traditional system.
- Forty five (43.85 percent) teachers agreed that syllabus is more flexible in traditional system than the CBCS.
- More than half i.e. fifty six (53.23 percent) teachers felt that semester system in CBCS encourages and supports faster learning opportunities than traditional system.
- Thirty seven (35.23 percent) teachers disagreed that learning environment in CBCS is stressful for the students.
- Thirty eight (36.19 percent) teachers agreed that CBCS challenges students for acquiring and creating knowledge than mere receiving the knowledge.
- Thirty four (32.38 percent) teachers agreed that theory and practice can be taught in holistic manner in CBCS.
- Forty four (41.90 percent) teachers felt that CBCS decreases the rote memorization in students.
- Nearly half i.e. fifty two (49.52 percent) teachers agreed that CBCS provides scope to use different teaching methods than the traditional system.
- Fifty (47.61 percent) teachers agreed to the statement that teachers' performance increases due to CBCS.
- Forty seven (44.76 percent) teachers felt that CBCS is better than traditional system.
- Fifty (47.61 percent) teachers agreed that CBCS improves the quality of higher education.
- Nearly half i.e. fifty two (49.52 percent) teachers agreed that in future, they will support to CBCS.
- Half i.e. fifty three (50.47 percent) teachers felt that higher education system can be benefited through the CBCS.
- Forty one (39.04 percent) teachers agreed that daily teaching schedule is affected due to CBCS.
- More than half i.e. fifty eight (55.23 percent) teachers felt that interfaculty interaction increases more due to CBCS.
- Forty one (39.04 percent) teachers felt that the students attend classes regularly due to CBCS.
- Majority i.e. seventy (66.67 percent) teachers agreed that workload is more in CBCS than traditional system.
- All of the respondents felt that their workload nearly doubles by implementation of CBCS.

- Few of the teachers opined that semester system is better known as "memorise, reproduce and forget" which is harmful for science education specifically now when weaker students are opting for basic sciences.
- Many of the teachers were of the opinion that oo many examinations and evaluations keeps the teachers too busy and this can slowly result into loss of interest in teaching, loss of efficiency and loss of sincerity.
- One of the respondent was of the strong opinion that more examination in case of CBCS will lead to the mindset of indifference and phobia to it whereby the spirit will be lost.
- Majority of the teachers opined that in traditional system students get sufficient time to learn the subject thoroughly find the available literature from different sources and also discuss but CBCS runs so fast that the students from vernacular medium find difficult to keep pace.
- There was strong opinion of one of the respondent that we need to prepare next generation of India and not hybrid of all.
- Almost all the respondents opined that CBCS requires enough infrastructure and human resources for its effective implementation.
- Sixty eight percent of the respondents were of the view that CBCS will help in removing the limitation of traditional system. The reasons the respondents gave for their responses are as under
- The respondents were of the opinion that CBCS reduces the work load of students as every hour involvement of student is credited in CBCS
- Few of the teachers opined that CBCS helps in getting more score as learning is regularised and therefore less mental fatigue
- Majority of the respondents opined that CBCS can remove fixed combination of subjects and can give liberty to the students to choose the subjects of their choice.
- Sixty three percent of the respondents opined that because of interfaculty interaction in CBCS it will help in evolving better system of education
- Fifty four percent of the respondents opined that as there is scope of measuring learning outcomes frequently thus helps in improving upon the learning of students.
- All the respondents opined that CBCS can prove to be excellent only if the required infrastructure in terms of human and material is made available.
- Few of the respondents opined that the traditional system has narrow approach and is stuck dealing with one topic throughout the year rather than exploring other topics as well. CBCS will provide practical training and thus will help in developing among students the communication skills and will enhance the personality of the students.
- One of the respondent strongly opined that unless the mindset that knowledge is in syllabus and information is knowledge is questioned at its very root any change will be cosmetic exercise. It was further added that emphasis should shift from comparison and competition to compassion and cooperation.
- All the respondents were of the opinion that there needs to be proper orientation about system of CBCS to the teaching faculty so that the teaching faculty can help the students as and when required. Maximum clarity is required to be given to the students as well about CBCS.
- There was suggestion from few of the respondents that there needs to be incentives

provided for healthy fulfilment of the objectives of CBCS

- Respondents felt an urgent need to arrange an open meeting where in every personnel can involve in the discussion and every one will have their say which in turn will help in improving the implementation of CBCS. At present there is confusion not only among students about CBCS but even the teaching faculties are not clear about the CBCS.
- One of the respondent strongly suggested that the prevailing culture of imposing uniformity in higher education for administrative efficiency and quantitative evaluation is only generating skilled labourers who adapt in sustaining and perpetuating the system but cannot think of creating an identity independent of system. Top-down approach may be a life breadth for an industrial set up but for academics to evaluate it is a suicide. Novelty and originality has neither birth date nor an expiry date.
- One of the important suggestions made was there needs to be real choice available to the students. At present only limited choices are available.
- Respondents felt that there needs to be uniform effort from all the personnel's involved in the teaching learning process for proper implementation of CBCS. The teachers, students, administration should come on the common platform for effective implementation of CBCS.

DISCUSSION

It was found that majority of the teachers were in favour of CBCS but all of them felt that their workload nearly doubles by implementation of CBCS. Another concern which the teachers had was much of the time will be utilised to evaluate the students and therefore the time available for the teaching learning process will be reduced which may hamper the teaching learning process. Many of the teachers were of the concern that CBCS is just introduced and therefore it would be too early to come to some conclusion about the implementation of CBCS. Teachers were having expectation that there needs to be orientation programme organised not only for students but for teachers as well so that the entire teaching community becomes aware about the Choice Based Credit System. Being aware about the CBCS will help the teaching community to guide the students accordingly and also help them in implementing the system effectively. The concern shown by majority of the teachers was that the system of CBCS is just introduced in the faculty. Above all neither the teaching faculty nor the students are completely aware about the newly implemented CBCS. Therefore majority of them voiced out that first the actual basic of CBCS should be made clear to both the students and teachers. There were also responses by majority of teachers that it is too early to say anything about CBCS as it is just implemented. There is an urgent need to arrange an open meeting where in every personnel can involve in the discussion and every one will have their say which in turn will help in improving the implementation of CBCS. At present there is confusion not only among students about CBCS but even the teaching faculties are not clear about the CBCS.

The investigators are of the view that there needs to be improvement brought about not only in the form of infrastructure but all in the form of human resources. CBCS by its nature demands manpower with varied competency. One of the components in CBCS is

provision of subjects as per the choice or interest of the students. In order to cope up with this the university requires enough of resources both human and material. The concern of the teachers is appropriate that there is scarcity of human and material resources which may hamper in the effective implementation of the CBCS.

The present attempt of CBCS cannot provide clear answer as we are offering very limited options at the moment. Further this is not truly CBCS. CBCS has to be evaluated for viability in the context of the actual situation. In principle it has some features but in reality it will work only if there is reasonable equivalence between departments, otherwise much skewed choices will be made by the students leading to some courses and some teachers overwhelmed by excess work load while others will find their courses undersubscribed. Unless mechanisms are worked out for ensuring a balanced distribution of choices, CBCS cannot be implemented in a viable way. It will be premature to switch to CBCS before addressing to the above said issues. The investigators also feel that there is a dire need to work out mechanism. There needs to be urgent thought given to the number of teachers available, number of class rooms available and number of choices available. CBCS can prove to be excellent only if the required infrastructure in terms of human and material is made available.

The investigators recommend that for effective implementation of CBCS if the examination system is made online many of the problems will be solved. If online examinations are available students will get the freedom to sit for the examination according to their choice and this will also help in reducing the workload on the part of teachers as well as administrators. The online examination will reduce the paper work and above all if the examinations are made more of objective then the OMR sheet will be used and just on the click of the mouse the results of thousands of students will be possible which will take care of paucity of time as well as increase the objectivity. Fifty one (48.57 percent) teachers agreed that in CBCS, assessment is done with a prejudice mind.

CONCLUSION

The study dealt with the attitude of the science faculty teachers of the M. S. University of Baroda towards CBCS from a perspective of their attitude towards the impact, teaching-learning process, evaluation and overall impact of CBCS in higher education. In the impact of CBCS, it was observed that the impact of the CBCS was good but time consuming, no creativity for students, no scope for extra-curricular activities, too many tests can be hindrances in implementing CBCS. However, there are some positive points too that can be benefit to higher education system. However, proper facilities should be readily available for making the system successful. Also the teachers and stack holders should be oriented with the system.

Thus on the basis of the present study it can be concluded that the system has been not properly implemented. Facilities for the CBCS should be readily available. Awareness about among the teachers and other members involved, proper options in selection of subjects could be of great help for making the CBCS successful. Attention to these aspects, if provided timely and immediately, will lead to ensuring the expected

improvement in the CBCS system which lead to contribution for improvement in higher education. If the students will be encouraged to take subjects according to their choices and provide them for a option for their career then in turn they will be fruitful in entire higher education system.

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