

Tracing challenges in the pathway of CBCS: A status study

Suraj Gupta, Desh Deepak, Rashmi Gore, Badri Narayan Mishra, Vimal Singh

Department of Education, Chhatrapati Shahu Ji Maharaj University, Kanpur, India,

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ABSTRACT

The education system in India is undergoing various changes to improve it. The Choice-Based Credit System (CBCS) has been introduced in higher education, allowing students to select elective courses based on their interests. This system offers advanced learning opportunities, the flexibility to transfer between institutions, and improvements in academic quality. The CBCS is designed to meet the evolving socio-economic environment and the educational needs of future generations. However, its implementation has posed challenges for students, faculty, and institutions. Thus, the goal of this research is to analyze the challenges of implementing CBCS and researchers also surveyed the opinion of faculty members on CBCS. A study conducted on 140 faculty members of CSJM University, Kanpur, revealed that there is no significant difference in opinions on CBCS between Arts and Science faculty members. It also showed that there is a significant difference in opinions on CBCS between male and female faculty members.

Key Words: Assessment, Evaluation, Measurement, Choice Based Credit System (CBCS), Arts & Science Streams Faculty Members

Introduction

The basis of development of any country is determined by the advancement of the education system of that country (Vos, Abajobir & others, 2017). Therefore, from time to time, different efforts have been made to improve the education system in the country (Fried, 2017). In this sequence, the Choice Base Credit System (CBCS) system was introduced to India to improve its higher system. Choice-Based Credit System (CBCS) was a great reform in higher education (Zhou, Li, Wu & Zhou, 2020). A tried-and-true, cutting-edge method of instruction in higher education, the Choice Based Credit System (Chakraborty & Mahanayak, 2021) gives students the flexibility to choose the courses they want to take to complete any degree program (Biswas, 2018). Due to this the education system proved to be a big step in moving towards a student-centric system instead of completely teacher-centric or curriculum-centric. Choice Base Credit System (Mistry, Kothari & Shelat, 2016) has helped adapt India's education system to global standards, and along with academic achievement, vocational skills are also being promoted among the students. Choice-Based Credit System provides a multidisciplinary experience to students to ensure overall progression of the students (Hart, Bond, Siegelman, Miller & others, 2017). Choice-Based Credit System promotes inclusive education by accommodating the diverse learning needs, interests, and backgrounds of students (Reimers, 2020). The Choice-Based Credit System was regarded as the standard by which our academic institutions were measured against universities across the globe (Education at a Glance - 2021, 2021). To improve quality and bring about a revolutionary shift in higher education, India implemented the Choice Based Credit System through the Eleventh Five Year Plan (NKC, 2009, Pp. 165-168) and on the advice of the National Knowledge Commission (Sam Pitroda) (National Knowledge Commission, 2009). A student may choose from three different course types under the Choice Based Credit System: required foundation courses, elective courses, and core courses. Here, students must take the required core courses each semester and select electives from a list of disciplines that are not linked to their field of study (Fung, 2017). The goal of the Choice-Based Credit System is to provide a multidisciplinary approach to higher education so that students can excel in a variety of elective courses (Biswas, 2018). This is a tool for creating consistency in the higher education system both nationally and internationally, both within and across institutions.

The choice-based credit system, according to the UGC, offers flexibility in curriculum design and credit assignment depending on course content and instructional hour (Shohel, Ashrafuzzaman & others, 2024). Students

have the option to select courses from a predetermined list of core, optional, and open elective courses under the choice-based credit system (Syed, Shihavuddin & others, 2022). The CBCS offers a cafeteria-style learning environment where students can select their own courses, proceed at their own speed, take additional courses to obtain more credits than needed and use an interdisciplinary approach to learning. Courses will be assessed using the grading system, which is thought to be superior to the traditional marks system (Mondal & Mal, 2023). The implementation of a grading system is important in order to provide uniformity across all Indian technical colleges. Students will initially gain from being able to transfer between Indian universities as well as between nations (Tazien, 2017). Prospective employers will also be able to evaluate the candidates' performance to the standard grading system. CBCS is one of the biggest reforms in the Indian higher education system to try to stand up with the global education system (Yadav, 2022).

So researchers want to discuss why CBCS is important, its implementation, and its challenges (Chaubey, 2022). The CBCS was started in various universities from 2015-16. In India, CBCS is like a newborn baby that offers students two prominent things, the freedom to choose between given courses & credit-based evaluation approach (Yadav, 2022). The CBCS system accepts the concept of a new system (Child-centred) in place of the old education system so that the education system can be given a new dimension (Chaubey, 2015). "This system is somehow different from the traditional examination-centric system, in which focus was given to only marks of examination at the end of the year, here much more emphasis is given to the needs and demand of the students" (Mishra, 2017).

The CBCS system emphasizes setting the evaluation and measurement system of the Indian education system based on global standards. "CBCS is beneficial because of the presence of a better evaluation system such as; grading and semester system in India" (Aitheli & Kumar, 2016). CBCS provides a multidisciplinary learning experience but freedom should be given in choosing elective subjects to students as per their interests (Kaur & Sharma, 2016). Credit transfers and choice-based paper selection might be challenging for a variety of reasons. Therefore, facilities for credit transfer and choice-based subject selection should be made to tackle this issue. It is recommended that the grading system be implemented in tandem with the marking system and that all institutions' standards be equalized to facilitate student mobility (Naidu & Shreedevi, 2016).

National Status of CBCS

Throughout a review of related literature and research on CBCS researcher found that **Dinesh (2023)** emphasizes the value of English language proficiency in his thesis, Curriculum and Methodological Issues of Business Communication in Management Institutions, which he submitted. The researcher recommended urgent recommendation that the curriculum be updated and improved to needs of both international organizations and Indian students. **Das (2021)** analyzed CBCS implications and its challenges and said that Better resources are offered to students by CBCS, including autonomy, adaptability, chances for advanced learning, satisfaction of academic needs and goals, transferability within and between institutions, high-quality education, etc. **Howlader & Roy (2021)** conducted a study attitude towards Choice Based Credit System (CBCS) of undergraduate students about their academic achievements. In this paper main objectives are to compare the attitude between boys' and girls' students towards CBCS and the correlated attitude towards CBCS and academic achievement of girls and boys students. The study reveals that there exists a significant difference in attitude towards CBCS between boys and girls students and no significant relationship between attitude towards CBCS and academic achievement of boys and girls students. According to **Biswas (2018)**, the primary focus of higher education nowadays is quality, which can only be evaluated and graded by a widely recognized system of assessment, which is made feasible by the CBCS. Higher education needs the CBCS system because it fosters student sincerity by allowing them to study the subjects they want to study. **Deuri (2016)** observed that some students and teachers consider CBCS to be a milestone in the education system in India but some do not believe it. So the academic reforms change in modification in assessments and examination methods switch over annual to semester system, acceptance of grading and credit system and other related reforms. **Chaubey (2015)** observes that CBCS brings a major shift from teacher-centric to student-centric educational reforms as CBCS respects learner autonomy, facility learner mobility, and provides a cross-cultural learning environment. He described that there are certain practical limitations like shortage of teachers and infrastructure, more workload for students and teachers, promotes partial knowledge. Chaubey concluded that there is a need to explore the concept of CBCS as that opportunities can be utilized in the best way. **Kelkar & Ravichankariv (2014)** conducted a survey of teachers to learn about their thoughts, the issues they were facing, and the ideas they had for improving CBCS implementation. A questionnaire

based on four parameters was used to conduct the study: the CBCS's objectives and whether or not they have been reached; the challenges teachers have had implementing the CBCS; the way the credit system is run; and the methods used to adjust to the CBCS. According to the study's findings, 62.5% of the teachers said that the CBCS placed an exclusive emphasis on evaluation. In his research, **Habib (2015)** found that CBCS caused far more serious harm and that the UGC created the course curriculum and structure. The statute itself restricts universities' ability to create their curriculum and courses. The idea of requiring all universities to use the same curriculum goes against the democratization of learning and governance. It disregards student populations' and regions' unique histories, as well as diversity and specific needs.

Research Gap

After the review of different types of study based on CBCS researchers have observed that an in-depth study of the CBCS system could provide a strong foundation for study. Based on the already existing literature on CBCS, the researchers got help in providing a definite direction for their study. The above comprehensive reviews of the relevant literature cover the evolution of the credit system historically (Ravichankariv, 2014), changes to the educational system for the addition of electives, and the measurement of learning in terms of the number of hours that students and teachers spend in contact. They also take into account the amount of time that students spend learning on their own by using various online or library resources. Students have a big part in the development of grading systems and their significance in academics. The open sky choice system is a significant addition to the Choice Based Credit System (CBCS). This means that students shouldn't be required to choose from a predetermined set of buckets holding courses. However, the new CBCS can choose courses from any subject and any number of universities (Chaubey, 2015). However, there were significant differences among universities both in India and beyond. This system has made an effort to mitigate these differences and preserve a bare minimum of consistency across the nation, which can support its alignment with the global education framework. In addition to this, a large number of papers were examined; As CBCS has been introduced recently in India, therefore very few numbers of studies were found in these fields.

Objectives of Study

The main objectives of the study are as follows:

1. To trace the various challenges in the implementation pathway of Choice Based Credit System (CBCS).
2. To compare the opinions of Art & Science Streams faculty members on the Choice Based Credit System (CBCS).
3. To compare the opinions of Male & Female faculty members on the Choice Based Credit System (CBCS).

Research Hypotheses

Null hypotheses have been formulated due to a lack of proper evidence as follows:

H₀₁ There is no significant difference in the mean scores of the opinions of Arts and Science Stream faculty members on Choice Based Credit System (CBCS)

H₀₂ There is no significant difference in the mean scores of the opinions of Male and Female faculty members on Choice Based Credit System (CBCS)

Research Method

This study investigated opinions on the Choice-Based Credit System of Arts & Science Streams faculty members. This study has utilized the strength of research i.e. both the approaches Quantitative as well as Qualitative, to analyze the opinions of Arts & Science Streams faculty members on CBCS. Objective-wise research methodology is given below in *Table 1*.

Table 1
Objective Wise Research Methodology

Sl. No.	Objectives	Research Approach
1.	To trace various challenges in pathways of implementation of Choice Based Credit System.	Qualitative
2.	To compare the opinions of Art & Science Streams faculty members on Choice Based Credit System.	Quantitative

Population, Sample, and Sampling Procedures

The population of this study consists of all the faculty members of Chhatrapati Shahu Ji Maharaj University, Kanpur, and its affiliated colleges. There are 140 selected faculty members from arts and science streams and constituted the sample accordingly given below in *Figure 1*.

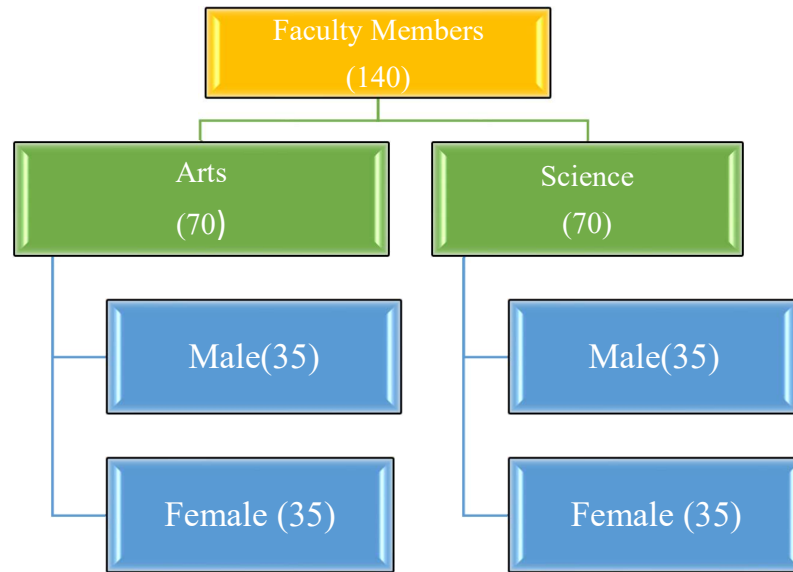


Figure 1 Distribution of Sample

Researchers have categorized the whole sampling procedure into two categories as given in *Figure 2*.

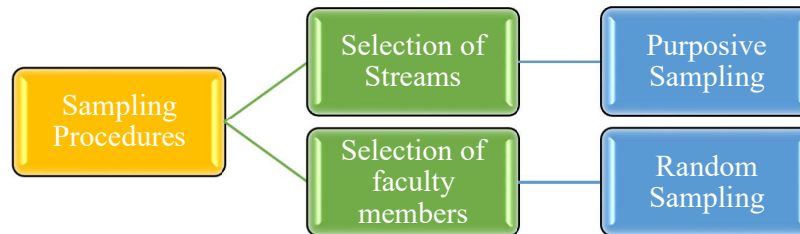


Figure 2 Distributions of Sampling Procedures

The selection of streams has been done through a purposive sampling technique based on the objectives and requirements of this study and the Random sampling technique has been used to select faculty members because researchers provide equal opportunity to all populations to be selected as a sample and valid and reliable representative of the group.

Tool of Data Collection and its Treatment

There is self-constructed a five-point Likert opinionnaire titled '**Opinionnaire on Choice Based Credit System**' for the Faculty Members has been utilized for collection on CBCS.

In this research, the researchers have used Qualitative data analysis techniques such as conceptualization, data reduction & content analysis, and based on the nature of the data; statistical techniques; Mean, Standard Deviation & t-tests were used to analyze the data.

Data Interpretation and Findings

Choice-Based Credit System: Challenges

The Qualitative Data Analysis and Interpretation of various challenges in the implementation pathway of the Choice-based Credit System have been given below in the following categories:

Challenges faced by Students

The presence of learners is essential in the educational process. Although CBCS offers advantages for students, it

also presents significant challenges. For example, the emphasis on student freedom and choices may lead to issues of indiscipline. Additionally, students may encounter difficulties in accessing open elective courses offered by remote departments. Inexperienced students often struggle to decide on elective courses due to uncertainty about future demand. The focus on classroom attendance and co-curricular activities may be met with resistance from students. The transition to grade points and letter grades instead of actual marks poses challenges, especially in assigning individual rankings. The excessive number of tests and evaluative exercises in CBCS can overwhelm students. Furthermore, students may find it challenging to grasp the new CBCS framework, including credit allocation, course selection, and evaluation criteria.

Challenges faced by Faculty Members

The educators are a crucial element in the entire educational process and play a significant role in overall development. However, since the implementation of CBCS, they have encountered certain difficulties. Specifically, the teachers are unable to complete their primary courses within the allotted time. This can be attributed to the additional burden placed on them as a result of carrying out evaluations and activities under the Choice-Based Credit System, thus leaving less time for teaching and research. Furthermore, they are encountering challenges associated with evaluating students based on Grading Points. Faculty members are struggling to dedicate time and effort toward orienting students to this new system. Many educators may not possess the necessary training and skills to effectively implement the Choice Based Credit System. It is also proving challenging for faculty members to develop appropriate assessment strategies that align with the principles of the Choice-Based Credit System. Resistance to changes associated with the Choice Based Credit System is stemming from concerns regarding workload and academic independence. Managing the administrative aspects of the Choice Credit System is proving to be overwhelming for faculty members. Additionally, addressing the diverse educational backgrounds, learning needs, and socio-economic profiles of students under the Choice-Based Credit System is posing a challenge for faculty members in designing inclusive and equitable learning experiences. Lastly, teachers are finding it difficult to allocate time to issue grade certificates for all registered students after every semester.

Challenges Faced by Institutions

Designing suitable evaluation methodologies that adhere to Choice-Based Credit System principles can be a difficult task for departments and institutions. Establishment stakeholders may be hesitant to embrace changes associated with the Choice Based Credit System due to concerns about workload and academic independence. Upholding high-quality standards in course delivery and evaluation under the Choice-Based Credit System necessitates effective mechanisms for supervision, assessment, and feedback, which might be deficient in some institutions. Promoting cross-disciplinary cooperation and course offerings under the Choice-Based Credit System requires collaboration among different departments, institutions, and disciplines, which might encounter opposition. The introduction of optional courses in the curriculum has heightened the demand for diverse training programs. The department lacks sufficient stakeholders in relevant fields of study. Adapting the current curriculum to align with the Choice-Based Credit System framework entails substantial restructuring. The Choice-Based Credit System has increased the administrative burden for departments and institutions.

Opinion Analysis: Hypothesis Testing

The researchers used a quantitative research approach to compare the opinions of Arts & Science Streams faculty members on the Choice-Based Credit System.

Table 2
Comparison of Opinions on CBCS
Arts and Science Streams Faculty Members

Groups (Faculty Members)	N (140)	Mean	S.D.	SEM	t-value	Result
Arts Stream	70	30.31	8.43	2.10	1.692	Not Significant*
Science Stream	70	32.70	9.75			

*df= 138, Significance level at 0.01 level

The table 2 & Figure 3 shows that the mean scores of faculty members of the Arts Stream is 30.31 is lower than the mean score of faculty members of the Science Stream was 32.70 with a standard deviation of 8.43 and 9.75 respectively. This indicates that Science Stream faculty members are most positive in implementation on CBCS than Arts Streams faculty members. Moreover, The calculated 't' value ('t' = 1.692) is less than the table value 2.61 at significance level 0.01 with degree of freedom 138. Hence, the null hypothesis *There is no significant difference in the mean scores of the opinions of Arts and Science Stream faculty members on Choice Based Credit System (CBCS)* is accepted. Therefore, it may be concluded that there is no significant difference among the faculty members of the Arts and Science Stream regarding CBCS implementation. This finding is supported by Deuri (2016), Chaubey (2015), and Kelkar & Ravichandran (2014) CBCS in their research found that there are so many problems that arise due to CBCS which has to be resolved to enhance the quality of Education. A graphical representation of mean Scores between Arts and Science Streams faculty members regarding opinions on the based Credit System is given below in Figure 3:

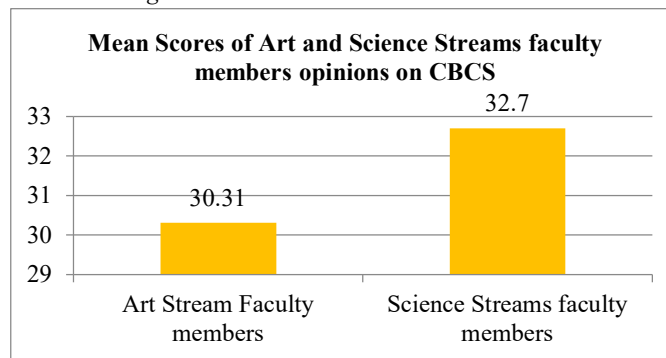


Figure 3

Graphical Representations of Mean Scores of Arts and Science Streams Faculty Members

The researcher has also compared the opinions of Male and Female faculty members of CBCS, the results are given below in Table 3.

Table 3
Comparison of Opinions on Choice-Based Credit System between Male and Female Faculty Members

Groups (Faculty Members)	N (140)	Mean	S.D.	SEM	t-value	Result
Male	70	33.68	4.76	1.041	4.18	*Significant
Female	70	29.33	7.30			

*df= 138, Significance level at 0.01 level

The *table 3 & Figure 4* shows that the mean scores of Male faculty members are 33.68 is greater than the mean score of Female faculty members is 29.33 with a standard deviation of 4.76 and 7.30 respectively. This indicates that Male faculty members are most positive in implementation on CBCS than Female faculty members. Moreover, The calculated 't' value ($t = 4.18$) is greater than the table value 2.61 at significance level 0.01 with degree of freedom 138. Hence, the null hypothesis. *There is no significant difference in the mean scores of the opinions of Male and Female faculty members on Choice Based Credit System (CBCS).* is not accepted. Therefore, it may be concluded that there is significant difference among the Male and Female faculty members regarding CBCS implementation. This finding is supported by Howlader's (2021) CBCS in their research. Graphical representation of mean Scores between Male and Female faculty members regarding opinions on Choice Based Credit System is given below in Figure 4–

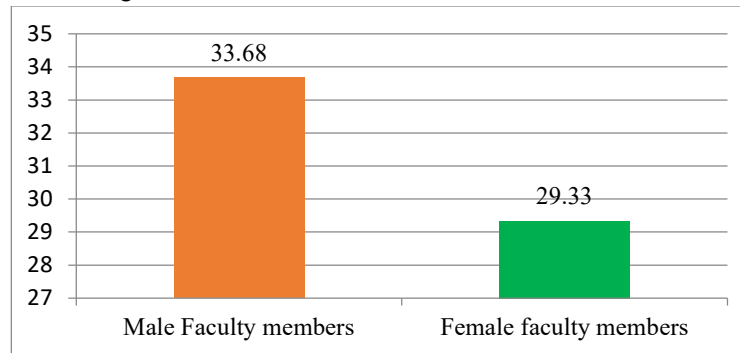


Figure 4
Graphical Representations of Mean Scores of Male & Female Faculty Members

Discussion

The implementation of the Choice Based Credit System (CBCS) marks a significant milestone in higher education, but there are certain drawbacks that directly or indirectly impact various educational programs. Hence, it is essential to consider several suggestions for a seamless execution of the CBCS in India. The CBCS aims to shift the focus of Indian education from being teacher-centered or student-centered to a student-centered system. However, the flexible nature of the CBCS may potentially lead to an increase in student indiscipline. Therefore, measures need to be taken to cultivate self-discipline among students. The current study is beneficial for curriculum developers in enhancing the course structure. The curriculums should be tailored to be student-centric and suitable for the students' level, while also addressing their needs and the prevailing situations. This approach will help maintain student interest and encourage them to study with greater care, as they will perceive the curriculum as meeting their needs and being relevant to the real world (Chaubey, 2015). Additionally, it is recommended that the assessment includes an evaluation of all skills. This will not only emphasize the teaching of all these skills. Consequently, this will result in increased engagement in the teaching and learning process, as students will be more actively involved in the process (Habib, 2015). The high student-to-teacher ratio in classrooms creates obstacles in implementing the curriculum, as teachers find it challenging to allocate time for assessing students' talents. Furthermore, attention should be given to bridging the gap between central and state universities in terms of education quality and infrastructure availability (Das, 2021). Providing guidance and counseling services for teachers and students when selecting soft-core papers can enhance the effectiveness of the CBCS. However, the studies we reviewed and highlighted some challenges and limitations of CBCS in the field of education. Among the main challenges and issues of students are curriculum overload, lack of clarity, high expectations, and financial burden, faculty members' challenges are curriculum redesign, increased workload, insufficient training, and assessment challenges, and resisting the shift from traditional teaching methods and challenges to institutions infrastructure upgradation, resource allocation, accreditation and quality assurance, administrative burden, and funding constraints, which can be a challenge. The results obtained from the opinion analysis that no significant difference between Arts & Science streams faculty members regarding CBCS implementation, findings supported by Deuri (2016) study, and a significant difference between Male & Female faculty members regarding CBCS implementation, these findings supported by Howlader's (2021). Moreover, CBCS implementation might be useful for students, faculty members, and institutions.

Conclusion

The research involves a comparison of the challenges faced by faculty members in the Arts and Science Stream of CSJM University due to the implementation of CBCS. The findings show that there is no significant difference in the challenges faced by faculty members in the Arts and Science Stream, but there is a notable difference between male and female faculty members with regard to CBCS. The implementation of the Choice-Based Credit System has led to an increase in administrative workload for teachers and departments, resulting in difficulty in completing syllabi on time (Das, 2021). Additionally, challenges have been encountered in understanding the credit allocation in the CBCS Framework. Teachers are struggling with grading assessments (Deuri, 2016), and students are finding it challenging to select elective subjects and interpret their grades based on the grade point system. These difficulties underscore the complexities of integrating the Choice Based Credit System in the Indian higher education system and emphasize the necessity for comprehensive support, training, and institutional reforms to facilitate a smooth transition (Tazien, 2017). Despite the challenges, there are numerous advantages to the Choice Based Credit System. This system allows students to choose subjects based on their interests, enhances their academic progress, and provides faculty members with opportunities to teach in innovative ways, enriching their teaching experiences (Biswas, 2018). Therefore, CBCS introduces challenges for faculty members, but with preparation and perseverance, these challenges can be overcome. Through CBCS, both students and faculty members can embrace a new and innovative educational system. The thoughtful application of CBCS will be a significant stride in enhancing student learning and preparing young individuals to confront the challenges of the twenty-first century (Tazien, 2017).

Limitation of the Study

The study's main limitation is its focus solely on Chhatrapati Shahu Ji Maharaj University, excluding other universities in Uttar Pradesh and elsewhere in India. Despite this, the researcher is confident that testing practices in other Indian states are similar. This research encompasses most departments at Chhatrapati Shahu Ji Maharaj University that offer Bachelor's and Master's programs in Arts, Language, Humanities, and Science. The study's scope is restricted to conducting interviews with faculty members and utilizing opinionnaires as the primary data collection method, with concerns that some teachers may not fully cooperate in filling them out. As a result, the researcher meticulously reviews each opinionnaire and may choose not to consider some if necessary.

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