ATTITUDE OF HIGHER EDUCATION TEACHERS TOWARDS CBCS IN RELATION TO ORGANISATIONAL CLIMATE AND PROFESSIONAL COMPETENCY

Thesis Submitted to Nagaland University, Kohima Campus, Meriema

For the degree of

DOCTOR OF PHILOSOPHY in EDUCATION

By

LINO K ZHIMOMI

Regd. No.- Ph.D./TED/00404

Supervisor

Dr. SURENDRA YADAV

ASSISTANT PROFESSOR

Department of Teacher Education, Nagaland University

Kohima campus (Nagaland)

NAGALAND UNIVERSITY

KOHIMA CAMPUS, MERIEMA-797004

August, 2024

DECLARATION

I do hereby declare that the thesis entitled "***ATTITUDE OF HIGHER EDUCATION TEACHERS TOWARDS CBCS IN RELATION TO ORGANISATIONAL CLIMATE AND PROFESSIONAL COMPETENCY***" submitted in the fulfilment of the requirement for the award of the Doctor of Philosophy in Education is entirely my original work and all ideas and references have been duly acknowledged. It does not contain any work that has been submitted for the award of the degree or diploma to any other university.

Dated: **LINO K ZHIMOMI**

Place: Kohima

NAGALAND UNIVERSITY
(A Central University established by the act of Parliament, 35/1989)
Department of Teacher Education
KOHIMA CAMPUS, MERIEMA-797004, Nagaland

SUPERVISOR'S DECLARATION

This is to certify that LINO K ZHIMOMI has completed her Ph.D. thesis entitled "***ATTITUDE OF HIGHER EDUCATION TEACHERS TOWARDS CBCS IN RELATION TO ORGANISATIONAL CLIMATE AND PROFESSIONAL COMPETENCY***" under my supervision. I certify that the work incorporated in the thesis was carried out by the candidate and has not submitted the same research work to any other institution for any degree/diploma, associate ship, fellowship or other similar titles. The thesis submitted is a record of original research work done by the Research Scholar during the period of study, and the thesis represents independent research work on the part of the Research Scholar. This thesis is fit for submission for the fulfilment of the requirements for the award of Doctor of Philosophy in Education degree.

Dr. SURENDRA YADAV

Date:

Place: Kohima

NAGALAND UNIVERSITY
(A Central University Established by the Act of Parliament, 35/1989)
Department of Teacher Education
School of Humanities & Education
Kohima Campus, Meriema- 797004

PLAGIARISM CERTIFICATE
Ph.D.

TOPIC: Attitude of Higher Education Teachers towards CBCS in relation to Organisational Climate and Professional Competency

Name of the research scholar	LINO K ZHIMOMI
Reg. No	Ph.D./TED/00404
Name of the Supervisor	Dr. SURENDRA YADAV
Name of the Department	Teacher Education
Date of plagiarism check	18-07-2024
Percentage of similarity detected by DrillBit software	10%
Remarks	Satisfactory

I do hereby declare that the thesis submitted by me is complete in all respect, as per the guidelines of Nagaland University on partial fulfilment of the requirement for the award of the Doctor of Philosophy in Education and the thesis (soft copy) has been checked for plagiarism using DrillBit similarity detection software. It is also certified that the contents of the electronic version of the thesis are the same hardcopy of the thesis. Copy of the DrillBit report is also enclosed.

LINO K ZHIMOMI Dr. SURENDRA YADAV

Registration No: Ph.D./TED/00404

Date:

DrillBit

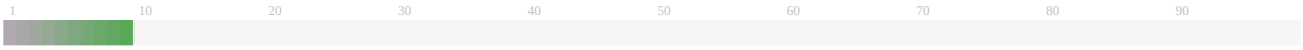
The Report is Generated by DrillBit Plagiarism Detection Software

Submission Information

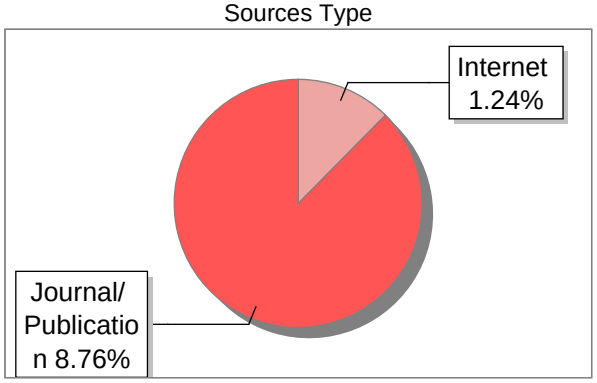
Author Name	LINO K ZHIMOMI
Title	ATTITUDE OF HIGHER EDUCATION TEACHERS TOWARDS CBCS IN RELATION TO ORGANISATIONAL CLIMATE AND PROFESSIONAL COMPETENCY
Paper/Submission ID	2132973
Submitted by	surendrayadav@nagalanduniversity.ac.in
Submission Date	2024-07-18 22:58:44
Total Pages, Total Words	152, 36437
Document type	Thesis

Result Information

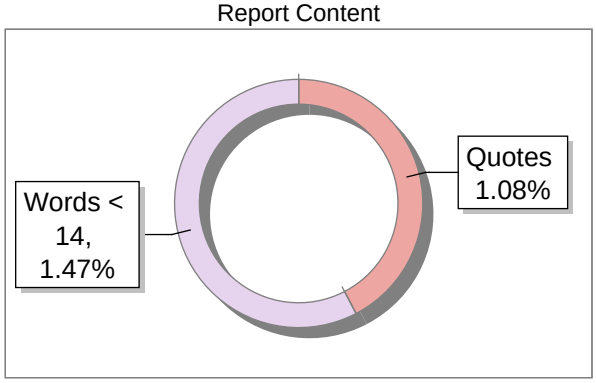
Similarity **10 %**



Sources Type



Report Content



Exclude Information

Quotes	Excluded
References/Bibliography	Excluded
Source: Excluded < 14 Words	Excluded
Excluded Source	**0 %**
Excluded Phrases	Excluded

Database Selection

Language	English
Student Papers	Yes
Journals & publishers	Yes
Internet or Web	Yes
Institution Repository	Yes

A Unique QR Code use to View/Download/Share Pdf File

DrillBit

DrillBit Similarity Report

10	58	A
SIMILARITY %	MATCHED SOURCES	GRADE

A-Satisfactory (0-10%)
B-Upgrade (11-40%)
C-Poor (41-60%)
D-Unacceptable (61-100%)

LOCATION	MATCHED DOMAIN	%	SOURCE TYPE
1	ijrte.org	1	Publication
2	Thesis Submitted to Shodhganga Repository	1	Publication
3	Thesis Submitted to Shodhganga Repository	<1	Publication
4	kb.icai.org	<1	Publication
5	sifisheriessciences.com	<1	Publication
6	www.uou.ac.in	<1	Publication
7	highereducation.mp.gov.in	<1	Publication
8	files.eric.ed.gov	<1	Publication
9	Thesis Submitted to Shodhganga Repository	<1	Publication
10	Thesis submitted to shodhganga - shodhganga.inflibnet.ac.in	<1	Publication
11	psychologyandeducation.net	<1	Publication
12	Thesis submitted to shodhganga - shodhganga.inflibnet.ac.in	<1	Publication
13	Thesis Submitted to Shodhganga Repository	<1	Publication
14	academicjournals.org	<1	Publication

ACKNOWLEDGEMENT

I thank the Almighty God for His love and abundant blessings which enriched me with the knowledge and wisdom to complete this thesis in a successful manner.

I would like to extend sincere gratefulness to my Guide, Dr. Surendra Yadav, Assistant Professor, Teacher Education Department, Nagaland University Kohima Campus, Meriema, who extended his persistent support with his knowledge, expertise and devoted guidance.

It is a privilege to expresses my appreciation to Prof. Jano. S. Liegise, Dean, School of Humanities & Education, Nagaland University Kohima Campus, Meriema, for the excellent institutional support and the platform provided by her to facilitate research work.

I thank Prof. Gyanendra Nath Tiwari, Head of the Department, Teacher Education Department, Nagaland University Kohima Campus, Meriema, for promoting a stimulating and welcoming academic and social environment that always fostered excellence at work.

My heartfelt thanks to the Research Advisory Committee for the valuable feedbacks and unwavering support that help me attain quality research work. I sincerely thank the Principals, Head of Departments and Teachers of the colleges that allowed me to collect the data.

With deepest love and appreciation, I would like to thank my family for their unconditional love and support which kept me focused and motivated to complete my research work.

Dated: LINO K ZHIMOMI

Place: Ph.D./TED/00404

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

SR. NO	ABBREVIATIONS	FULL FORM
1	**HEIs**	Higher Education Institutions
2	**NEP**	National Educational Policy
3	**UGC**	University Grants Commission
4	**IIT**	Indian Institute of Technology
5	**NIT**	National Institute of Technology
6	**AIIMS**	All India Institute of Medical Sciences
7	**MoU**	Memorandum of Understanding
8	**NHEQF**	National Higher Education Quality Framework
9	**PG/UG**	Post Graduate/ Under Graduate
10	**HECI**	Higher Education Commission of India
11	**NHERC**	National Higher Education Regulatory Council
12	**GEC**	General Education Council
13	**HEGC**	Higher Education Grants Council
14	**NAAC**	National Assessment and Accreditation Council
15	**4YUGP**	Four Year Under Graduate Programme
16	**ABC**	Academic Bank of Credit
17	**CBCS**	Choice Based Credit System

18	**CBCSS**	Choice Based Credit Semester System
19	**NSDC**	National Skill Development Corporation
20	**NHERA**	National Higher Education Regulatory Authority
21	**NCPA**	Nagaland College Principals Association
22	**IGCSE**	International General Certificate of Secondary Education
23	**ICSE**	Indian Certificate of Secondary Education
24	**ECTS**	European Credit Transfer and Accumulation System
25	**CATS**	Common admission Test
26	**CGPA**	Cumulative Grade Point Average
27	**AIU**	Association of Indian Universities
28	**LASE**	Liberal Arts Sciences and Engineering
29	**STEM**	Science Technology Engineering and Mathematics
30	**SWAYAM**	Study Webs of Active-Learning for Young Aspiring Minds
31	**FFCS**	Fully Flexible Credit System
32	**APAAR**	Automated Permanent Academic Account Registry
33	**MoE**	Ministry of Education
34	**UDISE+**	Unified District and Information System For Education Plus
35	**INI**	Institutes of National Importance
36	**M.Phil.**	Master of Philosophy
37	**CCFUP**	Curricular Framework and Credit System
38	**AISHE**	All India Survey on Higher Education
39	**NSDC**	National Skill Development Corporation
40	**NET**	National Eligibility Test
41	**Ph.D.**	Doctor of Philosophy
42	**NAAC**	National Assessment and Accreditation Council
43	**NHERA**	National Higher Education Regulatory Authority
44	**MMTTC**	Malaviya Mission Teacher Training Centres
45	**CBSE**	Central Board of Secondary Education
46	**SDG4**	Sustainable Developmental Goal four
47	**MBBS**	Bachelor of Medicine and Bachelor of Surgery
48	**BUGS**	Board of Under-Graduate Studies
49	**BDS**	Bachelor of Dental Surgery
50	**FFCS**	Fully Flexible Credit System
51	**NPST**	National Professional Standards for Teachers
52	**MCC**	Model Christian College
53	**NAC**	National Accreditation Council

APPENDICES

APPENDIX NO.	DESCRIPTION
APPENDIX A	Pool of Items (Attitude of college teachers towards CBCS)
APPENDIX B	Item-evaluation of CBCS (p-values, t-values and correlation of each item)
APPENDIX C	Z-score Norms for CBCS
APPENDIX D APPENDIX D (a)	Attitude Scale on Choice Based Credit System Opinionnaire for teachers on the issues faced in the implementation of CBCS
APPENDIX E	Pool of Items for Professional Competency
APPENDIX F	Item-Evaluation of Professional Competency (p-values, t-values and correlation of each item)
APPENDIX G	Z-score Norms for Professional Competency
APPENDIX H	Professional Competency Scale
APPENDIX I	Institutional Climate Inventory (For colleges) Constructed & Standardised by Dr. Tarlok Bandhu (2006)
APPENDIX J	Published papers and tool

CHAPTER I

CONCEPTUAL FRAMEWORK

1.0 Introduction

The second largest higher education system in the world is credited to India. The demand for intellectually curious learners, proficient in skills of analytical and problem-solving gave rise to development and advancement. This calls for 'quality education' challenging enough in a country like ours with 17% of the world population accounting to 1.39 billion people. Nonetheless, under the purview of the Ministry of Education with 1000 universities, a breakup of 54 central, 416 state, 125 deemed and 361 private and 154 Institutes of National Importance India has never laid back in promoting quality education to the masses.

India's higher education system refers to the level of education that is imparted after 12 years of schooling (5+3+3+4 curricular structure, NEP 2020).

Higher Education in India

The structure of Indian Higher Education is based on management, regulatory and accreditation. The universities and colleges work together with regulatory and accreditation bodies to deliver quality education. On the basis of management, universities are classified as:

Central Universities- It is established by an Act of the Parliament, funded and operated by the Union Government.

State Universities – It is established by an Act in the State Legislature, funded and functioned by the State Government.

Private Universities – Comprises of specialized institutions and multidisciplinary research universities, established through an Act in the State Legislatures.

Deemed Universities – Under the assistance of the University Grants Commission (UGC) due to its well-performing standard they are at an equal level as the Central Government universities. Such as Government funded Institutes of National Importance (INI) i.e. the IITs, NITs and AIIMs known to produce high skilled individuals.

Colleges –

They are affiliated higher education institutions either with the state or central universities. Under which autonomous colleges with affiliation, are free to carry out admissions procedures and examination process, curriculum and also private colleges which are mostly affiliated with state universities.

Within 15years the affiliation needs to either become an Autonomous or a constituent college of a university as per NEP 2020.

The classification of Degree or University Courses in India are:

I. Bachelor's degree –

NEP 2020 has introduced the structure of Four-year Under Graduate Programme (4YUGP) with Multiple-Entry and Exit option which can be pursued by learners who have completed secondary stage of schooling (class 9 to 12).

Post Graduate Courses-

In the past PG courses were of 2 years with research, now the duration is 3years without research in UG or 1-2 years as per the UG degree of 4 years with research.

II. Doctorate Courses – Indian Doctorate Degree Courses has a flexibility of 3-5 years duration.

Courses-

Classification of courses which will be offered in institutions in a multi-disciplinary manner are:

I. **STEM Courses –** Known as Science, Technology, Engineering and Mathematics, promotes interdisciplinary learning, extending to experimental, research-based and practical application.

II. **Non- STEM Courses –** These disciplines offer Humanities, Business Management, Commerce, Social Affairs and Arts.

Structure of Higher Education as per National Education Policy 2020 (NEP)

Higher education Commission of India (HECI) is the apex body for the smooth functioning of higher education exclusive of medical and legal education. The power lies with HECI to penalise HEIs not complying to the norms and standards; with its 4 independent verticals for maintaining regulation, standard setting, funding and accreditation, the responsibility respectively lying on National Higher Education Regulatory Council (NHERC), General Education Council (GEC), Higher Education Grants Council (HEGC), and National Accreditation Council (NAC).

By changing the structure of the education system from 10+2+3 as per Kothari Commission (1964) to 5+3+3+4 in the school structure; which starts from 3years pre-school/ Anganwadi to class 12. NEP 2020 also made significant changes in the higher education with the multiple entry and exit points and re-entry options under the Four-year Undergraduate Programme (4YUGP) and a Master's degree of one or two years as per the undergraduate degree of 4 years with research/3years. Discontinuing Master of Philosophy (M.Phil degree) based on the proposals of NEP2020; further leading to a doctoral programme eligible for learners with master's degree or a 4-year bachelor's degree with Research.

Four-year Undergraduate Programme and One- or Two-years Post-Graduate Programme and Choice Based Credit System

The NEP 2020 visioned to revise the CBCS to foster innovation and flexibility. Hence, moving away from norm-referenced to criterion-based grading learning, now learners

can store their credits in the Academic Bank of Credit (ABC) which would digitally store the academic credits earned from various recognized HEIs; further awarding them with the degrees as per their earned credits by the respective HEIs.

While the UGC released a draft of Curriculum and Credit Framework System for the Four-Year Undergraduate Programme on 17th march 2022 and the CBCS in 2015 (Nagaland University on 17th May 2023; 5th May 2021 respectively) however its functions remain misunderstood. In addition to the full-fledged Curriculum and Credit Framework for Undergraduate Programmes laid out by UGC in December 2022, an underlined difference and co-existence has been noted in table 1.1:

Table 1.1 (A comparison of CBCS and 4YUGP)

Sl. no	CBCS	4YUGP
1	A system introduced in India by UGC, 2015 to make it easier for students to select courses and earn credits across different disciplines.	It is a transformative initiative of the NEP 2020, to shift from the conventional 3-years under-graduate programme to 4years.
2	Also known as Choice Based Credit Semester System (CBCSS) as per the semester system, 2009 (UGC) it ensures continuous evaluation of students and availing a cafeteria approach to choose their course. One year comprising of two semesters and a three-year degree course of six semesters.	Identified as the Curricular Framework and Credit System for 4YUGP, given by UGC to ensure multiple entry and exit points and re-entry options with flexible curricular structures and appropriate certifications. The students are required to re-enter the degree programme within three years' time and complete the degree programme within a maximum period of 7years, acquiring 40 credits at each stage: I. a certificate after completing 1 year: a student must attain 40 credits to get a UG certificate. Apart from acquisition of credits, a students must complete one vocational course of 4 credits during the summer vacation.

		II. a diploma after 2 years: apart from acquisition of credits, a students must complete one vocational course of 4 credits during the summer vacation. III. a bachelor's degree after a 3-year IV. a bachelor's degree with honours after a 4-year programme of study or a bachelor's degree with research after a 4-year, if the student completes a rigorous research project in their major area(s) of study.
3	The prescribed courses comprise of: i. Core (Compulsory subject course) ii. Elective (discipline/unrelated to discipline) iii. Foundation, which is further categories into a. Compulsory (content-based for knowledge enhancement) b. Elective (Value-based/ skill enhancement)	The learners attain detailed programme/ course learning outcome, through the structure of eight semesters. i. Semester 1, 2, 3 The graduates of the FYUGP are required to demonstrate a general understanding of the natural sciences, social sciences, humanities, interdisciplinary studies, and vocational education as well as in-depth study of at least one subject area. ii. Semester 4, 5, 6 Each student will be allowed to choose a 'Major' as per a learners' academic interest/performance. iii. Semester 7, 8 At the beginning of the seventh semester each student will take up a research project along with advanced disciplinary/interdisciplinary courses and research methodology courses. Students who secure 75% marks and above in the first six semesters and wish to undertake research at the undergraduate level can choose a research stream in the fourth year. The final semester will be devoted exclusively to the research project. The project should be related to a topic in the chosen 'Major' disciplinary programme of study or an

		interdisciplinary topic that has a substantial overlap with the major disciplinary/interdisciplinary programmes of study.
4	As per UGC guidelines, each semester should have 90 teaching days and the credits earned as per the number of contact hours per week • 1credit =1hr (lecture/ tutorials) • 1credit=2hrs (practical/ fieldwork) Hence, 1credit=15 contact hours (15 days per month * 6months per semester)	The revision of CBCS as envisaged by NEP 2020, will digitally store the academic credits earned from various recognized HEIs in Academic Bank of Credit (ABC) with its credit validity of 7years. • Credits can now be earned online, digital and in blended mode. • Credits can now be earned during summer breaks (Field-based learning/project) • 7.5 CGPA is required to enter 4year bachelor's degree with honours/research and an attainment of 160-176 credits to complete the 4YUGP as per National Higher Education Qualification Framework (NHEQF). • 40-44 credits each year is required to complete a PG programme as per their 1/2years (diploma, with or without honours/research)
5	A numerical weight is allotted to each letter grade on a 10-point scale, and as per the performance of a student in a course the grades are determined i.e. O, A+, A, B+, B, C, P and F.	The learners will also be graded grounded on criterion-based and their achievement on the learning goals for each course.

The above statements clearly deliver that both CBCS and 4YUGP work hand-in-hand, the latter being a structural change in the higher education sector, which is more flexible, provides better opportunities and possess determined principles rooted in the pride of India. For which the misconception of both schemes functioning differently from each other is clarified. With the changing times NEP2020, brought changes to the scheme of CBCS with

more flexibility and a uniform pattern promoting colleges to remain competitive and relevant to achieve the countries' goal of becoming the global provider of education and improve rankings which are globally recognised.

Teachers in higher education

The total number of teachers in higher education in India is 15,51,070; 57.1% being male 42.9% are female, as per AISHE 2020-21 (All India Survey on Higher Education) by the Ministry of Education. Through a study on Skill Development Services Sector and Skill Requirements and Human Resource in the Education, the National Skill Development Corporation (NSDC, 2008) assessed the demand for teachers and training till 2011. Revealing that to achieve a student- teacher ratio of 20:1, 31,71,000 teachers would be required in higher education between 2008-2022. One of the reasons why India produce quality graduates, is the inability to cope with this prerequisite. The lack of human resources hence, posing a major challenge to maintain quality standards of education. The efforts UGC in raising the standards of teacher qualifications, mandatory NET and Ph.D.; the motto of NAAC to promote quality education; Revamping teachers' education by NEP 2020 and transformation of a single National Higher Education Regulatory Authority (NHERA) to make it more user-friendly. As such, solving the problem of student- teacher ratio and quality education with stressless efforts.

The status of teachers will be lifted with clearly defined, transparent, independent processes and criteria for faculty recruitment. And within the approved framework, the teachers will have the freedom to design their own pedagogical and curricular approaches, all under NEP 2020. In alignment with the policy, UGC has launched a capacity-building program to instruct human values and ethics for the holistic development of 15 lakh higher education teachers. Further, 111 institutions are identified which are called Malaviya Mission

Teacher Training Centres (MMTTC) where teachers will be trained in these institutions some of the programs are offline and others online (Hindustan times, 11th Sep, 2023).

1.1 Attitude

As defined by psychologists' attitude is a learned tendency to assess things in a certain way; comprising assessments of events, issues, people and objects, often being positive or negative. As *G.W. Allport says it is "a mental and neutral state of readiness organized through experience, exerting a directive or dynamic influence upon individual's response to all objects and situations with which it is related."*. Wood and Wood (1980) identified three components of attitude:

1. **Affective Component:** It is a feeling towards a person, issue, object and event.
2. **Cognitive Component:** It comprises of ideas, values, belief, and values that a person may have faith in.
3. **Behavioural Component:** It based on cognitive and affective component and the impact of various condition or situations that lead to a persons' behaviour**.**

Daniel Katz on the basis of organizational behaviour gave 4 functions of attitude :

- **i.** Utilitarian/Adjustment Function**:** Individuals adjust to their work environment through the help of their Attitudes. Thus, a positive attitude towards a management/job is developed if employees are well-treated.
- **ii.** Ego-Defensive Function**:** An individual's self-esteem or justifying actions which might be socially unacceptable are protected by our attitudes acting as defence mechanisms.
- **iii.** Value-Expressive Function**:** Attitudes are expression of general values, lifestyles, and outlook.
- **iv.** Knowledge Function **:** Attitudes allow individuals to comprehend and observe the world around them. When an individual becomes aware that a person/thing may

influence their behaviour, their need to know and comprehend becomes stronger with the things they come in contact.

Others were of the opinion that the importance of attitude in an organisational behaviour lies in:

Career success: If a teacher's attitude is positive, it will help one to create ways to finish their task in a well-defined manner, thus leading to performance success and promotion.

Productivity: Positive attitude creates positive energy among teaching faculties with more interest and responsibility resulting to better work and productivity.

Leadership: Efficient work will be carried out when there is good communication between the subordinates which is the result of a head or teachers' positive attitude. Thus appreciate each other 's competencies, working as a team for achieving common objectives.

Motivation: Teachers who can overcome obstacles and are motivated to move forward, are always guided by their positive attitude.

Interpersonal relations: A positive nature will always guide the teacher to build relation with students and other members of the organisation.

Stress management: Increased productivity in work and better decision making, is the result of reduced stress through positive attitude and thinking.

Theories of attitude

Luthans (2008; as cited in Logan & Hoges, 2012) defined a theory as an empirical data, resulting in an interpretation from observation or experimentation. Highlighting observational scientist who gave theories of attitude formation:

1. Cognitive Consistency Theories maintains an individual's equilibrium state, understood under the following heads.

a. Balance Theory:

Its basic model was developed by F. Heider, linked by relationship concerning uniformity in the judgment of people/issues; that is to do with the person, the other person and the impersonal entity. Between sentiment relations and unit relations, exist all sentiments/effect and the later supposed as belonging together. When all three relations are positive or two relations are negative and one positive, a balance exists and an imbalance in the vice-versa relations. This theory accepts that in a state of imbalanced, psychological tension occurs motivating one to restore the balance cognitively.

b. Affective Cognitive Consistency Theory:

As M.I. Rosenberg puts his theory as a consistency between a person's overall attitude/effect towards an object/issue/belief and its relationship to his more general values. It explains the situation of a person when there is alteration in attitude, suggesting three points: with a cognitive structural component a person's effect/evaluation of the object is consistent, in an inconsistent state one is driven to decrease the inconsistency thus change accordingly to attain consistency. Proposing a consistent alteration in the affective component producing changes in the cognitive component and suggesting that convincing interaction result in attitude change, by revaluating the goals.

c. Cognitive Dissonance Theory:

Leon Festinger (1950) stated that dissonance is an inconsistency and a cognitive dissonance is an incompatibility perceived between two/more attitudes/between behaviour and attitudes. Arguing that people will make efforts to decrease the dissonance because inconsistency is uncomfortable.

2. Functional Theory: the motivational structure of a person is related to attitudes and efforts, focusing on the influence situation concerning the motives and coping methods to attain goals. An understanding of the functions served by attitudes is important for

attitude change procedures since a particular method may produce change in individuals whose attitudes serve one particular function, but may produce no change in individuals for whom the attitudes serve a different function.

3. Social Judgment Theory: this theory given by Sherif and Hoveland, throw light on how existing attitudes distort attitude and these judgments bring attitude change. Hence, an initial attitude towards an issue, serves as an anchor for the judgment of attitude related stimuli, which offers a reference against which he evaluates other opinions.

Hence, attitude is influenced by an external element that conditions the mind or feelings of a person and further leads to an undesirable or desirable reaction.

1.2 Choice Based Credit System: Historical background

International General Certificate of Secondary Education (IGCSE) and International Cambridge syllabus (ICSE) in the United Kingdom, first introduced CBCS. With the flexibility of studying science and arts or humanity and computer science. Wherein major higher education institutions implemented credit system across the globe. For instance, the European Credit Transfer System (ECTS) in Europe's universities, the 'National Qualifications Framework' in Australia, the Pan-Canadian Protocol on the Transferability of University Credits, the Credit Accumulation and Transfer System (CATS) in UK etc.

In the Indian context, the marking system was putting massive pressure on the students. Subsequently, risking the mental health of both parent and the student. So, our Indian government introduced the Cumulative Grade Points Average (CGPA) system from CBSE at the school level and at the university level. Although the CGPA system helped to reduce the pressure on the students, there was a lack of relationship between the education, employment, and skills of the students. The employability skills were neglected entirely, and students started finding it hard to cope with the 21st century needs and innovations. Resulting

to a massive gap between the academic knowledge, skillset acquired, passion, and required job skills. So, the University Grants Commission (UGC) introduced the Choice Based Credit System (CBCS) in 2015. Thus, India undertook a significant paradigm shift to provide quality education at the learner's will.

Conceptual Framework

Choice Based Credit System (CBCS) means the freedom a learner receives to attain a degree with the required number of credits prescribed for that degree. The student's proficiency in a course is reflected through grade points and the knowledge acquisition through credits earned. Credits are earned across departments with a flexibility of time duration to complete a Program of study, based on students' aptitude and career goals as they opt for courses. The focus is on Core-credits being mandatory for the completion of the programme and the Elective credits which may overlap with other programmes/disciplines, ability enhancement compulsory and skill enhancement courses, following even & odd semester that sums up to an academic year, to map student performance uses grading and evaluation system, measuring parameters such as- Student performance, Learning outcomes, Entrepreneurship skills, Contact hours, Innovation, Creativity & talent. It is an initiative of the UGC, in enhancing and promoting the educational liberalization of existing conventional higher education models.

CBCS in India

To improve the quality and effectiveness of higher education, Indian Education Commission 1964-66 ever since has been working tirelessly. With the 11th Five Year Plan and National Knowledge Commission, University Grants Commission (UGC) introduced Choice Based Credit System (CBCS) in higher education for graduate, post graduate, diploma and certificate courses. Through administrative and academic reforms National Knowledge Commission in its report to the nation in 2008- 2009 and Yashpal Committee

Report in 2009 recommended revamping higher education. The UGC (11th plan, March 2009) in India, to make higher education at par with the universities in the developed nations, and later on the Association of Indian Universities (AIU) stressed on the following recommendations, understanding the hurdles of the changed times:

(1) Semester System

(2) Choice Based Credit System

(3) Curriculum Development

(4) Examination Reforms

(5) Administrative Reforms

On the recommendation of the Knowledge Commission (Sam Pitroda) and the 11th Five Year plan setting valuable and innovative transformation in Indian higher education, India implemented the CBCS. Indian universities and colleges ensuing marks or percentage-based evaluation systems, indirectly restricted learners' choice to pursue their desired courses and this led to CBCS system.

Rolling out CBCS from the academic session in July 2015 by the Central Universities, the idea was to assign credits grounded on hours of teaching and the course content, provide students freedom to take courses of their choice, learn at their own pace, undergo additional courses, acquire more than the required credits, and adopt an interdisciplinary approach to learning. It has a high probability to be operationalized efficiently and effectively by aided ICTs, including Basic Aspects of:

Semesters: Students are assessed semester wise, rather than calculating a learner's progress concerned on course duration like four years for engineering or 3 years for science, commerce and arts planned on the courses taken. Dividing a year into two semesters with 90 days of teaching equal to 15–18 weeks of assessment and academic training. Given the

autonomy for curriculum development and allotting credits grounded on hours of teaching and the course content.

Credit System: A credit is allocated to each course; credits are earned by a student after passing that course. A course need not be repeated by the student if he or she has passed a semester and has earned credits as per one's pace.

Provision of Credit Transfer: A student enjoys the flexibility to earn fewer credits, study fewer courses and recompense it in the subsequent semester, in case he or she falls sick. The remaining credits can further be acquired from another college.

Comprehensive Continuous Assessment: Both the student and the teacher continuously evaluate the student through examinations and semester, assignments and open book exams.

Allotment of Grading: UGC has introduced a 10-point grading system in CBCS to allot grading. The minimum Grade /Grade Point required to pass each paper in a semester examination under CBCS shall be Grade D / Grade Point 4 in each theory paper/ Practical/Project (wherever applicable) in External Examination and Internal Assessment separately. Absolute grading would be used where the marks obtained are converted to grades based on pre-determined class intervals. UGC recommended 10-point grading system, to implement the following grading system, in the colleges /campuses as given in table 1.2:

Table 1.2 (10-point grading system as per UGC)

Marks (%)	Letter Grades	Grade Points (G)
90 to<100	O (Outstanding)	10
80 to<90	A+ (Excellent)	9
70 to<80	A (Very Good)	8
60 to<70	B + (Good)	7
50 to<60	B (Above Average)	6
40 to<50	C (Average)	5
36 to<40	P (Pass)	4
0 to<36	F (fail)	0
	AB (Absent)	0

A student obtaining Grade F shall be considered failed and will be required to reappear in the examination as per existing rules of the university under Semester System.

- Credits Counting in Credit System: in a semester, teaching for an hour is equivalent to one credit, comprising lecture (L) or tutorial (T) or two hours of field work/practical work (P) per week. A course may constitute only a Lecture or Tutorial or field work/practical work or a blend of all the three components or any two. A student earning a total credit of L+T+P each semester.
- Grading System at a Global level: Credit system is being implemented by all major higher education institutions across the globe.

National Education Policy (2020) and CBCS

After a period of 34years, the new NEP 2020 was introduced with a change in the old structure of the education system from 10+2+3 to 5+3+3+4 (school structure) and 4YUGP. The policy proposes the revision and revamping of all aspects of the education structure, including its regulation and governance, to create a new system that is aligned with the aspirational goals of 21st century education; including SDG4 which seeks to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030, while building upon India's traditions and value system. It is based on the principle that education must develop not only cognitive capacities - both the 'foundational capacities 'of literacy and numeracy and 'higher-order' cognitive capacities, such as critical thinking and problem solving – but also social, ethical, and emotional capacities and dispositions. The purpose of the education system is to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper and creative imagination, with sound ethical morals and values. It aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution.

Choice Based Credit System (CBCS) is believed to be revised for instilling innovation and flexibility where NEP suggests several modifications for higher education, which could alter the learning experiences if executed in properly. The new NEP offers to engineering students to choose electives in arts and humanities. Students in arts and humanities will aim to learn more science, and all will make an effort to include more soft skills and vocational subjects," the scheme states; IIT-Bombay's new Liberal Arts, Sciences, and Engineering (LASE) Programme is an instance of how the NEP's vision interprets in reality. The LASE programme, introduced in 2021 gives freedom to learners to graduate with a Bachelor of Science (BS) degree in five fields or "concentrations" — engineering sciences, natural sciences, social sciences, art and design. Here, students will study a set of foundation courses in their second year i.e. contemporary digital societies, modern South Asian history, reading and writing literature, history of science, current social structures, in addition to their Science, Technology, Engineering and Mathematics (STEM) courses.

NEP's document also mentioned the four-year undergraduate programme where, except professional degrees such as B.Tech and MBBS, usually last three years. The new vision recommends to extend the duration of degree programmes to allow students "to experience the full range of holistic and multidisciplinary education in addition to a focus on the chosen major and minors as per the choices of the student". NEP does not remove the three-year structure of UG programme, yet sets that the four-year multidisciplinary Bachelor's programme will be implemented. The learners will now have the privilege of the multiple entry and exit option with certifications and degree as per the years completed and credits accumulated. Research projects will be encouraged for students in their final year of completing their course.

Delhi University was the first to implement the suggestions of NEP 2020 in higher education colleges**.** Starting from 2022-23 academic session, students from DU could opt for

either 4years honours programme or a 3years honours programme, or 4years honours programme with research, exiting with proper certification.

Academic Bank of Credit

The University Grants Commission (UGC) had introduced a choice-based credit system (CBCS) before the NEP 2020, earning credits for each course in degree studies. NEP 2020 suggested Academic Bank of Credit (ABC) where credits earned by students in higher education institutions will be digitally deposited. ABC in a way holds the responsibility to assistance multidisciplinary and the system of multiple entry and exit in higher education. In simple words, the credits that are digitally deposited in the ABC should help a student move across one higher education institution to another when need arise. Designating credits to each course would also mean that courses or projects in areas like sciences, mathematics, community engagement and service, value-based education, environmental education, art, and sports would carry weight. NEP 2020 believes that with such policies, the higher education institutions would go a long way in "attainment of a holistic and multidisciplinary education". The novel concept of an Academic Bank of Credit (ABC) coupled with Choice Based Credit System (CBCS) could actually get one into employment at different ages, different times, and different levels of education, unlike the conventional education journey. This will on an overall basis improve the adaptability of the coming generation and ensure every person holds to their true conduct.

As an outcome of Akhil Bhartiya Shiksha Samagam session held on 29th July, 2023. The Ministry of Education and Government of India rolled out the APAAR ID (Automated Permanent Academic Account Registry Identity): One Nation one Student ID scheme, setting to provide benefits to students across the nation. The students can now register through the ABC portal and avail benefits of Student Mobility, Academic Flexibility, Unified Student ID and Easy Transfers. The APAAR ID serves as a lifelong academic passport, guaranteeing a

unified and manageable academic experience for students across India. Thus, being a major change under NEP to execute the ABC, centrally digitalising the academic record of learners from Pre-primary to higher education. The Identity Document will track students' degrees, scholarships and any other academic rewards acquired both online and offline (Ministry of Education, 2023). Thavaseelan the Principal Director of School Education, Nagaland on 17th October instructed institutions to organise meetings with parents and teachers between October 16 and 18 as notified by the MoE to discuss the importance of APAAR ID, the scheme can only be executed after the consent of the parents. Hereafter, assuring the confidentiality of the data which would be shared only with government agencies where required. After a positive response from the meeting, the school will become responsible to upload the same on the central UDISE+ portal (Nagaland Post, 2023).

CBCS in Nagaland

UGC (2015) through a paradigm shift in teaching and learning and examination reforms and a greater aim to promote equity, efficiency and academic quality in Higher Education System; the major one is the advancement of course- curricula which led to the outline of CBCS. The system allows students to choose interdisciplinary, intra-disciplinary and skill-based courses.

CBCS in Nagaland University was notified to be implemented in the academic session 2021-2022 by the Vice Chancellor Prof. Pradeshi Lal on 5th July 2021. The CBCS syllabus was prepared by respective Board of Under-Graduate Studies (BUGS) as per UGC guidelines for disciplines/courses, keeping in mind 20% deviation of syllabus at the maximum. On 12th May 2022 further notice was given to implement CBCS for Undergraduate Programmes under NEP2020. The syllabus is only laid out for UG courses and modifications at the Post Graduate level as per notified in the official website. The scheme is not only limited to providing the students with the Core, Generic elective,

Discipline Specific elective and Skill Enhancement courses. It is merited to provisions such as Credit Bank and Credit Transfer with the execution plan of ABC, providing Free Entry and Exit Option as the credits earned by a student will be stored in a bank which should be registered in a Digital Locker by selecting the ABC's service and creating an APAAR ID. Keeping such provisions in mind, it becomes vital to thoroughly study and train the stakeholders before implementing it; how Nagaland University has taken up CBCS without proper training or orientation for the students', teachers' and heads of the Department remains an obstacle in itself .Thus creating many problems and confusions for the teachers' and the students' .

The stage of experimenting and making adjustments to the new system of CBCS in Nagaland University was only one academic session i.e 2021-2022, adopting CBCS under NEP2020 in 2022-23 session. St. Joseph College, Kohima Science College and Patkai College adopted CBCS under the semester system of teaching-learning examination and evaluation. However, the full-fledged execution of the schemes' flexibility in credit transfers and ease of mobility still remains questionable. Such questions underlying its revised implementation and its full implementation have to be considered as this is what the upcoming generation of our education system depends upon which may stand in the way for the successful implementation of CBCS under NEP2020.

Resource Person Prof. Dipak Sinha, (2022) Nodal Officer, CBCS, Nagaland University gave a presentation on the topic titled "Choice based Credit System (CBCS) incorporating NEP 2020." The focus being on the flexibility, by introducing a more holistic and multidisciplinary form of education emphasized on – increased number of papers, space and classroom limitations, combination of subjects, value-based courses, job-oriented skill enhancement courses, how credit transfer from SWAYAM can be done, how generic papers

and NEP requirements like soft skills/skill-based courses/credit transfer/academic credit bank/project training etc, were to be included in the guidelines.

As for Curriculum and Credit Framework guidelines for Undergraduate Programme under 4YUGP approved under the 36th Academic Council on 17th May 2023. With the change in the structure of the higher education system; undergraduate degree will be of either 3 or 4-year duration, with multiple exit options within this period, with appropriate certifications, e.g., a UG certificate after completing 1 year in a discipline or field including vocational and professional areas, or a UG diploma after 2 years of study, or a Bachelor's degree after a 3-year programme. The 4-year multidisciplinary Bachelor's programme, however, shall be the preferred option since it allows the opportunity to experience the full range of holistic and multidisciplinary education in addition to a focus on the chosen major and minors as per the choices of the student.

Students presently studying General courses under CBCS will also enjoy the flexibility to move into third semester majoring in some subject (Respective colleges may decide the Major subject). Accordingly, a student needs to earn additional 4 credits from Major courses during the ongoing semester (or from Swayam on the specific subject) to fulfil the minimum 60 credit in the Major subject. While earning the additional 4 credits on Major subject in a particular semester, the student need not take the corresponding Minor course in that semester to maintain 20 credits for that semester. The Colleges also have the autonomy to continue with the CBCS system for those students who were admitted under CBCS system till the end of the programme. (Nagaland University Guidelines for 4YUGP,2023).

1.3 Professional Competency

The Oxford dictionary defined 'Professional' as a person engaged/qualified in a paid occupation; 'Competence' as the ability to do something efficiently or successfully and a competency is an action – a use of knowledge, behaviour or skill. So, competence is a state –

the successful achievement of one or more competencies. Competence as per Palliative Care Dictionary depends on critical curiosity, self-awareness, habits of mind, attentiveness and presence; as for Professional Competence, it is the technical skills, knowledge, clinical reasoning, habitual and judicious use of communication, emotions, values, and reflection in daily practice for the benefit of the individual and community being served. Professional Competence is impermanent, context-dependent and developmental. Competence functions on basic clinical skills, scientific knowledge, and moral development, such as the:

- Cognitive aspect, which deals with the acquisition and the use of knowledge to solve real-life problems.
- Integrative, which refers using biomedical and psychosocial data in clinical reasoning.
- Relational, communicating effectively with patients and colleagues.
- Affective/moral, the willingness, patience, and emotional awareness to use these skills judiciously and humanely.

Like all other developments that take place in an individual, Professional Competence also need all-round developments to attain competency in a profession.

Theories of Competence

The term 'competence' is credited to R.H White, as developed in 1959; but its growth and development is credited to David McClelland's research in 1998, from which he produced the article "Testing for Competence Rather than Intelligence." and it was in the 1980s that the idea of competences began to spread worldwide (Boyatzis, 1982) and in this context to educational settings there are two competence model:

1. The behavioural theory defines competence as a fundamental aspect of an overall psychology comprising self-image, motives, abilities, knowledge and skills. This theory has its origin on the pioneering works of David McClelland, who maintained that the procedure of the evaluation of competences should measure something that evolves with learning and

daily practice. Boyatzis mentioned that there is a minimum level of competence required for a job; the reality of the job and the environment or culture of the organization are the two external psychological elements of competences. And that competences are measurable, can be generalized, and viewed as an underlying characteristic of job performance. Spencer & Spencer (1993) considered ability and knowledge as the visible elements of competences, and the deeper reasons are the self-image, motives and personality traits, that comes after. This model, conceive competences as abilities, and consider that the individual has the capacity to do something but doesn't necessarily do it.

2. The cognitive and motivational approach, regard the development of competences in the form of work place, internal motives, culture, values, and ethics. The model is suggested by Nicolay Foss (2003) who view that, motivation must be studied to completely comprehend learning and also stressed the importance of self-motivation as an essential part for learning, further finding a relationship between cognitive processes and the motivation of the person considering the business. This model is applied to teaching methods, as Chomsky (1970), defined competencies as "the capacity and readiness for action and interpretation" and its indicators identified through bloom's taxonomy categorizing knowledge.

Lednev (2002) defined competency as a sphere of "relations between knowledge and action in human practice". Competency is the activity and competence are the subject of this activity. Tatur (2004) regard competencies as the readiness of an individual to identify one's personality traits, knowledge, skills, experience, for the purpose of producing creative activity in the occupation, taking account of its social and personal responsibility for the results of this activity in the need for continuous improvement. As per post-Soviet pedagogy, competence-oriented approach is close to personality-oriented professional activity and Competency-oriented approach is close to technological-orientation. Researchers in Russia correlate the concept of competence with professionalism as a professional competence,

which is an individual characteristic of the level of correspondence with the profession; to be able and proficient, to perform certain labor tasks, to act independently and responsibly (Markova,1996; as cited in Ibad, 2021). Further, determining an individual's professional maturity, structured professional competence in terms of several competencies has been made:

Special competence – this refers to the high-level mastery of the professional activity and the ability to project one's further professional development.

Social competence – it closely relates to the social responsibility in one's work, the mastery of cooperative professional activity, collaboration, and professional communication techniques that are accepted in a specific occupation.

Personal competence – it refers to mastery of self- development and self- expression.

Individual competence – it is a means of mastering self-fulfilment, developing individuality in the occupation, the ability of professional personal growth, self-organization, and self-rehabilitation.

Competencies are the knowledge and skills that allow a teacher to be effective, where (Nessipbayeva, 2012) specified four competencies which produce greatest outcomes.

I. Instructional delivery: Researchers have proved that increased mastery of lessons are from teachers who employ instructional strategies and practices. Unlike a situation where students are inactive and teachers do not actively guide instruction, in a dynamic setting better learning takes place in which teachers offer explicit active instruction (Hattie,2009).

II. Classroom Management: Classroom management is among the top five issues that affect student achievement, as it is one of the most persistent areas of concern voiced by teachers, public and school administrators (Evertson &Weinstein, 2013).

III. Formative Assessment: It is essential to have an effective ongoing assessment as it promotes the success of a teacher and student and tops the interventions for school improvement (Walberg,1999). And an essential tool for improving performance in sports, business, and education is the feedback, which has been identified by Hattie (2009) as the most powerful tool available for improving student performance.

IV. Personal competencies (soft skills): An inspiring teacher can affect student deeply by motivating their interest in learning.

Researchers have added that for building effective teacher development, these competencies can be used to organise the numerous specific skills and knowledge. A list of core competencies for educators has been stated by Stacy Zeiger (2018):

1. Interacting Well with Students

Educators should know how to interact positively with all students, catering to individual differences, keeping their prejudices and feelings aside to treat all students with respect, delivering them equal opportunities for learning and make them feel confident.

2. Creating a Learning Environment

High expectations should be setup by educators for student performance and behaviour. Enforcing all rules consistently and fairly, where students feel safe and comfortable in the classroom interaction.

3. Good at Lesson Plan Design

An educator should know how to create and choose instructional materials to accommodate students at different levels, creating a sequence and scope that delivers students with enough time to master the standards.

4. Able to Use Varied Teaching Strategies

A variety of strategies must be added by educators to their lectures, and with a non-traditional teaching strategy student with multiple learning styles learn and stay engaged. Educators also

attend regular professional development sessions to learn new strategies and the latest best practices.

5. Able to Assess

To monitor student performance, informal and formal assessment techniques along with technology, portfolios and other creative methods are combined by teachers.

6. Able to Identify Student Needs

A quality teacher involves with students beyond an instructional level, catering to their interests, readiness to learn and making sure students are mentally and emotionally focused on learning.

7. Good at Communication

Keeping the best interests of the child a quality educator keeps track of a child's progress and calmly discuss issues with difficult parents on how to solve problems that arises concerning the child.

8. Able to Collaborate

Through collaboration, teachers can learn from one another and grow into better teachers.

9. Maintaining a Professional Appearance

A healthy environment is exercised by an educator, setting a decent example for the students. Teachers here, respect one another and thus develop respect for themselves through their good personality, dressing and professional skills.

10. Demonstrating a Commitment to the Profession

With the passage of time, there is need of changed teaching strategies. Thus, giving rise to student-teacher improved learning and teaching. The quality of the education is improved by educators when they further their education and take part in professional development sessions.

Competencies are the requirements of a "competency-based" teacher education, identified by Houstan (1987) where a teacher-trainee must demonstrate for successful completion of a teacher education programme equipped by knowledge, skills and values. Consequently, to attain professional competency it is vital that teachers pass through the four levels of professional growth.

1. Pedagogical ability – it the acquisition of comprehensive knowledge of the subject.
2. Pedagogical skill –this is related to mastering teaching skill.
3. Pedagogical creativity – it is the ability to practise new techniques and methods into educational activities.
4. Pedagogical innovation – is the ability to progressive theoretical ideas, incorporate new, principles and methods of training and education (Buharkova & Gorshkova, 2007 as cited in Nessipbayeva, 2012). The addition of such competencies is being skilled in Information Communication Technology, well-equipped, intelligent and self-confident which can change students learning experiences. And thus, have the willingness to prepare them to face the world as a teacher of the 21st century and avoid having barriers in the transfer of knowledge.

Thus, Professional competency is the knowledge, abilities, and skills that equips a person in an organisation/institution for success in the workplace and lifelong career management. Without the requisite competencies needed for a teacher in the 21st century learner-centred education and rapid innovations, it will prove to be a stumbling block for an educator to transact quality education to the students and fail to contribute to the society at large.

1.4 Organisational Climate

When two or more people work co-operatively towards a common objective or a set of objectives, it may be known as an organisation, consisting of human, physical, work and coordination element. Hence, an organization is a social system of co-operation that is designed to enhance individual effort at goal accomplishment. The term 'climate' was coined to refer to the general feeling of persons in groups towards each other and some of the attitudes they reveal in their behaviour. The individuality of an organization is labelled as the atmosphere of the organization, deferring in their goals, ethnic composition of their population etc.

Cornell (1955) used the term ‘Organizational climate’ for the very first time to denote a "delicate blending of interpretations or perceptions by persons in the organization of their jobs or roles in relationship to others and their interpretation of the roles of others in the organization". Viewing organization as a formal structure, different writers define organizational climate in varied ways. Organizational climate is stated as ‘personality’ and some considered it as 'a general flow of behaviour and feeling' and the contact between environmental and personal variables of members of a group or groups which function in an organization. Created through the interaction such as: emotional needs of the members of the organization, system, structure, culture and leadership behaviour (Argyris, 1957; as cited in Tam & Ryan, 2012). According to Campbell, “Organisational climate can be defined as a set of attributes specific to a particular organisation that may be induced from the way that organisation deals with its members and its environment. For the individual members within the organisation, climate takes the form of a set of attitudes and experiences which describe the organisation in terms of both static characteristics (such as degree of autonomy) and behaviour outcome and outcome- outcome contingencies.” The following characteristics convey **t**he nature of organisational climate:

1. Organizational climate is generally perceived as the internal environment people in an organisation experience for which they develop their perception within which they work.
2. Organizational climate is an abstract and an intangible concept, that is qualitative and cannot be measured.
3. Organizational climate has a unique and a distinct identity, which differentiates one organisation with the other.
4. Organizational climate represents continuing excellence of the internal environment that is practiced by the organisational members.
5. Organizational climate is multi-Dimensional, ranging from leadership style, individual autonomy, authority structure, degree of conflicts, pattern of communication, and cooperation etc.

In the late 1940s the human relationists, introduced the term organisational climate, now denoted to as "situational determinants" or "Environmental determinants" which effect the human behaviour. Climate of an organisation is somewhat like the personality of a person, with a unique personality differing from other persons. So also, an organisations' organisational climate differs from other organisations. Basically, the organisational climate reflects a person's perception of the organisation to which he belongs. It is a set of unique characteristics and features that are perceived by the employees about their organisations which serves as a major force in influencing their behaviour. As such Forehand and Gilmer, considered that "Climate consists of a set of characteristics that describe an organisation, distinguish it from other organisations are relatively enduring over time and influence the behaviour of people in it."

Shintri and Bharamanaikar (2017) in their work traced organizational climate back to 1939 (Lewin, Lippitt & White), first known as 'Social Climate' (Srivastav, 2009).

Organisational climate is the “shared beliefs and values of organizational members constitute the perceived work environment” (Litwin & Stringer, 1968); climate refers to “individual's perception towards his work environment” (Schneider, 1973); Climate adds value to the organisational and individual behaviour’ (Glick, 1985). With Schneider (1975) pointing out that Gestalt School of psychology and the Functionalism are associated with certain assumptions of organizational Climate.

Gestalt Psychology:

The two hypotheses of Gestalt psychology state that humans understand order in their environment and create order throughout, with the intention that their work environment can efficiently be adjusted to their behaviour. The theory is of the view that individuals display their behaviour considering the environment they are into.

Functionalism:

Gestalt psychology defines order and it is Functionalism that transmit such order into behaviour and consequently based on the order individuals have created, their behaviour is manifested.

Lewinian Field theory:

Stressing on the second assumption of Gestalt Psychology, Lewin (1951) theorized the relationship between individuals and their social environment in his study “Field theory in Social change”. Stating that behaviour is an outcome of interaction between person and environment.

The dimensions of Organisational Climate were denoted by the above theories. Schneider (1975) opined that climate establishes the reliability of the organisation and acts as a motivation in the organisation. Organisational climate adds to employees‟ positive or negative work experiences and functions at individual and workgroup levels (Hart & Cooper, 2001). A climate study is a measure of the real or perceived quality of interpersonal,

academic and professional interactions on a campus and consists of ‘the current attitudes, behaviours and standards of faculty, staff, administrators and students concerning the level of respect for individual needs, abilities and potential’ (Hurtado,1992; Rankin,2001). A healthy climate is grounded in respect for others, nurtured by dialogue between those of differing perspectives, and evidenced by a pattern of civil interactions among community members. Campus climate includes the experience of individuals and groups on a campus and the quality and extent of the interaction between those various groups and individuals. A positive climate need not necessarily refer to a healthy campus or a climate in a campus that is always comfortable. This goes far beyond with nurturing the complex surrounding in an academic campus with different views, providing opportunities for growth, and developing democratic values. Halpin and Croft on their study of school climate, recognized eight dimensions describing varied dimensions of academic climate:

Teacher's Behaviour is a group characteristic

1. Disengagement: is known to be a teacher's propensity to be "not with it", defining a group which is "going through motions", "not in gear" having a task at hand. In short, this focuses on the teacher's behaviour in a task-oriented situation.

2. Hindrance: is known to be a teachers' sensitivity towards the principal, when he or she burdens them with committee demands, routine duties, and other requirements which they feel are less important. Left with the feeling that the principal is hampering rather than helping their authentic work.

3. Espirit : considers the "morale" of teachers, a sense that their social needs are fulfilled and that they are at the same time, appreciating a sense of achievement.

4. Intimacy: states a teacher's satisfaction of approachable social relations with each other. Defining a social need fulfilment which is not necessarily linked with task achievement.

Principal's Behaviour is Leader's characteristic

5. Aloofness: is related to the actions of the principal which is formal and impersonal, the attitude that "goes by the book" and favors to guide by rules and policies and not in an informal, face-to-face state, emotionally keeping way from the members of the institution.

6. Production Emphasis: relates to the principals' behaviour of friendly supervision of the faculty, with a directive approach also provides feedback from the staff.

7. Thrust: relates to the principals' behaviour wherein he or she tries to "move the organization setting examples to motivate teachers personally, thus favoured by the teachers.

8. Consideration: relates to the principals' behaviour, leaning towards treating teachers humane manner.

Further, Halnin and Croft also identified six types of organisational climate:

i) Open Climate: there is more openness in this situation, here teachers Organizational Climate are not stagnant in their work either by the organization nor by the school principal. They maintain good cooperation, job satisfaction, friendly relationships, strongly driven to overcome problems, hindrance and are proud to be related to the school.

ii) Autonomous Climate: compared to open climate, it is less open. Here, the teachers almost enjoy complete freedom to offer their own structure-for-interaction so that they can find ways within the group for fulfilling their social needs. Teachers quickly achieve their goals, work collectively and easily complete responsibilities of the organization. The principal manages the institution in a business-like means and stay remote from teachers, establishing measures and guidelines which teachers can follow. Yet, thoughtful and labours himself to set examples and is honest and provides freedom.

iii) Controlled Climate: there is slighter openness compared to autonomous climate types, emphasizing on achievement with the gratification of social needs. It has no

room for approachable relations with others or for deviation from recognized controls and directives as all concentrate on work commitments. Social isolation is common; therefore, task accomplishment is central to job fulfilment. The principal is ego-centred, wants results, is formal and impersonal, has low human qualities and gives little love, warmth or sympathy to his teachers, shows bossism, dominative and directive, delegates few responsibilities and does everything to keep the school moving.

iv) Familiar Climate: the principal creates friendly relationship with the staff. Thus, social needs fulfilment is very high yet there is no scope for group activities to be focused towards goal attainment. Here, job gratification is average and the leader is afraid of alteration, nor inspiring or leading teachers to put their best efforts and exerting less control on the activities of teachers. However, the leadership does not promise and is weak, lacks the will to stress on production, there is no direct or indirect means to assess or direct the activities of teachers.

v) Paternal Climate: This type of climate is the unsuccessful ways of the principal to regulate teachers and also to satisfy their social needs. Partly closed climate, the principals' behaviour is monitoring, non-motivating, checking, only commanding and no work gets completed, the principal has an exaggerated ego and teachers do not collaborate and divisions persists. The principal's inability to control activities of teachers leads to lack of formation of group preservation. The principal executes maximum work; hence, teachers have less hurdles, as a whole the stuff do not have job satisfaction. The principal fails to deliver a perfect example which teachers can match, therefor they are not driven for improvement.

vi) Closed Climate: it is known to be a risky state of the climate space, the most closed space. Here, the principal fails to direct the activities of teachers, is not

interested in personal wellbeing, bearing indifferent and impersonal demeanour in regulating and guiding teachers' activities, and he does not encourage the teachers by giving good personal examples but sets up instructions which are normally random, "goes by the book" instead of solving the problems of teachers.

Characteristics of Organisational Climate

Organisational Climate changes with time and is never constant, then influenced by organisational labour and psychosocial variables that effect the entire field of an institution, with the following features:

1. Physical environment: relates to the work place or physical space of an institution.
2. Social environment: indicates department within an institution and the people working in the same space.
3. Structure: relates to a mutual organisational structure where members share common teaching hours, staff rooms, work, management styles etc.
4. Organisational behaviour: it relates to a person's productivity, punctuality, and fulfilment of one's objective towards a service which has distinct individual difference.
5. Work environment: it may be understood as a form of building interpersonal relationships, such as respect for one another, trust, healthy dialogue, empathy to create an appropriate climate for the greater good of the institution.
6. Motivation: it is the work motivations a teacher receives for one's exceptional contribution to the job, which may be in the form of extra bonuses, overtime pay etc. It may further be encouraged in the work place for a completion of a task or attainment of a goal.
7. Belonging: psychologist has viewed 'belonging' as one of the basic needs which generates feeling of togetherness and thus produces participation.

8. Training: it forms an important part in the growth of a good organisational climate. To prepare 21st century educators, training is provided as part of the motivation leading them to become self-confident in attaining skills.
9. Leadership: teachers must themselves build leadership skills, committing to create healthy work environments and being role models for their colleagues and students.
10. Evaluation: it relates to improving teachers' weaknesses and strengths, through self-reflection and evaluation.

Teachers in the Organisational Climate

The climate of an organisation makes-up the overall well-being of the members involved in the setting. As reported by earlier researchers, teachers' commitment and professionalism proves to be hugely contributing to the success of an institution. Only such motivated and committed teacher will labour to realize organizational goals, henceforth engage in activities enthusiastically and work to show improved performance. Finding that the result of a healthy school climate is the improved teacher retention (Distefano et al., 2007; as cited in Khan, 2019). The learning theory of Behaviourism suggest that behaviours are influenced and learned from external forces; thus, conveying clearly that it is vital for the authorities and the management to preserve a healthy climate; both for the student and the teacher.

1.5 Genesis of the Problem

Many of the higher education institutions in India, in the recent past, have introduced the Choice Based Credit System (CBCS) in their UG or/and PG level courses. With its cafeteria 'type approach' in which the students can take courses of their choice, learn at their own pace, undergo additional courses and acquire more than the required credits, and adopt an interdisciplinary approach to learning. The credit-based semester system provides flexibility in designing curriculum and assigning credits based on the course content and

hours of teaching. This reform with its several benefits for students, still had challenges with regard to seamless implementation in terms of mobility and credit transfer. The flexibility of moving from one institution to another with the help of credit transfers remains an issue. However, the revision of CBCS by NEP 2020 through the digital platform of ABC attempts to remove the challenges because the credits earned will now be stored online which will automatically be transferred to institutions as per once convenience. Other challenges still persist as the article of Dutta (2016) highlights the challenges the universities will face in the execution. i) Designing the curriculum of core, elective and foundation courses, where the elective should be linked with core courses and the foundation which are skill enhancement courses hence, skills associated with the core courses. ii) Providing interdisciplinary courses demands a powerful teaching faculty, so that students can have options to choose courses without the problem of lack of faculty to cater to their demands. iii)The infrastructure can be a visible challenge, when a large number of students opt for a specific course, both the students and teachers will have to face the problem of overcrowded classroom and successful delivery of the content will be a big question. iv) Allowing inter-university mobility, requires the uniformity of the curriculum between the two universities. It is important to know if the university for a particular programme maintains flexibility or a fixed number of seats. v) When students are offered with choices from the foundation courses, maintenance of proper Time-table will be challenging especially with the shortage of teachers and space. vi) There is still a need of training the teachers to make them understand how the system will work, as the real executors of the CBCS system are still untrained in this aspect. vii) Getting used to grading students on 10-point grading system against the old system of numerically marking the students. Lalrinzuali (2017) found that Mizoram University lacked infrastructure, shortage in number of teachers', the sudden increase in the workload of academic

departments, prevalence in long distance of the departments, no uniformity in open electives, and no proper training on CBCS on the part of different stakeholders.

In case of Nagaland University CBCS was implemented without conducting proper research on how it can be executed throughout all colleges across the state. Implementing the scheme in the academic session of 2021-22 without producing one batch of students under its 1st Regulation and a haste to implement the revised CBCS under NEP 2020, certainly created confusion and problems for the teachers along with the students. With several unique features, CBCS has to be thoroughly thought out and studied before implementing it. Nagaland University without practical training or orientation for the heads of the Department, teachers and students; may have created challenges with regard to conceptual clarity and the execution of the plan especially when CBCS has been revised under NEP 2020. CBCS in Nagaland University was notified to be implemented in the academic session 2021-2022 by the Vice Chancellor Prof. Pradeshi Lal on 5th July 2021. The CBCS syllabus was prepared by respective Board of Under-Graduate Studies (BUGS) as per UGC guidelines for disciplines/courses. On 12th May 2022 further notice was given to implement CBCS for Undergraduate Programmes under NEP2020. The syllabus is only laid out for UG courses and modifications at the Post Graduate level as per notified in the official website. The scheme is not only limited to providing the students with the Core, Generic elective, Discipline Specific elective and Skill Enhancement courses. It is merited to provisions such as Credit Bank and Credit Transfer with the execution plan of ABC, providing Free Entry and Exit Option as the credits earned by a student will be stored in a bank which can be registered in a Digital Locker by selecting the ABC's service and creating an APAAR ID. Keeping such provisions in mind, there is need to thoroughly study and train before implementing it; how Nagaland University has taken up CBCS without proper training or orientation for the

students‘, teachers‘ and heads of the Department remains an obstacle in itself .Thus creating many problems and confusions for the teachers’ and the students’ .

The stage of experimenting and making adjustments to the new system of CBCS in Nagaland University was only one academic session i.e 2021-2022, adopting CBCS under NEP2020 in 2022-23 session. Although St. Joseph College, Kohima Science College and Patkai College adopted CBCS under the semester system of teaching-learning examination and evaluation. However, the full-fledged performance of the schemes’ flexibility in credit transfers and ease of mobility still remains questionable. Such questions underlying its revised implementation and its full execution have to be considered as this is what the future of our education depends upon which may be a hurdle for the effective execution of CBCS under NEP2020. Since teachers play a pivotal role in the execution, there was need to know the attitude towards the alteration in the system of education and find the challenges which could be avoided.

The study will throw light on the attitude of teachers towards the CBCS and the challenges teachers faced in adopting CBCS, which could guide the institutions, principals and the concerned authorities to avoid the hitches that create a hurdle for effective implementation of the revised CBCS. Other factors that take place with or without a person’s control can influence the attitude, hence Organisational Climate and Professional Competency has been studied to know to what extend independent variables effects the dependent variable. The results of the research work can guide the institutions, principals, teachers on the practical aspects of CBCS and create awareness of the Organisational Climate and Professional Competency as perceived by teachers across Nagaland.

1.6 Statement of the problem

The title of the current study is “**Attitude of Higher Education teachers towards CBCS in relation to Organisational Climate and Professional Competency.”**

1.7 Operational definitions

a) Organisational Climate

It refers to the environment of the college which influences the attitude of teachers towards CBCS in the Colleges affiliated to Nagaland University. It is determined through a scale; measuring the perception of the teachers towards their organisational climate under 7 dimensions given by Bandhu (2006) i.e Disengagement, Alienation, Espirit, Intimacy, Psycho-physical hindrance, Production emphasis and Humanized thrust.

b) Professional Competency

It refers to the skills, knowledge and attributes which influences their attitude towards CBCS, it is measured through a questionnaire constructed by the researcher on 4 dimensions i.e Conceptual and Content competencies, Competencies related to Professional practice, Professional ethics and values and Competencies related to Professional Development and growth.

c) Higher Education Teachers

Higher Education Teachers means all teachers teaching in higher education colleges across Nagaland.

d) Attitude Towards CBCS

Attitude means positive or negative reaction of teachers towards CBCS in colleges.

e) Choice Based Credit System

It is an internationalized pattern of curriculum management with flexibility in designing curriculum and assigning credits based on the course content and hours of teaching (UGC Guidelines, 2015) focusing on Semester system, Credit system, Comprehensive continuous assessment, Grading and Choice based course structure.

1.8 Objectives of the study

1) To assess the level of attitude of Higher Education Teachers towards Choice Based Credit System and Professional Competency.

2) To assess the Organisational Climate as perceived by Higher Education Teachers.

3) To explore the difference in the attitude of teachers towards Choice Based Credit System, Organisational Climate, Professional Competency with respect to gender, type of college, stream of teaching and experience.

4) To determine the relationship between teachers' attitude towards Choice Based Credit System and Professional Competency.

5) To determine the relationship between teachers' attitude towards Choice Based Credit System and Organisational Climate.

6) To determine the relationship between Organisational Climate and Professional Competency.

7) To analyse the influence of Organisational Climate and Professional Competency on teachers' attitude towards Choice Based Credit System.

8) To know the challenges faced by teachers in the implementation of CBCS in Nagaland.

1.9 Hypotheses of the study

1. There exists no significant difference in the attitude of male and female higher education teachers towards Choice Based Credit System**.**
2. There exists no significant difference in the attitude of teachers in government, private and autonomous colleges towards Choice Based Credit System.
3. There exists no significant difference in the attitude of teachers in arts, science, and commerce stream towards Choice Based Credit System.
4. There exists no significant difference in the attitude of teachers towards Choice Based Credit System with teaching experience of 1-10, 11-20, 21-30 years.
5. There exists no significant difference in the organizational climate of male and female Higher Education teachers**.**

6. There exists no significant difference in the organizational climate of government, private and autonomous higher education teachers.
7. There exists no significant difference in the organizational climate of arts, science, and commerce stream of higher education teachers.
8. There exists no significant difference in the organizational climate with teaching experience of 1-10, 11-20, 21-30 years of higher education teachers.
9. There exists no significant difference in the professional competency of male and female higher education teachers**.**
10. There exists no significant difference in the professional competency of government, private and autonomous higher education teachers.
11. There exists no significant difference in the professional competency of arts, science, and commerce stream higher education teachers.
12. There exists no significant difference in Professional Competency of teachers with teaching experience of 1-10, 11-20, 21-30 years.
13. There exists a significant positive relationship between the attitude of Higher Education Teachers towards Choice Based Credit System and Organisational Climate.
14. There exists a significant positive relationship between the attitude of Higher Education Teachers towards Choice Based Credit System and Professional Competency.
15. There exists a significant positive relationship between Professional Competency and Organisational Climate among higher education teachers.
16. Organisational Climate and Professional Competency has significant influence on the attitude of Higher Education Teachers towards Choice Based Credit System.

1.10 *Research Question*

1. What are the issues faced by higher education teachers in the implementation of CBCS in Nagaland?

1.11 *Organisation of the thesis*

This thesis is organized into five chapters; chapter 1- Conceptual framework, chapter 2-Review of related literature, chapter 3- methodology, chapter 4- Analysis and interpretation of data, chapter 5- summary, conclusions and suggestions.

The current chapter lays out the conceptual framework on the variables under study i.e. Attitude, Choice Based Credit System, Professional Competency and the Organisational Climate based on their historical background, theories, views of researchers and their scenario in the present context. The next chapter will be followed by the review of related literature.

CHAPTER II

REVIEW OF RELATED LITERATURE

2.0 Introduction

Literature review aims at summarizing and synthesizing the opinions and concepts of existing knowledge without adding any new contributions in a particular field. Its general purpose is to gain an understanding of the current state of knowledge and if the identified problem has already been researched. Further, contributing to framing the research questions, designing the study and directing methodological problems specific to the research questions.

2.1 *Choice Based Credit System*

In Higher Education Choice Based Credit System is vital, which increases teachers' earnestness and that of students. Having proved to be capable of removing rote learning and memorization by promoting creativity and innovation in the education system through critical thinking and analysis. As a result, CBCS will allow a shift from a teacher-centric to a student-centric structure (Biswas, 2018).

2.1.1 Studies related to CBCS and teachers

Kelkar and Shankar (2014) found that teachers in arts, commerce and science stream agreed that the objective of CBCS was achieved in terms of class performance, exam results, attendance, improvement in teaching–learning, interactive learning, teaching methodology and development of students. While a maximum number of teachers (65%) felt that CBCS emphasizes only on evaluation, 20% on teaching other 15% opined that CBCS gives importance on evaluation and teaching equally. Some difficulties are met by teachers concerning credit implementation, such as: increased class size, more stress on evaluation leads to less teaching hours, lack of storage space allotted for projects/assignments and other records, while adding stress and workload on teachers. It was further found that CBCS with its continuous evaluation approach, lessen the burden of teachers where one can concentrate

on the teaching and need not assess students' only at final exams. CBCS facilitates learner centred education, with its interdisciplinary and intradisciplinary approach; provides cross cultural learning environment, supports the development of professional skills, helps achieve transparency and compatibility between institutions hence aim to achieve the dreams of the upcoming generation. Bindumol (2015) found that maximum teachers have an unfavourable Attitude towards Curricular Activities and Examination System in the CBCSS. Kapur (2017) discussed on the consequence of the implementation of CBCS where she points out the problem of budget allocation to higher education which comes in the way of implementing CBCS, gathering a number of opinions from teachers and students the system was seen as limiting the autonomy of universities, some see it as against the diverse nature of the country, it establishes a platform for teachers to take part in making policies and design curriculum but such was ignored in reality. Furthermore, teacher's workload increased which may lead to contractual teachers whereby risking teachers' status. Ability Enhancement Compulsory Courses and Skill Enhancement Courses remain just a formality rising from its complicated means to find and manage Experts.

Katoch (2017) on college teachers' perception towards CBCS, conveyed that there was no significant difference in teachers' attitude towards CBCS with respect to gender, locale, teaching experience. Mahakur et. al. (2018) through a descriptive survey method collected data to find the perception of teachers and students towards the implementation of CBCS at undergraduate level. The perception of Science, Commerce and Arts do not differ significantly; there was no significant difference with respect to gender but a significant difference existed with respect to type of college. They also highlighted that the undergraduate students highly favoured the semester system of examination in terms of gender, stream and type of college. The study of (Singh, 2017) also showed that there is

satisfaction towards CBCS on the part of student and teachers which plays a major role in developing the child holistically.

2.1.2 Studies related to CBCS in Nagaland

NEP 1986 suggested for elimination of excessive element of chance and subjectivity, deemphasizing memorization. Hence, introduction of Continuous and Comprehensive Evaluation (CCE), use of grades in place of marks and introduction of semester system from secondary stage in a phased manner. The University Grants Commission (UGC) framed guidelines for adoption of Choice-Based Credit System (CBCS) for all undergraduate and postgraduate level degree, diploma and certificate programmes under the credit system awarded by Central, State and Deemed to be Universities. The UGC circulated these guidelines to the Vice-Chancellors of all universities and requested them to introduce this system from the academic year 2015-16. The details of adoption of the guidelines are not centrally maintained in the UGC however it has indicated in the guidelines that it is desirable that Higher Educational Institutions move to CBCS and implement the grading system.

CBCS has formally been in place since 2015, it is only questionable when its implementation in Nagaland has only been on July 26th 2022, which is visible only in fragments. The earliest importance given to CBCS in Nagaland was a conference organised by Model Christian College (MCC) on CBCS reported by *Nagaland post* on 19th August 2019. *Morung Express* also stated that Under Graduate (UG) colleges in Nagaland is set to shift to the CBCS from the 2021-2022 academic session, wherein the Nagaland College Principals Association (NCPA) organized a webinar on May 24th 2021 on implementation strategies for college and department heads. On 5th May 2021, *Nagaland University* notified that it has already rolled out the CBCS syllabus for UG courses for 21 discipline/courses prepared by their respective Board of Under-Graduate Studies (BUGS). Further, Dr Ranit informed that UG students need to study 26 courses spread over 6 semesters in three

academic sessions with the liberty to choose from various options. *Eastern Mirror* on April 17th 2021 reported that the Directorate of Higher Education organised a one-day orientation programme on "Choice Based Credit System" for all the principals of secular colleges.

Now Nagaland University has proposed guidelines for implementing CBCS to adopt the principles incorporated by the newly introduced National Education Policy (NEP)–2020 which lays emphasis on imparting holistic and multidisciplinary education to learners. Below is a representation of the guideline of CBCS under NU incorporating policies recommended by NEP 2020 in UG programme.

Figure 2.1 Nature of the Courses

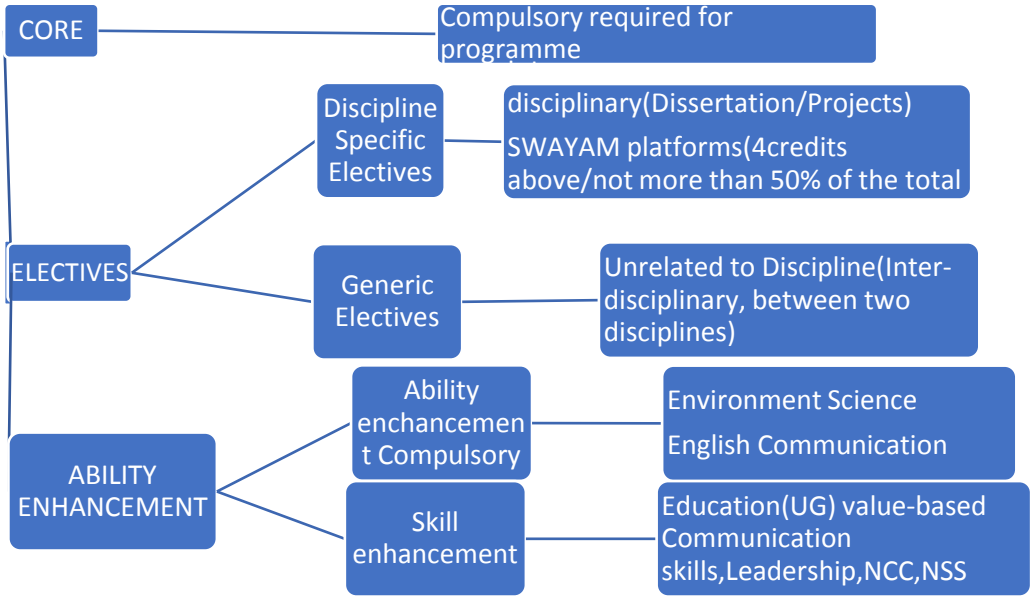
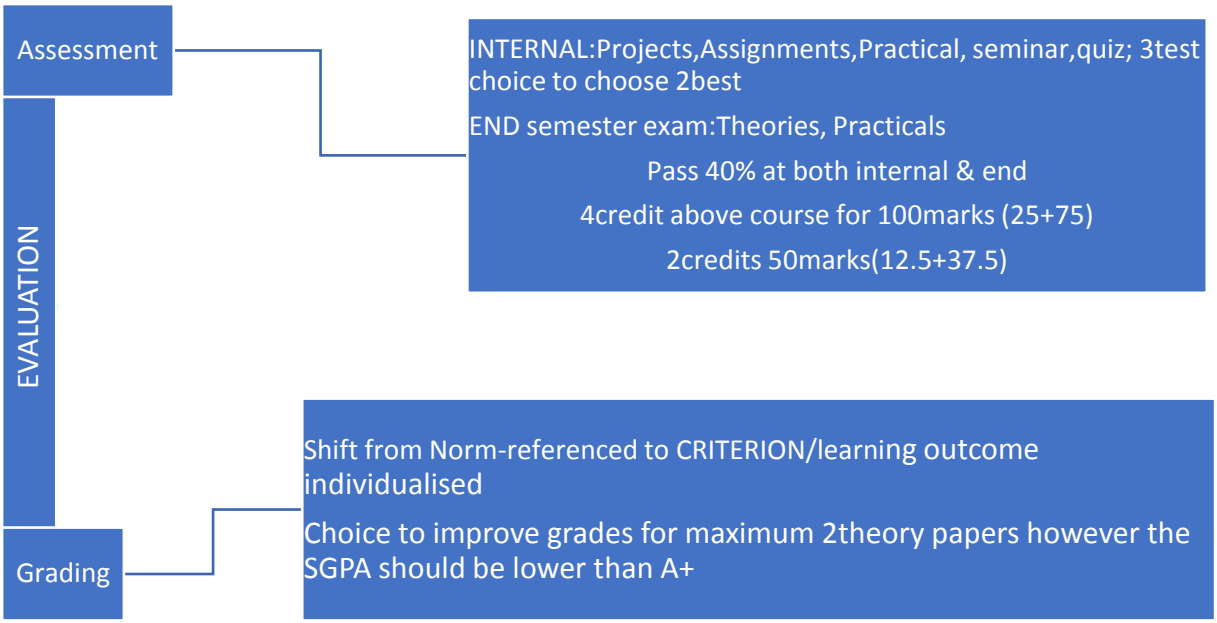


Figure 2.2 Examination and assessment under CBCS



From the above figure 2.1 and 2.2 we get a general idea of how the CBCS is adopted in NU. Credits are earned in line with the contact hours, for instance a learner will earn 6 credits with 6 contact hours per week and the practical classes of 1credit will have 2 contact hours per week. One contact hour shall be of 60 minutes engagement; 140 credits are the maximum requirement for an honours course and 120 credits for general course, the additional credits earned from other sources will be reflected in transcript and not counted as merit. Excluding days for the conduct of Examinations and Evaluation, a Semester shall have a minimum of 90 working days. Students will be graded as per the marks obtained by them on a 10-point conversion table given by UGC; the grade point will be the marks obtained divided by 10 (100marks) 5 (50 marks); the credit point= grade point × credit. The credits and grades earned will be transcript in the form of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA). SGPA is the ratio of sum of the product of the number of credits and the grade value scored by a student in all the courses opted by a student and the sum of the number of credits of all the courses undergone by a student.

SGPA (Sj) = ∑ (Cij x Gij) / ∑ Cij

Where, Sj = SGPA of the jth semester, Cij = number of credits of the ith course of the jth semester, Gij = grade point obtained by the student in the ith course of the jth semester.

CGPA are all the courses undergone by a student over all the semesters of a programme,

CGPA = ∑ (Cj x Sj) / ∑ Cj

Where, Cj = credits earned in semester j, Sj = SGPA in semester j, ∑ Cj = Total credits earned in the programme.

With a formula to convert CGPA or SGPA to % of marks: % Marks = [CGPA x10]

2.1.3 Studies related to CBCS abroad

The creation of credit unit was started by Carnegie Foundation, an innovation by the Americans for the Advancement of Teaching. Charles W. Eliot, a member of the foundation was determined to introduce electives at Harvard University, as it motivated students to study the subjects of their interest. In 1910, Morris L. Cooke in his book "Academic and Industrial efficiency" developed student hour, to measure pupils' one hour of lectures, one hour of lab work, or recitation room work. However, the credit hour surfaced, the issues which raised from the core advantage, the 'credit hour' provides i.e., in keeping record of student learning and the transfer system. In 1999 South Korea, adopted the Credit Bank System (CBS) to provide Lifelong Learning to its citizens. It is a system that played an important role in escalating flexibility in Korean educational society. (Kim et el., 2014). John Dewey's philosophical view of education leading to the self-realization of the individual, captured the core of the intervention of the credit system in HEIs of other countries. Further, sprung the many benefits the system offers from the heart of child-centred education. The different types of credit system as adopted by different countries are: Semester Credit Hours System (SCH) by US; Credit Accumulation and Transfer Scheme (CATS) by U.K in 1986; PAN-Canadian

Protocol on transferability of University Credits by Canada in 1995; Academic Credit Bank by Korea in 1998; European Credit Transfer and Accumulation System (ECTS) by Europe in 1999. British and German credit models were adopted by the higher education system of America. The colonial powers had a huge hand in passing on the educational system as an inheritance: Dutch model to Indonesia, British model to Malaysia and Singapore, American model to Philippines, excluding Thailand with a hybrid model of western countries. The acquisition of credits of all respective countries are of a similar nature, in line with contact hours and workload of learners. As for the positive aspects, Regel (1992) pointed out the outcomes of adopting the Credit system:

1. Singapore experienced a higher pass percentage, lower drop-out rate of students, perceived condition were students refrain from memorisation and more attentive to class work.
2. It paves way to higher education overseas as Malaysian students have the opportunity to study overseas after their first or second year in their home country thus reducing the study cost.
3. Studies also show a decrease number of repeaters and students complete the courses within a stipulated time.
4. The online credit courses paved way for more students to be enrolled in a lecture, expanding the horizon of part-time credit acquisition.
5. Throughout the academic year, students are fully engaged, thus increasing motivation reducing stagnation, repetition and wastage.

Critics pointed out that:

1. The system gives way to fragmentation of knowledge, less depth of study as learners will acquire a course only for a semester instead of a full academic year.

2. Learning was seen only as credit accumulation which distorted students' motivation in the process of learning.
3. The diversity among institutions poses a challenge in the inter-institutional credit transferability of students.
4. Fewer seats allotment and narrower course offerings, may result in stagnation when the students stay longer to graduate.
5. When the modal is learner-centred the institutions may face problems in maintaining a balance between less favoured course offerings and favoured courses.

Regel (1992) found that the opponents of the academic credit system reflected on the scheme as to result in uneducated students, which fragmented the higher education system. Yet, gave five important measures for successful implementation. Such as; the system should be of quality and appropriate to the context, it should be adapted in those institutions which are capable and have the ability to offer the credit system, the system should be in line with the economy and educational forms of the country, the changed patterns in the education brought by the scheme ought to be valued and supported by all HEIs in the country. The 'credit' mobility refers to students who study abroad for a certain phase. There is also a need to understand different terms the system has to offer; for instance, 'free movers' where students move to a foreign university to seek full degree unlike the 'exchange programme' were an institution which has an MoU (Memorandum of Understanding) with a foreign university is allowed to authorize students to study a course and then come back to the home institution to complete the programme. We have the 'joint degree' were two institutions jointly issue a certificate the other being a 'double degree', were in a learner acquires two or more certificates situated in two countries. All Indian learners were free movers in the US, as per a survey. The conditions which hinder student mobility are visa, lack of information, financial issues and academic difficulties (GHK & Technopolis, 2011).

2.1.4 Studies related to CBCS and its challenges

In 1996 Tamil Nadu introduced CBCS in Manonmaniam Sundaranar University which focused on job-oriented syllabi. It stressed to allocate adequate funds to orient the university teachers for the planned task, since teachers' commitment and involvement will play an integral part to achieve the new approach. It is a system that promises to bring in holistic development of an individual by providing flexible and multi-disciplinary learning experience. This change in the curriculum of higher education, has faced a lot of criticism from educationists, policy makers, teachers and students from across the country as they find Choice Based Credit System to be impractical in the Indian education scenario. However, for any new system there will be a strong resistance to change from every quarter of the academic world. To implement transfer of credits from one institution to another the collaborating universities need to be connected with Memorandum of Understanding (MoUs) or some kind of agreements. The problem lies in the fact that there is no such connection between most universities and even if the MoUs or connection is made, the academic schedules between universities vary. The learning outcomes also differ from one institution to another which also pose a challenge for student mobility (Tazien, 2017). Teachers and students at the higher secondary level also pointed out some limitations of CBCS (Chahal & Manan, 2017), which are as follows:

I. 41.6% students agreed that their workload has been increased.
II. 40.8 % agreed that the implementation of CBCS has affected the core subject teaching.
III. 42.5% were of the view that the dilemma of selecting optional subjects has increased with the introduction of CBCS.
IV. 65.8% agreed that they can develop their academics according to their interest.
V. 48.3% say there is equality in assessment and evaluation.

VI. 62.5% favoured grading system as part of CBCS

VII. Time table clashes exist in different departments as approved by 60.8%.

VIII. CBCS still needs improvement as agreed by 83.33%.

Researchers have informed that the flexibility of CBCS to choose courses in the forms of Discipline specific, Dissertations and Generic electives, the educational institution must have adequate infrastructure such as enough well accommodating classrooms, overhead projectors, sound system, laboratories, computers, internet connections and libraries. But the universities which are set up newly, are struggling with infrastructure greatly. Due to lack of classrooms, a small number of options are offered to the students as minor and major electives. Moreover, the seat capacity is also limited for the courses.

Kelkar and Ravishankar (2014) mentioned in their study that one of the major challenges for successful implementation of CBCS is the shortage of space. Critics are of the opinion that work load of teachers would be increased, ultimately generating stress in faculty members and high-quality teaching may be hampered. Providing weightage to continuous internal assessment and evaluation students will not prepare themselves seriously for examinations, deficiency of human resource and infrastructure is still a serious barrier to its implementation. Institutions will have to bear higher expenses with the need of more staff, resources, efficiency, coordination and more of everything leading to an increased fee. The execution of CBCS has not been very pleasant, many researchers have pointed out that the problem of time management will arise; as different variety of subjects has been offered under CBCS. Needing an ideal organisation of the activities involved in the daily schedule, it will impact the curriculum and everyone included, in managing it. Furthermore, the concept is still unclear to most teachers and students, directing concerned authorities to survey, debate, conduct seminar and conferences on CBCS, for it to work successfully and to achieve the global standards in higher education in India. Mahajan (2015) informed the undemocratic

way of introducing CBCS in Delhi University, with the intend to fix higher education system in one stroke. The practical limitations along with its top-down approach may crumble the standards of higher education in India despite its theoretical attractiveness. The intra and inter-institutional transferability may not be practical, as more students are likely to move from a substandard to a standard university (Das, 2021). Mallick and Paroi (2019) on stakeholder's views towards CBCS in higher education at Kazi Nazrul University are:

a. A favourable opinion was shown by stakeholders concerning dimensions i.e Student - centric, Flexibility, In -depth knowledge, Inter-disciplinary Approach, Continuous Assessment and Grading.
b. It was also found that lack of coordination among various educational institutions, lack of infrastructure, and manpower, inability to comprehend and benefit from CBCS were certain challenges faced by stakeholders.

Above all, CBCS has to go a long way in curbing its practical limitations which comes with problems such as – teacher and infrastructures, workload, evaluation system, and need to explore the concept of CBCS to utilize its benefits (Chaubeyvii et al., 2015).

2.2 Professional Competency

Holly and Mcloughlin (1989) stated, "If we view teachers are professionals, we also consider them capable of creating their own agendas for professional development." This points out, that every teacher is capable to conduct their professional development. CBCS being one of the academic reform measures for implementation in Indian higher education institution as per 12th Five Year plan, aims to accelerate the quality of education and enable student-transfer from one university to another at the national and international level. Such quality in higher education thus, give rise to quality teachers and hence the need of professionally competent teachers.

The conceptual framework and the nature of teachers' professional competencies, can be categorised below:

1) Teacher learning: concerned with teachers' life -long learning in terms of formal, non-formal and in-formal learning focusing on continuous professional development; national and international seminars and conferences, workshops; practical experiences in teaching and adopting knowledge and skills as per their context.
2) Professional Competence: The fundamental professional competencies of a teacher pointed out by Weinert (as cited in Guerriero, 2017) is based on cognitive and affective-motivational resources. The former denotes the knowledge of the subject matter and the art of delivering the content, the later relates to students' achievement that contribute to the quality of teaching.
3) Decision making and professional judgement: it is the skill of a teacher to analyse, evaluate, keeping in mind the situation and context.
4) Teaching approach and instruction: this approach covers the whole aspect of classroom management and organisation.
5) Student learning: teachers' competency is linked to learners' achievement.

Some of the researchers define competency as behaviours an employee needs to display in order to do the job effectively, while competence refers to aspects of the job that an employee can perform (Velasco, 2014; as cited by Manley & Garbett, 2000; Moore et al., 2002; Westera, 2001; Woodruffe, 1993). Some of the competencies the teacher of this age should possess are: competence in a certain area of knowledge, research, life-long learning, preparation and implementation of programs, socio-cultural and multicultural competencies, emotional, communicative, information and communication technologies (ICT) competence, managerial and ecological competences. These competencies influence values, communication, behaviour, academic process, professional developmental support, goals and

practices that evolve around the life of a teacher (Smolikevych, 2019). Nessipbayeva (2012) was of the view that as educators of the 21st century, instructors should establish the following competencies:

1) Promote positive relationships, cooperation, and purposeful learning through effective classroom management.
2) Effective teaching practices, to engage learners in active learning opportunities.
3) Effective assessment, to help students become aware of their strengths and needs and encourage them to set personal goals for learning.
4) Acquire technology skills, to maximize student learning.

Lauermann and König (2016) a study based on two aspects of Professional Competence found that General Pedagogical Knowledge has negative linear association with self-efficacy, and no significant association with burnout. The findings of Yazdani (2016) concluded that professionalism among teacher educators did not depend on gender and educational qualification. The experience of teachers does not influence professionalism instead, knowledge, skills, spirit and dedication contribute immensely and also found no significant difference between regular and contractual teachers on the basis of professionalism except in the area of skill. The professional characteristics of teachers identified by Ajayi (2009) is the proficiency of subject knowledge with the application of creativity, providing feedback to learners through assessment, being able to motivate higher education students and managing an interactive teaching and learning; failure to which will reflect poorly on teacher performance.

2.2.1 Teachers Professional Competency and students' achievement

Academic qualification cannot be a mere essence of a teacher, the quality of an educator is the production of effective learners. With the increase in teachers' competence students' achievement also increases. (Sivakumar et al., 2010). A highly competent

professional promotes desirable attitudes in students (Quraishi, 1972; Singh, 1975; Singh, 1980, as cited by Philip & Ramya, 2017). Quality of student learning is improved with effective and skilled performance of the teacher in the classroom (Elmore and Wong, 2009). Magnoand and Sembrano (2007) reveals that good performance of a teacher cannot only produce quality learners but also determine the success of an institution. An improved educational institution is supported by the competencies inherent in the institution (Talbot et al., 2007). A highly effective teacher with high intellectual capacity and creativity is capable in fostering desirable attitude in students (Singh, 1980 as cited in Singh, 2019) and also a highly skilled teacher competencies influenced academic achievement of students (Jayaramanna, 2001 as cited in Sivakumar et al., 2010).

The best way for teachers to achieve professional competence for Sustainable Development are: teacher professional development, peer collaboration and guidance, active learning, feedback and evaluation, 21st century skills. Professional capabilities can be enhanced by leadership talent strategies; the assurance from professional teachers is students' efficiency, academic achievement, mental health, teacher-student rapport, extended knowledge, better learning. Hence, in order to carry out the qualitative evaluation successfully, there is need to expand and strengthen teachers' professional competencies (Yue & Ji, 2020). The essential competencies needed in a successful teaching career as per a survey made on teachers and students are comprehensive understanding of subject matter, planning and execution of appropriate learning experience, identify prerequisites and knowledge of students, professional development and exhibit professionalism and engaging in active research (Shankar et al., 2019). Competence is measurable and centered on skill, attitude and knowledge; catering to teaching, leadership and life-long learning skills to facilitate students' learning (Nessipbayeva, 2012). A proficiently competent teacher is one,

that can cater to a learner's varied needs and abilities (Surapuramath & Kotreshwaraswamy, 2013).

A study on world universities, identified eight professional competencies that are central to development and contribute to the success of every student. Such are: Teamwork, Self-directed learning Ability and application of knowledge, Oral and written communication, Entrepreneurial spirit, Capacity to adapt to new situations, Leadership and Global mindset. Of which 90% of the stakeholders find it vital to develop competencies in higher education (Velasco, 2014). The quantity of professional development experiences plays an important role in determining the teaching practices of the teacher, as well as the culture of the classroom. With the increased hours of professional development teaching standards of the teacher increased, with the outcome of high-level classroom culture. The need of quantity experiences is no greater than the quality experiences which are attained by teachers' positive attitudes (Johnson, 2007 as cited in Nair, 2017). Ansie and Marike (2007) in their study on teachers' motivation towards the continuous professional development, found teachers who attended the workshops had positive attitudes and are more likely to attend in the future in value of time and sacrifices made. Their attitudes did not differ on the basis of qualifications, age, sex or teaching position. Competency behaviours as an employee, such as knowledge, ability, and personal characteristics predicts the performance on one's profession. (Ozcelik & Ferman, 2006). Ferdinand (2007) teachers' effective teaching is the result of competent assessment procedures, added by providing appropriate rubrics to students for their improvement which in turn reflect their success. Above all, student's feedback showed that effective teachers create favourable study environment allowing an understanding communication of shared ideas (Akram, 2019 as cited in Ibad, 2021). Teachers who are competent possess the qualities that could positively contribute to the upliftment of an institution (Mann,1980 as cited in Nessipbayeva, 2012).

2.2.2 The need of Teachers Professional Competency

To think about competences, is to bring in the concepts of effectiveness and performance as competence has direct link with effective performance in complex situations as Westera (2001) quotes "competent performance presumes competence". There is no denying that the teaching learning process, wholly lies on the competence of a teacher, of whom is shouldered the responsibility to upbring the child to the fullest of his/her potential. However, the endowed duty cannot be processed till the educator herself/himself is built on competencies that could positively direct a learner. The present context gives birth to teachers who are creatively and knowledgably trained to foster each learner as per their difference. Thus, skilfully applying strategies and techniques to help a child to attain all-round development. Hoyle Joyce observed that professional development encompasses all natural learning experiences both conscious and planned activities, projected to be intended or unintended is of advantage to an individual, team or institution; these experiences largely contribute to the quality of education in the classroom. Such gives rise to skills and competencies in teachers' profession, thus the need of professional training from time to time to cater to the changing needs. The study of Kumar (2013) identified professional teaching competencies under three heads:

i. Instructional Competences:

   These competencies relate to Concept, Context, Transactional, developing teaching learning materials, use of latest information and Communication Technologies in Teaching Learning Process.

ii. Organizational Competences:

   It falls under adjustment Competence, identifying resource and mobilizing resource, organizing co- curricular activities, working /dealing with parents and community, Co-ordination and Management Competence.

iii. Evaluative Competence:

Acquired with new trends in evaluation, Assessment procedures, construct evaluative items, conduct tests and Interpretation of results.

Further stating that competency of teachers is an intellectual potency existing in one's mind which is actualized in his/her job professionally. Therefore, competency becomes the ability of teacher to help, guide, and counsel learners for their positive growth. Now being a teacher in its truest sense, one should work with dedication and for the greater cause of the country rather than for commercial motives. And finally stressing the need to attain professional code of conduct or ethics without which the professional competency of a teacher is incomplete. Academic qualifications, professional and pedagogical competence of a teacher is essential to generate professionals with high level of professional culture, intellectual development, a competitive attitude to provide scientific, technical and social progress of society. However, development of professional competence of the teacher involves all components of educational space of course training within the teachers' qualification improvement. Stressing the need to improve the pedagogical education of teachers (Drovnikov et al., 2016). Researchers have identified some of the competencies based on student feedback. Pertaining to research competence, professional competence, communication competencies, educational competence, information technology competence, motivational competence, communicational, curriculum development competence, socio-cultural competencies, emotional competencies and environmental competencies, life- long learning and publication competence. These studies show that students want to encounter valuable teaching-learning experiences to be prepared for their future (Blaskova et al., 2014; Selvi, 2010; Voss et al., 2006 as cited in Jocelyn & Sammanasu, 2021).

2.3 Organisational Climate

Organisational culture is inherent, behaviour based and resilient to current events. However, organisational climate is grounded on perceptions of events at a point in time. Thus, the value of studying the climate of an institution permits the management and employees to comprehend internal strengths and weaknesses and make changes accordingly (Verbeke et al.,1998; as cited in Tam & Ryan, 2012). As (Damoe et al., 2017; Shobaki et al., 2018; Castro & Martins, 2010; Goleman, 2000; as cited in Aboudahr & Mohamad, 2020) identified three dimensions i.e., resource adequacy, participatory decision making and staff freedom to be the best practices to manage quality education in a good organisational culture. Manuela et al. (2014) also identified eight dimensions of organisational climate in line with leader-collaborator relationships i.e., Performance Assessment, Leadership, Working Conditions, Benefits, Motivation, Satisfaction, Interpersonal Relationships, Training, Commitment and Functions. Stressed the need for leaders to possess captivating characteristics, in the process of building the recognised dimensions to generate positive organizational climates. For with the development of the leader-member relationships the organizational life also progresses.

Patterson et. al. (2004) throws light on the importance of employees' job satisfaction as they are the assets of company performance and the builders to a healthy organizational climate. Absenteeism, commitment, cooperation and stress of the employee has largely been influenced by the climate of an organisation (Rose, 2002, 2004; as cited in Khan, 2018).

*2.3.1 Organisational Climate **and the teacher***

Chung (2020) studied school's organisational climate dimensions on teacher commitment resulting in significant relationship between the two variables. It was found that significant positive relationship exists between teacher commitment and collegial leadership, teacher professionalism and academic press but no relationship with institutional

vulnerability. Further findings showed teacher commitment as the dominant predictor of teacher professionalism. The ethical and job behavior of faculties shape the climate of an institution, catering to its values, cultures, and attitudes (Wong et al., 2019). Studies of Salisu, Chinyio and Suresh (2015); Schreurs et al. (2015) found the need to cater to an employee's contentment and disappointment in any establishment. As attitudes of employees, concerning their motivation, behavior and performance, satisfaction with work, are hugely influenced by the organisational climate (Budihardjo, 2014). In support Al- Subai (2014) found that the nature of an organisational climate reveals the effectiveness of the organization. High quality of education, depends largely on the organisational climate of an institution (Budihardjo, 2014).

Aboudahr and Mohamad (2020) in their study specified that organizational climate significantly influence quality management of the staff providing them freedom for research, development and training. An organisation makes effort to improve and develop their environment; because climate plays a major role in maintaining quality higher education institutions in terms of bringing development and achieveing the satisfaction of the staff (Shobaki et al., as cited in Aboudahr & Mohamad, 2020). Leadership characteristics also helps to create positive Higher education organizational climates. Performance Assessment, Working Conditions, Leadership, Interpersonal Relationships, Motivation and Satisfaction, Training, Commitment and Functions influence the behaviours working in higher education institutions and establish the central organizational climate (Maria et al., 2014).

BenĠea (2013) found more positive organization's structure, objectives, performance and leadership from 5-10 years of experienced teachers who have newly entered in organizations with respect to teachers who have more years of service in educational system. In addition, teachers with low-risk averse attitude are more approachable and open to change in turn acknowledge the prospect of change in their school as a chance to improve

organizational climate thus, perceive more positive this school climate. Further pointed out, to create a positive climate, school organization's members, especially teachers, must be aware of changes, adaptable and flexible in dealing with them.

Bai (2014) in his study found significant relationship between organizational climate and teachers' burnout and further suggested that managers should generate a positive climate to reduce teachers' burnout. Ghosh and Guha (2016) found male had better perception to organizational climate however they were less motivated than the female. No positive significant relationship was found in the perception of teacher educators' organizational climate and their motivation to work. Pramod et. al. (2018) studied the impact of organisational climate on teacher effectiveness which resulted to significant impact of organizational climate on academic, professional and social dimensions of teacher effectiveness of secondary schools. Furthermore, laid that for the survival strength, efficiency and success of the institution teacher effectiveness is essential. Passos (2009) also revealed that teacher effectiveness is not a constant feature but an interplay between different determinants of the environment and particular teacher features, which change the way a teacher performs.

Anandarasu and Abdullah (2019) in their study found no significant difference of secondary and higher secondary school teachers on Organizational Climate concerning gender, subject designation, qualification, marital status, experience and residence. Kaur (2019) revealed that teacher educators perceived good organisational climate and had average level of teacher effectiveness. In better organisational climate there was high teacher effectiveness, average in good organisational climate, and low in poor organisational climate. Singh (2019) found the academic achievement of the students in science and mathematics can be increased through teachers' professional commitment, perceived school climate and effectiveness of administrative heads. The variables significantly contributed to the prediction

of academic achievement of the students. Organizational climate has an influence on the productivity and job satisfaction of individuals (Giri & Kumar, 2007). Sokol et. al. (2014) found that the creativity of students increased with the prevalence of better organizational climate in universities. Organisational Climate plays a huge role in influencing the sharing of knowledge between teachers in the higher educations (Al-Kurdi et al., 2019).

A principal's leadership behavior clearly depicts the climate of an institution, studies have also shown positive relationship with teacher related competencies and performance. There is increase in teacher commitment when a principal foster shared school climate (Singh & Billingsley, 1998). The result of a good climate is a competent relationship which further give rise to outstanding academic achievement (Mahdieh, et al., 2013). Further, Cerit (2010) states that an organizational commitment and teachers' job performance is correlated to principal management. Hence, teacher commitment in turn enhances student achievement. The climate in a workplace is influenced by leaders, a dull and controlling one will lead to a bleak future of an institution. Whereas, one who harness positive and productive feedback, encourages professional development, creativity, independent decision making and establishes collaborative behavior contributes to a healthy climate (Block, 2003). High levels of job performance and commitment is seen when principals establish shared leadership (Meyers & Gelzheiser, 2001; Pearce & Herbik, 2004 as cited in Khan, 2019). The work of Jothi & Kanmani (2019) found the qualification of teachers did not associate significantly with their organisational climate but the experience in teaching which catered to different work environments had a relation with their perception towards their school climate.

Insecurity prevails in the organisational level of HEIs in the form of de-motivated stuff who resist change and lack taking risks under the management approach. However, an organisational institution practicing 'collegial' approach promotes sharing of information, positive relationships and a high degree of cognitive conflict (Allen, 2003). Selamat et al.,

(2013) found an unhealthy Organisational Climate prevalent in secondary school and the teachers' tasks could not be exercised properly and that teachers' job performance was significantly affected by the organizational climate. Babu and Dipser (2013) also found significant difference between Organisational Climate and Effectiveness of Elementary School Teachers. In addition, the Private Schools with Closed Climate had fewer effective teachers compared to Government Schools with Open Climate. Depression and anxiety associates closely with bad emotions whereas comfort and enthusiasm links close to good emotions; hence, to teacher's high satisfaction leading to a positive organisational climate. Also, teachers' work-related emotions and job satisfaction is a strong predictor of their perception of the organizational climate (Otrębski, 2022).

2.3.2 ***Professional Competency and Organisational climate***

Professional competence and school effectiveness of teachers is affected by innovation and emotional intelligence. There also existed significant direct relationship between teachers' professional Competence and school effectiveness. The higher the professional competence so is the school effectiveness (Rahayu et al., 2018)**.** Organizational climate of the school contributes significantly to teacher performance (Gemnafle et al.,2018). It was found that knowledge or mind, energy, time, commitment, alignment and sense of professionalism responsibility to improve student achievement will be developed in teachers if their school organizational climate is positive.

Gundry et. al. (2015) reveal that a stronger commitment to the organization is influenced by collaborative communication between employees which furthermore builds trusting relationships with administrative and technical innovation facilitating Organisational Commitment. Ilanlou and Zand (2011) in their study found a significant relationship between teachers' perspectives about Qualitative Evaluation and Professional Competence. Digital competence of Higher Education teachers has significant association with effort expectancy

and engagement with their work. Thus, digital competence acts as a stimulus for teachers work engagement. (Wang et al., 2021). Web-based learning enhance teachers' professional competency (Rampai et al., 2011). Researchers in the past have shown, organizational and academic atmosphere has a direct role in competency and job performance. Organizational support and work performance is affected by the socioemotional needs of an individual (Fasolo & Lynch, 1998). An organisations' atmosphere and commitment have a role to play in the work outcomes (Zhou, 2005). Positive learning ability has been an outcome of team cooperation (Ma, Liu & Fan, 2012; as cited in Xu & Ye, 2014). A positive correlation exists between teaching, research, job performance and teachers' competency level with academic atmosphere having a vital part in the interaction between the job performance and teachers' competency (Xu & Ye, 2014). A competent instructors' performance positively contributes to the organisation. There is a close relationship between job performance and managerial traits and skills of managers (Wang & Chen, 2002). Interpersonal knowledge, skill, interaction, and virtues predicts job-dedication, task and job performance (Song, 2008).

Researchers point out that teaching competencies depend on the economic status of a teacher, thus relating to their environment effecting their competencies in performance. Further stating that effective teachers are shaped by the satisfaction derived from their job. Personality factors, motivation and attitudes effect teachers' teaching competency (Babu & Dipser, 2013).

2.4 Summarisation

Introduction of CBCS and its ground-breaking strategies to improve the quality of education in India, raised the standards of teachers' professional competency and organisational climate being the dire need of the hour. As this cafeteria approach calls for competent teachers, proficient enough to comprehend and embrace the concepts of integrated and multidisciplinary approaches and equipped with the skills of the 21st century learners.

Aware of the revised CBCS under NEP 2020, the new policy demands teaching faculty to cooperate, coordinate and motivate the learner's life through skill and character building. Further focusing on the sacrifice, efforts and contribution of the teachers to maintain the respect, dignity and honour of their profession. This can only be achieved when a teacher possesses a high level of professional competency.

The system throws light on the need of adequate infrastructure facilities for the proper implementation of CBCS. And with such requirements, it becomes a necessity for the educational institutions to improve the climate of the organisation in which the heads, teachers and the students teach and learn. CBCS not only stressed on the physical infrastructure but on the over-all climate of an organisation/ school/ college which contributes to the all-round development of students. Since, some studies show students favouritism over CBCS when there is satisfactory implementation of the scheme. Sumithaa et el., (2016) through empirical evidence found the perception of students towards CBCS, to be student centric providing autonomy and transparency in evaluation, with organised syllabi and college resources, and all-round development of students is also catered. Eventually, CBCS will avail the proper evolution from teacher-centric to a student-centric system. Students from Hyderabad favoured CBCS due to its design, I.T. applications, flexibility, and division of courses (Barlaii, 2013). Kulkarni and Patil (2018) in the implementation process of CBCS on B. Tech students noticed improvement in students' admission to higher studies, entrepreneurship and placement. Howlader and Roy (2021) in their study, Attitude towards Choice Based Credit System of under- Graduate students in Relation to their Academic Achievements found that: significant difference exists in the attitude towards CBCS with respect to gender, but no significant relationship exists between attitude and academic achievement of girls and boys. Deuri (2015) studied the attitude of Post Graduate students towards *CBCS* in Gauhati University. Results declared that in contrast to Arts, Science

Students have high level attitude towards CBCS; girls have lower-level attitude in comparison to boys. Such attitudes of students towards CBCS are influenced by the organisational climate in which they learn, so also goes for the teachers in an organisational setting in which they teach. As attitudes of employees, concerning their motivation, behaviour and performance, satisfaction with work, are hugely influenced by the organisational climate (Budihardjo, 2014). Therefore, organisational climate plays a major role in influencing the attitude of teachers towards CBCS and thus raised the need to improve the organisational climate of a college/institution.

Fair enough a lot of critics talked about the failures of implementation of CBCS. Teachers will face problems with respect to credit implementation, ranging from: increased class size, more stress on evaluation leading to less teaching hours, lack of storage space allotted for projects/assignments and other records, while adding stress and workload on teachers, struggling with infrastructure and human resources. Yet quality measures can be taken for the successful implementation of CBCS as it has several benefits for the student in particular and the education system in general. As Regel (1992) mentioned five important measures for successful implementation of CBCS. The system should be of quality and appropriate to the context, it should be adapted in those institutions which are capable and have the ability to offer the credit system, the system should be in line with the economy and educational forms of the country, the changed patterns in the education bought by the scheme ought to be valued and supported by all HEIs in the country.

Literature review points to the fact that researchers in the past have studied the three variables; delving in their importance and how it benefits the students, teachers and the educational institutions, though few in number. No study has been conducted on attitude of teachers towards CBCS, Professional Competency and Organisational Climate after the implementation of NEP2020 in India, for which the results will vary.

In the next chapter i.e., chapter three, description of the research method; population and sample; construction and standardization of tools; procedure of data collection and techniques of data analysis are discussed in detail.

CHAPTER III

METHODOLOGY

3.0 Introduction

A research methodology guides the way in which a researcher plans to carry out an investigation. It is a systematic design of a study to guarantee valid and reliable results to address the research aims, objectives and research questions. As Barr (1960) said, "The machinery of methodology occupies a very important position in any kind of research. The vehicle of research cannot perform its function without it, since it is methodology, which lays out the way that formal research is to be carried out and detailed description of the research variable and procedure".

Methodology directs the entire research design, while research design is the structure and plan of the investigation to describes the procedures for conducting the study, and when, from whom and under what conditions the data will be obtained. Thus, this chapter explains the research method; population, sample, tools and procedure of data collection; and the statistical techniques used for data analysis.

3.1 RESEARCH METHOD

As per the nature of the study Descriptive survey method was employed to conduct the research. It involved the collection and analysis of quantitative data and part of the dependent variable through open-ended qualitative data. Data was collected through scales; to obtain the objectives of the present research, the quantitative data were collected and for the dependent variable the qualitative data was also collected to support the conclusions of the study. The questionnaire was addressed through Direct meeting and Google Forms as per the convenience of the teaching faculty. The investigator studied the role of Organisational Climate and Professional Competency on the attitude of all higher education teachers in Nagaland towards CBCS. The data allowed to recognise the current situation of Higher

education Teachers' Attitude towards CBCS, Organisational Climate and Professional Competency.

3.2 POPULATION

The population of the present study comprised of all teaching faculty working in higher education colleges across Nagaland.

3.3 SAMPLE

The Investigator drew a sample from the population concerned, to generalise the findings. Here, the researcher adopted Simple random sampling technique to get the reflection of the whole population. This technique is applicable when the population is composed of homogeneous and uniformly selected populations. In this selection method, all the individuals have an equal opportunity to participate in the study. As stated in Nagaland Economic Survey 2021-2022 tabled by Directorate of Economics & Statistics, Nagaland has 66 colleges with 15 government and 51 private (2022, April 7). To minimize the relevance of bias in the process of random sampling selection: method of lottery is used, this is the most primitive and mechanical example of random sampling. Here each member of population is numbered in a consequent manner, samples are randomly taken from the box by choosing folded pieces of papers in a random manner. Hence, a total of 11 colleges and 350 teachers are selected through lottery method. Adapting the sample size for various populations at 95% confidence interval table given by Krejecie and Morgan (1970) as such the researcher decided a sample size of 350 which is appropriate for a population of 4000. The selected list of colleges, the number of teaching faculty as per their institution and the selected number of teachers are shown in Table 3.1, the information noted from the official website of the respective colleges.

Table 3.1
College Wise Distribution of Sample

S. No	Name of college	Total no. of Teaching faculty	Selected no. of Teachers
1	S D Jain Girls College, Dimapur	26	18
2	Sao Chang College, Tuensang	37	11
3	Don Bosco College, Kohima	48	26
4	Tetso College, Dimapur	81	26
5	Dimapur Government College	67	33
6	St. Joseph College, Jakhama	95	61
7	Unity College, Dimapur	51	48
8	Patkai Christian College, Chumukedima	70	46
9	Kohima College	57	21
10	Fazl Ali College, Mokokchung	66	6
11	Science College, Kohima	94	54
	Total	692	350

3.4 TOOLS

Tools are the instruments employed by the researcher to collect data, below are the tools used in the present study.

1. Attitude Scale on Choice Based Credit System (self-constructed)
2. Opinionnaire for teachers on the issues faced in the implementation of CBCS (self-constructed)
3. Professional Competency Scale (self-constructed)
4. Institutional Climate Inventory (For Colleges) Constructed & Standardised by Dr. Tarlok Bandhu (2006) Himachal Pradesh University

Construction of Tools

The following procedure was followed for the construction of tools

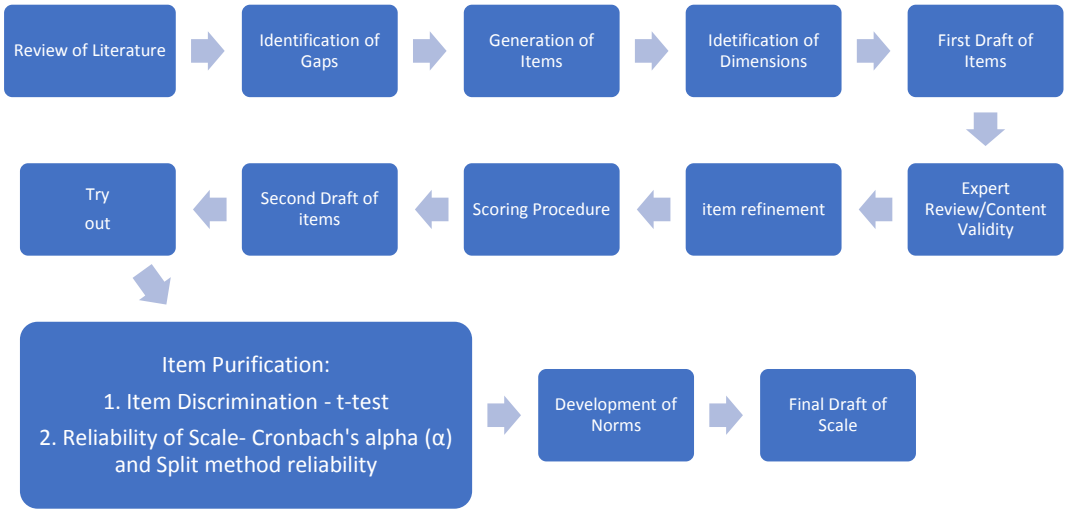


Figure 3.1: Procedure for tool construction

Below is a detailed description of how each tool was prepared.

3.5 Attitude Scale on Choice Based Credit System

For assessing the Attitude of all HEIs Teachers towards CBCS, the Investigator constructed an attitude scale for there was no suitable tool for measuring the variable. An attitude scale is a measurement tool used in psychology and social sciences to assess a person's attitude toward a particular event, concept and object.

Henceforth, consulting the relevant conceptual literature (articles, journals, newspapers), guidelines of UGC, regulations of CBCS in Nagaland University along with a series of discussions and meetings with the supervisor; prepared the tool. For the first stage of item pool, 108 items (Appendix A) were constructed and after careful consideration from the guide; 60 items (Appendix B) were selected for expert opinion. Further, five dimensions were identified on the basis of the basic aspects of CBCS 2015, as laid out by UGC:

1. **Cafeteria Approach:** Refers to shift to a wider choice in paper selection, allowing 95learners to take courses of their choice, learn at their own pace, adopt an inter-disciplinary approach to learning, undergo additional courses and acquire more than

the required credits. This approach consists of Core-credits, earning them would be essential for the completion of the programme, Elective credits are likely to overlap with other programmes or disciplines of study and the Ability Enhancement Courses (AEC) offer papers from the parent department as well as from other departments.

2. **Credit and grading system:** Grading refers to a uniform 10-point grading system introduced to allot grading**.** As per the scheme, a credit is allocated to each course, credits are earned by a student after passing that course. A course need not be repeated by the student if he or she has passed a semester and has earned credits as per one's pace. As for Credit transfer; a student enjoys the flexibility to earn fewer credits, study fewer courses and recompense it in the subsequent semester, in case he or she falls sick. The remaining credits can further be acquired from another college.
3. **Impact on teachers' profession:** it concerns the impact of the scheme to teachers' profession i.e. quality teaching, relationship with the students, professional growth and job opportunity.
4. **Impact on students' academics:** this refers to the effect of CBCS on students' academic career.
5. **Implementation of CBCS:** It concerns to the implementation process that are to be carried out by the respective institutions or universities for the smooth functioning of the scheme. This section underlines: Semesters system- Students are assessed semester wise, rather than calculating a learner's progress concerned on course duration like four years for engineering or 3 years for science, commerce and arts planned on the courses taken. Dividing a year into two semesters with 90 days of teaching equal to 15–18 weeks of assessment and academic training. Given the autonomy for curriculum development and allotting credits grounded on hours of teaching and the course content, the total credits earned by a student for each semester

is L+T+P (lecture+ tutorial+ practical). Comprehensive Continuous Assessment-Assessment: Both the student and the teacher continuously evaluate the student through examinations and semester, assignments and open book exams.

The first draft of the scale is presented in table 3.2, as per dimension-wise distribution of items.

(FIRST DRAFT)

Table 3.2 Dimension wise distribution of items of Choice Based Credit System for teachers

Sr. No	Dimension	No. of items
1	Cafeteria approach	10
2	Credit and grading system	8
3	Impact on teachers' profession	12
4	Impact on students' academics	15
5	Implementation of CBCS	15
	Total	60
	The no. of negative items is 20 (item no. 3, 6, 8, 11, 14, 18, 19, 28, 30, 32, 33, 36, 40, 43, 46, 50, 53, 56, 57, 60)	

The researcher distributed the tool to 10 experts from across various disciplines in higher education institutions and their suggestions and comments were incorporated to establish Content validity. Keeping in mind the items covered all the areas relating to CBCS the investigator once again revised the items and laid out the scoring procedure. The response format was the Likert scaling (Likert, 1952) with 5 response options labelled as 'Strongly Disagree (SD)', 'Disagree (D)', Not Sure, 'Agree (A)', and 'Strongly Agree (SA)'. The purpose of using 5-point scale is that, it is one of the best and most popular Likert Scale providing a neutral stand-point representing a specific response from the respondents which will eventually help in providing feedback and improving the programme. The positive items will be given a score from 1 to 5 and the negative the reverse i.e., 5 to 1. The second draft of the scale was prepared based on the expert suggestions, some of the items were modified

rejected and replaced. The modified questionnaire was administered to 147 teachers in Nagaland.

Item analysis

Computation of *t*- values were made for each item, for this 27% of low scores (low group) and 27% of high scores (high group) were recognized and middle 46% was weeded out (Kelley, 1939). The subjects' responses for 20 items were not showing significant difference between the lower and upper groups. Therefore, only 40 items were retained and 20 items which were found to be either very difficult and easy; were ineffective to differentiate teachers' difficulty level (item no-1, 6, 8, 11, 12, 14, 19, 21, 30, 31, 37, 43, 47, 50, 51, 52, 54, 55, 57, 59). *t*- value greater than 1.96 (critical table value of *t* at 0.05 LS) were accepted. Item to total correlation was also worked out to check internal consistency of the scale, items with lower values of *r* {*r* <0.113 (critical table value of *r* at 0.05 LS)} lack consistency and were rejected. Calculated values of Item to total correlation and correlation values ranges from .01 to .92 and item no. (1, 6, 14, 15, 19, 21, 31, 37, 51, 52, 53, 54) do not measure the same construct that the whole scale is measuring. Therefore, the retained items as per the p-value, t-value and item to total correlation is 38 items (item no-2, 3, 4, 5, 7, 9, 10, 13, 16, 17, 18, 20, 22, 23, 24, 25, 26, 27, 28, 29, 32, 33, 34, 35, 36, 38, 39, 40, 41, 42, 44, 45, 46, 48, 49, 56, 58, 60) and 22 items are rejected (item no-1, 6, 8, 11, 12, 14, 15, 19, 21, 30, 31, 37, 43, 47, 50, 51, 52, 53, 54, 55, 57, 59) attached in appendix B.

Preliminary draft of 60 items was reviewed by 10 experts to attain content validity. To estimate the internal consistency, the scale was interpreted computing Cronbach's alpha (α) and Split-half method reliability (1^{st} & 2^{nd} half/ Spearman-Brown Coefficient) through SPSS software. Reliability coefficient ranges from 0 to 1 (Gliem and Gliem, 2003). However, closer to the value of 'α' to 1 greater will be the internal consistency of the scale. Reliability coefficients are provided in table 3.3

Table 3.3 Overall Coefficient of Reliability of CBCS

No. of Items	Cronbach α	Split Half Reliability (1st & 2nd Half)
38	.93	.92

The above table shows that the Split-Half reliability of Spearman-Brown Coefficient for 1st and 2nd half items at equal length is .92, which indicate that the retained items have good Split-Half reliability. Table 3.4 shows the internal reliability coefficients (Cronbach alpha) overall and dimension-wise, are very good. Hence, the scale of Attitude towards CBCS possess good internal consistency and each item on a test is related to the topic researched.

Table 3.4 Dimension-wise Cronbach α

Sr.No	Area/Dimension	Cronbach α
1	Cafeteria approach	.80
2	Credit and grading system	.78
3	Impact on teachers' profession	.81
4	Impact on students' academics	.85
5	Implementation of CBCS	.87
	Total	.93

Norm

The investigator estimated z-score norms based on the raw scores obtained by the representative sample (Z-score = (X-M)/σ). The formula developed by Edward. I. Altman to determine a performance, where X is the raw score of the individual respondent, M is the mean of the representative sample, σ is the standard deviation of the representative sample. The Z-scores corresponding to raw scores of teachers is given in the appendix C. The minimum score of teachers towards CBCS is 38 and the highest is 190, the descriptive statistics for the collected data, is given below in table 3.5

Table 3.5 Norms for Interpretation (level of Attitude of Teacher's towards CBCS)

Mean: 127.19 SD:10.49 N: 350 Range of Scores: 38-190

Sr.No	Range of Raw Score	Range of z-Scores	Grade	Level of Attitude
1	149 & above	+2.01 & above	A	Extremely High
2	141-148	+1.26 to +2.00	B	High
3	133-140	+0.51 to +1.25	C	Above Average
4	**122-132**	**-0.50 to 0.50**	**D**	**Average**
5	114-121	-1.25 to -0.51	E	Below Average
6	101-113	-2.00 to -1.26	F	Low
7	100 & below	-2.01 & below	G	Extremely Low

The final draft of the scale is attached in Appendix D, containing 38 items on a five-point scale. Table 3.6 shows the final draft of the number of items accepted as per their dimensions.

Table 3.6 Dimension wise distribution of items CBCS (Final Draft)

Sr. No	Dimension	Serial No. of items in the old scale	Serial No. of items in the new scale	No. of items
1	Cafeteria approach	2, 3, 5, 20, 22, 23, 34, 40	1, 2, 4, 12, 13, 14, 23, 28	8
2	Credit and grading system	17, 18, 25, 29	10, 11, 16, 20	4
3	Impact on teachers' profession	7, 32, 35, 36, 38, 39, 46, 48	5, 21, 24, 25, 26, 27, 33, 34	8
4	Impact on students' academics	4, 13, 16, 26, 27, 33, 42, 45, 49, 56, 58	3, 8, 9, 17, 18, 22, 30, 32, 35, 36, 37	11
5	Implementation of CBCS	9, 11, 24, 28, 41, 44, 60	6, 7, 15, 19, 29, 31, 38	7
	The positive items are 28 (1, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 20, 23, 24, 26, 27, 29, 30, 31, 32, 34, 35, 37) The no. of negative items is 10 (item no. 2, 11, 19, 21, 22, 25, 28, 33, 36, 38)		Total	38

Opinionnaire for teachers on the issues faced by them in the implementation of CBCS

In order to find the issues faced by higher education teachers in the implementation of CBCS, an opinionnaire of four statements were constructed of which one is open-ended. The opinionnaire was constructed by the researcher after extensive literature study and suggestions from experts. For which the self-constructed opinionnaire has been attached in appendix D (a).

3.6 Professional Competency

For assessing the Professional Competency of teachers, the Investigator constructed the Scale of Professional Competency for there was no suitable tool for measuring the variable. For the first stage of item pool, 55 items (Appendix E) were constructed and after careful consideration from the guide: 50 items (Appendix F) were certain for expert opinion. To measure the Professional Competency, the researcher prepared the items of the Higher Education Teacher after a thorough review of related literature along with a series of discussions and meetings with the supervisor. With deep understanding of the concept, four dimensions were identified:

1. Conceptual and Content competencies:

A teacher should have clear and full mastery of subject area, in-depth comprehension of educational theories, thorough knowledge of various educational trends, pedagogical methods, techniques and the skill to apply the same. It also adds to teacher's effective use of technology to deliver the subject content.

2. Competencies related to Professional practice:

This refers to the skill of day-to-day teaching which includes- the ability of a teacher to plan a topic and deliver the same using differentiated activities and ICT; Encourage students to share their opinion without fear and take responsibility for their learning; Engage students in the development of their own learning; Create assessment activities to assess learning;

Carry out continuous evaluation in a systematic and formal manner. As a whole it relates closely to the transactional competencies, class management and evaluation competencies of a teacher.

3. Professional ethics and values:

It relates to the ability of a teacher to illustrate practices and apply ethics and values in professional relations and teaching practice; Create an environment in which students treat each other with dignity, courtesy, respect and fairness, while also promoting the open and critical exchange of ideas; Apply the knowledge of diversity in the classroom; Adapt practices that uphold the dignity of the teaching profession; Perform professional responsibilities with honesty and integrity and instil these values in students.

4. Competencies related to Professional Development and growth:

These Competencies refers to the efforts made by the teachers to actively participate in learning communities within and outside of school through conferences and seminars/webinars, seek feedback from students, peers and supervisors about own practice and identify learning needs, and use reflective practices to modify ones' own teaching practice.

The items and the dimension-wise distribution as per the first draft of the scale is provided in table 3.7

(FIRST DRAFT)

Table 3.7 Dimension wise distribution of items of Professional Competency

Sr. No	**Dimension**	**No. of items**
1	Conceptual and Content competencies	2, 4, 6,7, 10, 23, 26, 28, 41
2	Professional practice	5, 11, 12, 13, 14, 17, 18, 19, 20, 24, 29, 30, 31, 32, 33, 34, 35, 37, 38, 39, 42, 43, 45, 46, 50
3	Professional ethics and values	1, 3, 8, 15, 21, 22, 36, 40, 47
4	Professional Development and growth	9, 16, 25, 27, 44, 48, 49
	Total	50
The no. of negative items is 12 (item no. 11,14,18,20,24,27,34,37,41,43,45,50)		

The researcher distributed the tool to 10 experts from across various disciplines in higher education institutions and their suggestions and comments were incorporated to establish Content validity. Keeping in mind the items covered all the areas relating to the Professional Competency of teachers, the investigator once again revised the items and laid out the scoring procedure. The response format was the Likert scaling (Likert, 1932) with 5 response options labelled as Not at all, Rarely, Sometimes, Often, and Most of the time. The purpose of using 5-point scale is that, it is one of the best and most popular Likert Scale providing a neutral stand-point representing a specific response from the respondents which will eventually help in providing feedback and improving the competencies of a teacher. The positive items will be given a score from 1 to 5 and the negative the reverse i.e., 5 to 1. The second draft of the scale was prepared based on the expert suggestions, some of the items were modified, rejected/replaced. The modified questionnaire was administered to 147 teachers in Nagaland.

Item analysis

Computation of *t*- values were made for each item, for this 27% of low scores (low group) and 27% of high scores (high group) were recognized and middle 46% was weeded out (Kelley, 1939). The subjects' responses for 4 items were not showing significant difference between the lower and upper groups. Therefore, only 40 items were retained and 10 items which were found to be either very difficult and easy; were ineffective to differentiate teachers' difficulty level. Item to total correlation was also worked out to check internal consistency of the scale, items with lower values of *r* (t statistic>critical value at 0.05 LS) lack consistency and were rejected. Calculated values of Item to total correlation and correlation values ranges from .05 to .98 and item no. (1, 11, 41, 42, 49) do not measure the same construct that the whole scale is measuring. Therefore, 10 items were rejected (item no-1, 3, 6, 11, 17, 18, 41, 42, 49, 50) and the retained items as per the p-value, t-value, and

item to total correlation is 40 items (item no- 2, 4, 5, 7, 8, 9, 10, 12, 13, 14, 15, 16, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 43, 44, 45, 46, 47, 48) attached in appendix F.

Preliminary draft of 55 items was reviewed by 10 experts to attain content validity. To estimate the internal consistency, the scale was interpreted computing Cronbach's alpha (α) and Split-half method reliability (1^{st} & 2^{nd} half or Spearman-Brown Coefficient) through SPSS software. Reliability coefficient ranges from 0 to 1 (Gliem and Gliem, 2003). However, closer to the value of 'α' to 1 greater will be the internal consistency of the scale. Reliability coefficients are given in table 3.8

Table 3.8 Overall Coefficient of Reliability of Professional Competency

No. of Items	Cronbach α	Split Half Reliability (1^{st} & 2^{nd} Half)
40	.98	.97

The above table shows that the Split-Half reliability of Spearman-Brown Coefficient for 1^{st} and 2^{nd} half items at equal length is 0.97, which indicate that the retained items have very good Split-Half reliability. Table 3.9 shows the internal reliability coefficients (Cronbach alpha) overall and dimension-wise, are very good. Hence, the Professional Competency scale possess good internal consistency.

Table 3.9 Dimension-wise Cronbach α

Sr.No	Area/Dimension	'r' value
1	Conceptual and Content competencies	.93
2	Professional practice	.97
3	Professional ethics and values	.95
4	Professional Development and growth	.92
	Total	.98

Norm

The investigator estimated z-score norms based on the raw scores obtained by the representative sample (Z-score = (X-M)/σ) where X is the raw score of the individual

respondent, M is the mean of the representative sample, σ is the standard deviation of the representative sample. The Z-scores corresponding to raw scores of teachers is attached in appendix G. The minimum score of teachers' Professional Competency is 40 and the highest is 200, the descriptive statistics for the collected data, is given below in table 3.10

Table 3.10 Norms for Interpretation (level of Teacher's Professional Competency)

Mean: 163.13 SD: 20.204 N: 350 Range of Scores: 40-200

Sr.No	Range of Raw Score	Range of z-Scores	Grade	Level of Professional Competency
1	197 & above	+2.01 & above	A	Extremely High
2	189-196	+1.26 to +2.00	B	High
3	174-188	+0.51 to +1.25	C	Above Average
4	**153-173**	**-0.50 to 0.50**	**D**	**Average**
5	138-152	-1.25 to -0.51	E	Below Average
6	116-137	-2.00 to -1.26	F	Low
7	115 & below	-2.01 & below	G	Extremely Low

The final draft of the scale is attached in Appendix H, of which table 3.11 shows the final draft of the number of items retained as per their dimensions.

Table 3.11 Dimension wise distribution of items PC (Final Draft)

Sr. No	Dimension	Serial No. of items in the old scale	Serial No. of items in the new scale	No. of items
1	Conceptual and Content competencies	2, 4, 7, 10, 23, 26, 28	1, 2, 4, 7, 17, 20, 22	7
2	Professional practice	5, 12, 13, 14, 19, 20, 24, 29, 30, 31, 32, 33, 34, 35, 37, 38, 39, 43, 45, 46	3, 8, 9, 10, 13, 14, 18, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 35, 37, 38	20
3	Professional ethics and values	8, 15, 21, 22, 36, 40, 47	5, 11, 15 16, 30, 34, 39	7
4	Professional Development and growth	9, 16, 25, 27, 44, 48	6, 12, 19, 21, 36, 40	6
	Total			40
The no. of negative items is 7 (item no. 15, 17, 27, 34, 37, 43, 45)				

3.7 Organisational Climate

The researcher used the Institutional Climate Inventory (ICI) constructed by Bandhu (2006) as the instrument covers all the areas the researcher wanted to study, to find the organisational climate of teachers apparent in colleges.

As per the details provided, the Inventory has 27 items from leader behaviour characteristics namely psycho-physical hindrance, production emphasis and human thrust and 23 items from group characteristics in terms of disengagement, alienation, esprit and intimacy. With 34 positively worded and 16 negatively worded statements, rated on 4-point range i.e. ‘rarely occurs’, ‘sometime occurs’, ‘often occurs’, and ‘very frequently occurs’. The 7 dimensions were on the grounds of the educational setting, practiced and felt by the teaching faculty:

1. Disengagement focuses on the teacher's behaviour in a task-oriented situation.

2. Alienation is the behaviour of the teachers and the principal, known to be highly impersonal and formal. Here, the leader follows the policies and rules and does not have a friendly relationship with the teachers, also revealing an emotional distance among the teachers

3. Espirit concerns the "morale" of teachers, a sense of emotional needs being met and also appreciating the achievement in their job.

4. Intimacy is the teacher's fulfilment of emotional attachment with each other not at all times connected to task achievement.

5. Psychophysical Hindrance, a teacher here sense that the principal worries them with a lot of administrative requirements, routine duties and management activities which are less important. Considering the principal as autocratic, being remote to feedback from the teachers, and not sharing a two-way communication.

6. **Control** is a condition wherein the principal exercises bureaucratic behaviour and an impersonal demeanour; but he or she is task oriented makes efforts to be effective and efficient handing help to the faculty to attain a common goal through required active leadership and secretarial services.

7. Production Emphasis, here the principal exercises close supervision of the teachers, is highly directive and welcomes feedback from the teachers.

8. Humanized Thrust relates to the principals' behaviour wherein he or she tries to move the organization, setting examples to motivate teachers personally.

The table 3.12 below indicate the distribution of items as per dimension-wise.

Table 3.12 Institutional Climate Inventory by Bandhu (2006)
Dimension-wise distribution of items in the Institutional Climate Inventory

Dimension-wise Distribution of Items in the Institutional Climate Inventory Sr. No.	**Dimensions**	**Item Numbers in each Dimension**	**Number of Items**
1	Disengagement	**3***, 21, **30***, 40, 46	5
2	Alienation	5, 14, 25, **37*, 45***	5
3	Esprit	1, 9, 19, 22, 33, 42, 48	7
4	Intimacy	4, 8, 17, 34, 41, 47	6
5	Psycho-physical hindrance	**6*, 10*, 18***, 24, 29, **35*,** 43, **49***	8
6	Production emphasis	**2*, 12*, 16*, 23*,** 26, 28, **36***, 39, **44***, 50	10
7	Humanized thrust	7, 11, 13, 15, 20, 27, 31, **32***, 38	9
The Asterisk indicates the negative items		Total	50

To assess a climate as **better, good or poor,** Bandhu (2006) inferred the study of the broad classification on three different climatic conditions in the educational setting made by Halpin & Crofts (1963).

A setting which allows teachers to have job satisfaction and achievement is known as **better climate**. The emotional needs of the teaching faculty are attained; thus, they enjoy approachable relationship with each other. Further, giving way to interconnected group, task orientation, high morale and participation in the process of performing varied organisational responsibilities. Here, the principal has a democratic nature, yet thoughtful and sympathetic, concerns the needs of varied officials, delivers autonomy, encourages team work, decentralization, integration and exercises sensible management to provide quality and genuineness of non-academic and academic efforts. Marked by high level of spirit, co-worker cohesion, role clarity, fairness and support from authorities and administration, the teachers in this type of climate enjoy necessary physical environments and infrastructure with no authoritative hurdles.

When a cordial relationship is enjoyed between the principal and the staff members, it is known as a **good climate**. The emotional and social needs are fulfilled because teachers consider themselves a larger group of a family under the leadership of the principal. A certain amount of control is maintained by the principal in an indirect manner to manage the system. Thus, the leader is highly task-oriented. But what this type of climate lacks is the adequate facilities for teaching-learning, group involvement for task-accomplishment, opportunities for professional growth, decision making, classroom material, learning resources etc.

When teachers in an environment have a high degree of indifference, it is known as a **poor climate**. Here, the teachers do not enjoy job satisfaction and social relations, lacking contribution, closeness and group approach on the part of teachers. The leader is considered highly dictatorial who does not encourage nor support teachers in executing their tasks in a state of burn-out, introducing innovative practices, promoting professional growth and improvement.

3.8 Administration and Scoring

1. The questions provided on the paper is suitable to extract the answers as per the study.
2. There is no time constrain to complete the answer. Respondents are requested to give their response at their convenience.
3. Before administering the scale, confidentiality of responses must be assured to the respondents.
4. The respondents should be informed that the questions are structured to know the individual difference attitude and perception to different conditions and not to find their weaknesses and strengths, and no items hold correct or incorrect answer.
5. Respondents must be informed that all items are mandatory and no items should be left unattempted.
6. Each positive item or statement for Attitude Scale on CBCS should be scored 1 to strongly disagree (SD), 2 to disagree (D), 3 to Not Sure, 4 to agree (A) and 5 to strongly agree (SA). Reversed scoring is to be followed for the negative items.
7. Each positive item or statement for Professional Competency should be scored 1 to Not at All, 2 to Rarely, 3 to Sometimes, 4 to Often and 5 to Most of the time. Reversed scoring is to be followed for the negative items
8. Each positive item or statement for Institutional Climate Inventory should be scored 1 to Rare, 2 to Sometimes, 3 to Often, and 4 to Very frequently occurs. Reversed scoring is to be followed for the negative items.

3.9 Procedure

The procedure for data collection included obtaining permission from the concerned competent authorities, and then collecting the data. The researcher then visited the respective colleges and stated the title and purpose of study to the concerned authorities. The procedure for permission included writing an application to seek permission for data collection, which

was submitted to the college principals as per the sample. Information was gathered for the three variables being studied, namely, Attitude Scale on CBCS, Professional Competency and Institutional Climate Inventory. It was done using self-reporting scales administered to the sample. The respondents were first briefed about the objective of the study and the way of responding. They were assured of confidentiality of their responses and urged to provide honest responses. The scales do not consist of extracting personal information from the subjects, where the respondents choose if they should take part and to what degree. Curious respondents were assured, the outcome at the end of the investigation.

The data was analysed and interpreted by using appropriate statistical techniques. After the application of statistical techniques, the results were interpreted and analysed to test the stated hypotheses. Finally, conclusions were drawn and further implications of the study were stated.

3.10 Statistical Techniques

Investigator used following statistical techniques to test the stated objectives and hypotheses:

- Mean, standard deviation and percentage has been used to assess the levels of attitude of teachers towards CBCS.
- Mean, standard deviation and percentage has been used to assess the Professional Competency and Organisational Climate as perceived by higher education teachers.
- For finding the difference in attitude of teachers towards CBCS; Professional Competency among higher education teachers; Organisational Climate as perceived by higher education teachers with respect to gender, t-test has been applied.
- One-way ANOVA has been used to find out the difference in attitude of teachers towards CBCS; Professional Competency among higher education teachers;

Organisational Climate as perceived by higher education teachers - with respect to type of college, Stream of teaching and Years of experience.

- Post Hoc test (Tukey) has been used to find out the difference in mean groups individually when, One-way ANOVA showed only significant difference in mean groups as a whole.
- Pearson Product Moment method of coefficient of correlation has been used to discover the relationship involving - attitude of teachers towards CBCS and Professional Competency; attitude of teachers towards CBCS and Organisational Climate; Professional Competency and Organisational Climate.
- Regression analysis has been used to study the impact of Professional Competency and Organisational Climate on attitude of teachers towards CBCS.
- Multiple response analysis and percentages to analyse the open-ended questioners with regard to the challenges faced by higher education teachers in the implementation of CBCS.

In the next chapter i.e. chapter-four, the analysis and interpretation of the data will be discussed in detail.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

4.0 Introduction

An organized material, studied in order to discover essential truths and involving a number of closely interrelated processes to get results of research hypothesis and questions is referred to as analysis of data. For which the collected data has no value and importance if not properly analyzed.

After an analytical study, the procedure of investigation related to drawing inferences from the collected facts is referred to interpretation of data. Interpretating data is an important part of the investigation as it is only through this process which makes the collected data useful in solving actual problems. The analysis and interpretation of the data has been done under the following headings:

i. Result Pertaining to Attitude of teachers towards Choice Based Credit System.
ii. Result Pertaining to Organisational Climate as perceived by Higher education teachers.
iii. Result Pertaining to Professional Competency among Higher education teachers.
iv. Result Pertaining to Difference in Attitude of teachers towards Choice Based Credit System with respect to Gender.
v. Result Pertaining to Difference in Attitude of teachers towards Choice Based Credit System with respect to Type of College.
vi. Result Pertaining to Difference in Attitude of teachers towards Choice Based Credit System with respect to Stream of teaching.
vii. Result Pertaining to Difference in Attitude of teachers towards Choice Based Credit System with respect to Years of Experience.

viii. Result Pertaining to Difference in Organisational Climate as perceived by Higher education teachers with respect to Gender.

ix. Result Pertaining to Difference in Organisational Climate as perceived by Higher education teachers with respect to Type of College.

x. Result Pertaining to Difference in Organisational Climate as perceived by Higher education teachers with respect to Stream of teaching.

xi. Result Pertaining to Difference in Organisational Climate as perceived by Higher education teachers with respect to Years of Experience.

xii. Result Pertaining to Difference in Professional Competency among Higher education teachers with respect to Gender.

xiii. Result Pertaining to Difference in Professional Competency among Higher education teachers with respect to Type of College.

xiv. Result Pertaining to Difference in Professional Competency among Higher education teachers with respect to Stream of teaching.

xv. Result Pertaining to Difference in Professional Competency among Higher education teachers with respect to Years of Experience.

xvi. Result Pertaining to Relation between Attitude of teachers towards Choice Based Credit System and Organisational Climate.

xvii. Result Pertaining to Relation between Attitude of teachers towards Choice Based Credit System and Professional Competency.

xviii. Result Pertaining to Relation between Professional Competency and Organisational Climate.

xix. Results Pertaining to Influence of Professional Competency and Organisational Climate on Attitude of teachers towards Choice Based Credit System.

xx. Results Pertaining to the issues faced by higher education teachers in the implementation of CBCS.

4.1 RESULT PERTAINING TO ATTITUDE OF TEACHERS TOWARDS CHOICE BASED CREDIT SYSTEM

The objective was to assess the attitude of teachers towards Choice Based Credit System. The attitude of teachers towards Choice Based Credit System was examined through the statistical techniques of Mean, Standard Deviation and Percentage. After administering the attitude of teachers towards Choice Based Credit System scale, the mean and standard deviation were calculated. The overall mean is 127.19 and the Standard Deviation is 10.49. Accordingly, the mean indicate that the maximum score is 137.64 and the minimum is 116.61. Percentage was calculated corresponding to the obtained number of Higher education teachers in each category of attitude of teachers towards Choice Based Credit System.

Table 4.1
Mean, SD and Percentage of Higher Education Teachers in different Levels of Attitude towards Choice Based Credit System

Category of Attitude towards CBCS	Number of Higher Education Teachers	Mean	SD	Percentage of Higher Education Teachers
Unfavourable	120	116.61	8.30	34.30
Less favourable	123	128.43	2.03	35.10
Favourable	107	137.64	6.45	30.60
Overall	350	127.19	10.49	100.00

INTERPRETATION

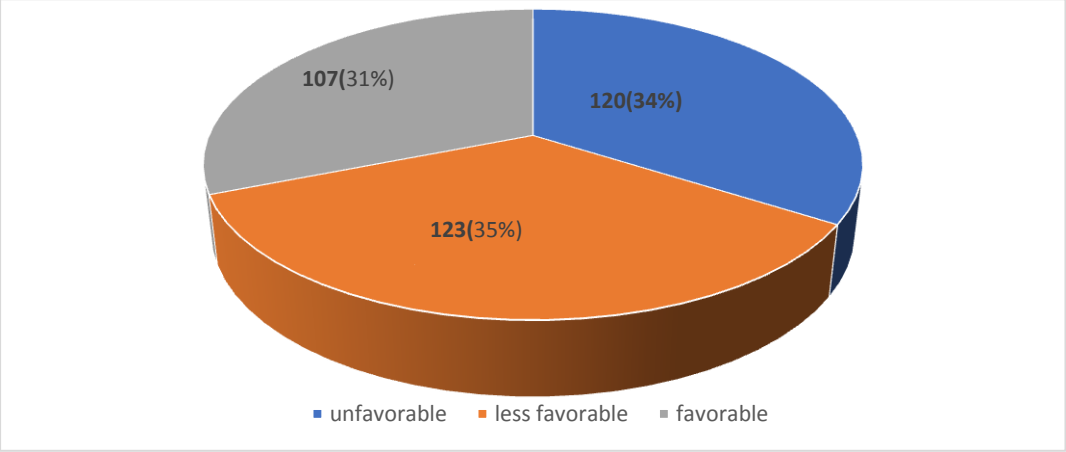
Table 4.1 shows that out of the 350 Higher education teachers that constituted the sample, 123 exhibit less favourable attitude towards CBCS, 120 with unfavourable and those with favourable attitude towards CBCS scores are 107. Further, the Mean and Standard

Deviation within the unfavourable attitude towards CBCS are 116.61 and 8.30 respectively. The Mean and Standard Deviation within the less favourable attitude towards CBCS are 128.43 and 2.03 respectively. The Mean and Standard Deviation within favourable attitude of teachers towards CBCS are 137.64 and 6.45 respectively.

The maximum number of Higher education teachers exhibit less favourable level of attitude towards CBCS, while favourable attitude towards CBCS is shown by the minimum number of teachers from the selected sample. The dispersion within the levels is highest in unfavourable attitude of teachers towards CBCS scores and is the lowest in less favourable attitude of teachers towards CBCS scores.

The Percentage of Higher education teachers falling in the less favourable attitude of teachers towards CBCS category is 35.10%, while that in unfavorable and favourable attitude towards CBCS category are 34.30% and 30.60% respectively. Figure 4.1 shows the number and percentage of Higher education teachers in various categories of attitude of teachers towards CBCS respectively.

Figure 4.1 Number and percentage of higher education teachers in various categories of attitude of teachers towards CBCS



4.2 RESULT PERTAINING TO ORGANISATIONAL CLIMATE AS PERCEIVED BY HIGHER EDUCATION TEACHERS

The objective was to assess the perception of teachers towards Organisational Climate. For which the sample was examined through the statistical techniques of Mean, Standard Deviation and Percentage. After administering the scale, the mean and standard deviation were calculated. The overall mean is 141.87 and the Standard Deviation is 16.88. Accordingly, the mean indicate that the maximum score is 160.67 and the minimum is 123.42. Percentage was calculated corresponding to the obtained number of Higher education teachers in each category of perception towards their Organisational Climate.

Table 4.2
Mean, SD and Percentage of Higher education teachers in different Levels of Organisational Climate

Levels of Organizational Climate	Number of Higher Education Teachers	Mean	SD	Percentage of Higher Education Teachers
Poor	118	123.42	8.79	33.70
Good	118	142.15	4.22	33.70
Better	114	160.67	8.34	32.60
Overall	350	141.87	16.88	100.00

INTERPRETATION

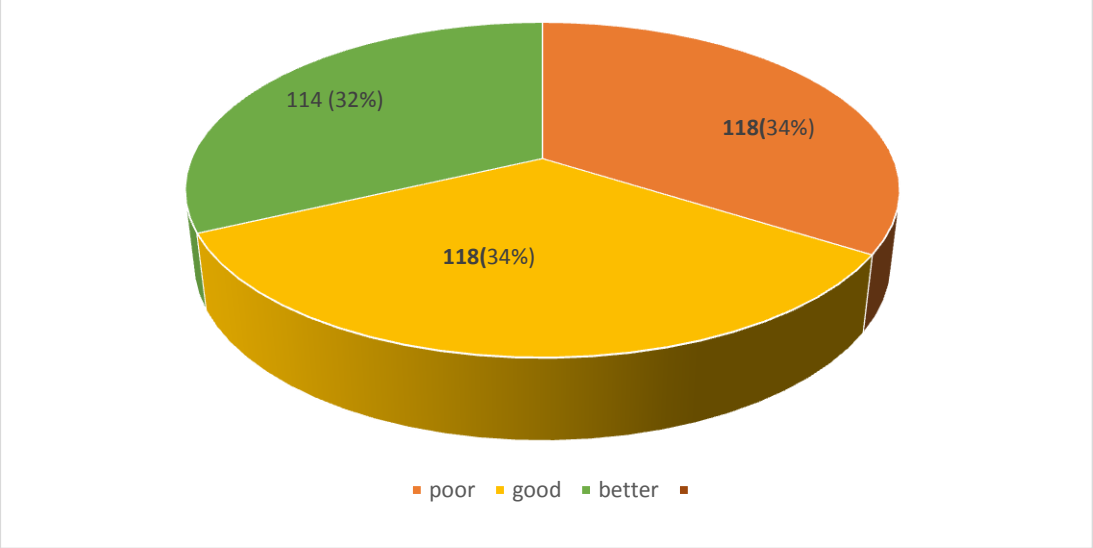
Table 4.2 shows that out of the 350 Higher education teachers that constituted the sample, 118 has poor perception and another 118 has good perception towards their Organisational Climate. The number of Higher education teachers with better perception towards their Organisational Climate is 114. Further, the Mean and Standard Deviation within the poor Organisational Climate are 123.42 and 8.79 respectively. The Mean and Standard Deviation within good Organisational Climate are 142.15and 4.22 respectively. The

Mean and Standard Deviation within better Organisational Climate are 160.67 and 8.34 respectively.

The maximum number of Higher education teachers exhibit poor and good level of Organisational Climate, while better Organisational Climate is shown by the minimum number of teachers from the selected sample. The dispersion within the levels is highest in poor Organisational Climate scores and is the lowest in good Organisational Climate.

The Percentage of Higher education teachers falling in the poor and good level of Organisational Climate is 33.70 %, in better level of Organisational Climate is 32.60%. Figure 4.2 shows the number and percentage of Higher education teachers in various categories of perception towards Organisational Climate respectively.

Figure 4.2 Number and percentage of higher education teachers in various categories of perception towards Organisational Climate



4.3 RESULT PERTAINING TO PROFESSIONAL COMPETENCY AMONG HIGHER EDUCATION TEACHERS

The objective was to assess the Professional Competency of teachers, examined through the statistical techniques of Mean, Standard Deviation and Percentage. After administering the Professional Competency of teachers, the mean and standard deviation of the population were calculated. The mean is 163.13 and the Standard Deviation is 20.20.

Accordingly, the mean indicate that the maximum score is 183.06 and the minimum is 139.56. Percentage was calculated corresponding to the obtained number of Higher education teachers in each category of Professional Competency.

Table 4.3
Mean, SD and Percentage of Higher Education Teachers in different Levels of Professional Competency

Levels of Professional Competency	Number of Higher Education Teachers	Mean	SD	Percentage of Higher Education Teachers
Low	117	139.56	14.42	33.40
Average	121	167.47	5.22	34.60
High	112	183.06	5.40	32.00
Overall	350	163.13	20.20	100.00

INTERPRETATION

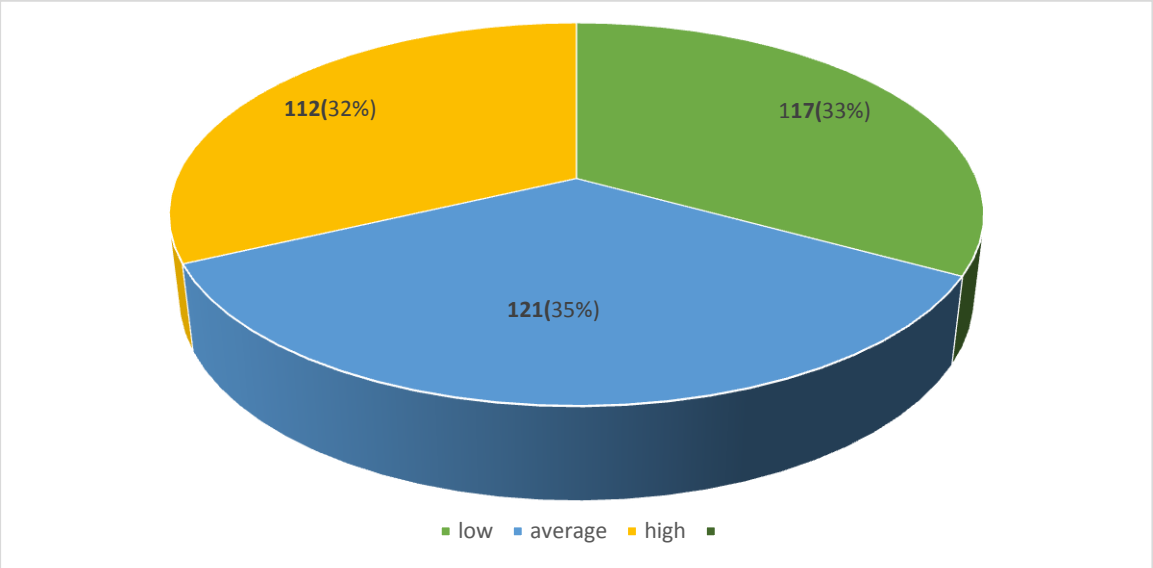
Table 4.3 shows that out of the 350 Higher education teachers that constituted the sample, 117 has low Professional Competency, 121 fall under average and 112 exhibit high Professional Competency. Further, the Mean and Standard Deviation within the low Professional Competency are 139.56 and 14.42 respectively. The Mean and Standard Deviation within average Professional Competency are 167.47 and 5.22 respectively. The Mean and Standard Deviation within high Professional Competency are 183.06 and 5.40 respectively.

The maximum number of Higher education teachers has average Professional Competency, minimum number of teachers has high Professional Competency from the selected sample. The dispersion within the levels is highest in low Professional Competency scores and is the lowest in average Professional Competency scores.

The Percentage of Higher education teachers falling in low Professional Competency is 33.40 %, average at 34.60% category and high at 32%. Figure 4.3 shows the number and

percentage of Higher education teachers in various categories of Professional Competency respectively.

Figure 4.3 Number and percentage of Higher education teachers in various categories of Professional Competency



4.4 RESULT PERTAINING TO DIFFERENCE IN ATTITUDE OF TEACHERS TOWARDS CHOICE BASED CREDIT SYSTEM WITH RESPECT TO GENDER.

The objective was to find out the difference in the attitude towards Choice Based Credit System of male and female Higher Education teachers. After administrating the Attitude towards Choice Based Credit System scale, mean, standard deviation, standard error of difference and t-value of the attitude towards CBCS of male and female Higher Education teachers were computed and the results have been presented in table 4.4

H_o: There exists no significant difference in the attitude of male and female higher education teachers towards Choice Based Credit System**.**

TABLE 4.4
Significance of Difference between Means of Choice Based Credit System of male and female Higher Education teachers

Gender	Mean	SD	N	SE_D	t'-value	S/NS
Male	127.15	10.47	170	1.12	0.93	P>0.05 NS*
Female	127.23	10.53	180			

Table values of t' (df=348) at 0.05 level of confidence is 1.97

INTERPRETATION

Table 4.4 shows the mean scores, standard deviation, standard error of difference and t'-value of attitude towards Choice Based Credit System of male and female Higher Education teachers. The table reveals that the mean scores of male and female Higher Education teachers in attitude towards Choice Based Credit System are 127.15 and 127.23 respectively. It may be concluded that the female teachers' attitude towards CBCS is better as compared to male teachers. The value of standard deviation in case of male is 10.47 and in case of female teachers it is 10.53. The t-value of male and female teachers in terms of attitude towards CBCS comes out to be 0.93 which is not significant at 0.05 level of confidence. It shows that male and female higher education teachers do not differ significantly from each other in attitude towards CBCS.

Therefore, the stated hypothesis that there exists no significant difference in the attitude towards Choice Based Credit System of male and female Higher Education teachers is accepted at 0.05 level of confidence.

4.5 RESULT PERTAINING TO DIFFERENCE IN ATTITUDE OF TEACHERS TOWARDS CHOICE BASED CREDIT SYSTEM WITH RESPECT TO TYPE OF COLLEGE

The objective was to find out the difference in the attitude towards Choice Based Credit System of Higher Education teachers in the government, private and autonomous colleges. After administrating the Attitude towards Choice Based Credit System scale, mean, standard deviation, One-Way ANOVA for attitude towards CBCS of teachers in the government, private and autonomous colleges were computed and the results have been presented in table 4.5

H_o: There exists no significant difference in the attitude of teachers in government, private and autonomous colleges towards Choice Based Credit System.

TABLE 4.5
Mean and Standard Deviation of Attitude towards Choice Based Credit System of Higher Education teachers with respect to type of college

Type of College	N	Mean	SD
Government	71	125.59	11.18
Private	118	127.93	9.12
Autonomous	161	127.35	11.08

INTERPRETATION

As depicted in Table 4.5, the mean attitude of higher education teachers towards CBCS scores of governments, private and autonomous colleges are 125.59, 127.93 and 127.35 and their standard deviation are 11.18, 9.12 and 11.08 respectively. The mean attitude of higher education teachers towards CBCS scores in government colleges is found to be the lowest and the highest in private colleges.

To explore the significance of differences between means of attitude of higher education teachers towards CBCS among government, private and autonomous colleges, One-Way ANOVA was applied. The summary of One-Way ANOVA is given in table 4.6.

TABLE 4.6
Summary of One-Way ANOVA for attitude of higher education teachers teaching in government, private and autonomous colleges

SOV	SS	df	MS	F- ratio	S/NS
Between the groups	250.74	2	125.37	1.13	P>0.05 NS*
Within the groups	38179.43	347	110.02		
Total	38430.17				

Table values of F- ratio for df (2 &347) at 0.05 level of confidence is 3.02

The F- value as seen in table 4.6 is 1.13 which does not reach significance with a p-value of 0.32 and is not significant at 0.05 level of confidence. Therefore, the stated hypothesis that there exists no significant difference in the attitude of teachers in government, private and autonomous colleges towards Choice Based Credit System is accepted.

4.6 RESULT PERTAINING TO DIFFERENCE IN ATTITUDE OF TEACHERS TOWARDS CHOICE BASED CREDIT SYSTEM WITH RESPECT TO STREAM OF TEACHING

The objective was to find out the difference in the attitude towards Choice Based Credit System of Higher Education teachers teaching in science, commerce and arts stream. After administrating the Attitude towards Choice Based Credit System scale, mean, standard deviation, One-Way ANOVA for attitude towards Choice Based Credit System of Higher Education teachers belonging to different streams was computed and the results have been presented in table 4.7.

H_o: There exists no significant difference in the attitude of teachers in arts, science, and commerce stream towards Choice Based Credit System.

TABLE 4.7
Mean and Standard Deviation of Attitude towards Choice Based Credit System of Higher Education teachers with respect to stream of teaching

Stream of teaching	N	Mean	SD
Arts	206	127.83	10.57
Science	102	125.33	10.58
Commerce	42	128.55	9.49

INTERPRETATION

As depicted in Table 4.7, the mean attitude of higher education teachers towards CBCS scores of arts, science, and commerce stream are 127.83, 125.33, and 128.55 and their standard deviation are 10.57, 10.58 and 9.49 respectively. The mean attitude of higher education teachers towards CBCS scores of science stream is found to be the lowest and commerce stream the highest.

To explore the significance of differences among means of attitude of higher education teachers towards CBCS teaching in science, commerce and arts stream, One-Way ANOVA was applied. The summary of One-Way ANOVA is given in table 4.8.

TABLE 4.8
Summary of One-Way ANOVA for attitude of higher education teachers teaching in arts, science, and commerce stream

SOV	SS	df	MS	F- ratio	S/NS
Between the groups	514.71	2	257.35	2.35	P>0.05 NS*
Within the groups	37915.46	347	109.26		
Total	38430.17				

Table values of F- ratio for df (2 &347) at 0.05 level of confidence is 3.02

The F- value as seen in table 4.8 is 2.35 which does not reach significance with a p-value of 0.09 and is not significant at 0.05 level of confidence. Therefore, the stated hypothesis that

there exists no significant difference in the attitude of teachers teaching in arts, science and commerce stream towards Choice Based Credit System is accepted.

4.7 RESULT PERTAINING TO DIFFERENCE IN ATTITUDE OF TEACHERS TOWARDS CHOICE BASED CREDIT SYSTEM WITH RESPECT TO YEARS OF EXPERIENCE

The objective was to find out the difference in the attitude towards Choice Based Credit System of Higher Education teachers with teaching experience of 1-10, 11-20, 21-30 years. After administrating the Attitude towards Choice Based Credit System scale, mean, standard deviation, One-Way ANOVA for attitude of higher education teachers towards CBCS having different years of teaching experience was computed and the results have been presented in table 4.9.

H_o: There exists no significant difference in the attitude of teachers towards Choice Based Credit System with teaching experience of 1-10, 11-20, 21-30 years.

TABLE 4.9
Mean and Standard Deviation of Attitude towards Choice Based Credit System of Higher Education teachers with respect to years of experience

Years of experience	N	Mean	SD
1-10	218	127.24	10.55
11-20	88	126.50	12.16
21-30	44	128.34	5.46

INTERPRETATION

As depicted in Table 4.9, the mean attitude of higher education teachers towards CBCS scores of teaching experience of 1-10, 11-20, 21-30 years are 127.24, 126.50 and 128.34 and their standard deviation are 10.55, 12.16 and 5.46 respectively. The mean attitude

of higher education teachers towards CBCS scores for 11-20 years' experience is found to be the lowest and 21-30 years' experience is the highest.

To explore the significance of differences among means of attitude of higher education teachers towards CBCS with teaching experience of 1-10, 11-20, 21-30 years, One-Way ANOVA was applied. The summary of One-Way ANOVA is given in table 4.10.

TABLE 4.10
Summary of One-Way ANOVA for attitude of higher education teachers teaching in with teaching experience of 1-10, 11-20, 21-30 years

SOV	SS	df	MS	F- ratio	S/NS
Between the groups	100.692	2	50.346	0.456	P>0.05 NS*
Within the groups	38329.483	347	110.460		
Total	38430.174				

Table values of F- ratio for df (2 &347) at 0.05 level of confidence is 3.02

The F- value as seen in table 4.10 is 0.45 which does not reach significance with a p-value of 0.63 which is not significant at 0.05 level of confidence. Therefore, the stated hypothesis that there exists no significant difference in the attitude of teachers towards Choice Based Credit System with teaching experience of 1-10, 11-20, 21-30 years is accepted.

4.8 RESULT PERTAINING TO DIFFERENCE IN ORGANISATIONAL CLIMATE AS PERCEIVED BY HIGHER EDUCATION TEACHERS WITH RESPECT TO GENDER

The objective was to find out the difference in the organizational climate of male and female Higher Education teachers. After administrating the organizational climate scale, mean, standard deviation, standard error of difference and t-value of the organizational climate of male

and female Higher Education teachers were computed and the results have been presented in table 4.11.

H_o: There exists no significant difference in the organizational climate of male and female Higher Education teachers**.**

TABLE 4.11
Significance of Difference between Means of Organizational Climate of male and female Higher Education teachers

Gender	Mean	SD	N	SE_D	t'-value	S/NS
Male	159.50	20.49	170	2.12	2.17	P<0.05 S*
Female	164.51	17.50	180			

Table values of t' (df=348) at 0.05 level of confidence is 1.97

INTERPRETATION

Table 4.11 shows the mean scores, standard deviation, standard error of difference and t'-value of organizational climate of male and female Higher Education teachers. The table reveals that the mean scores of male and female Higher Education teachers in organizational climate are 141.44 and 142.27 respectively. It may be concluded that the female teachers' organizational climate is better as compared to male teachers. The value of standard deviation in case of male is 16.79 and in case of female teachers it is 16.99. The p-value of male and female teachers in terms of organizational climate comes out to be 0.04 which is significant at 0.05 level of confidence. It shows that male and female higher education teachers differ significantly from each other in their organizational climate.

Therefore, the stated hypothesis that there exists no significant difference in the organizational climate of male and female Higher Education teachers rejected at 0.05 level of confidence.

4.9 RESULT PERTAINING TO DIFFERENCE IN ORGANISATIONAL CLIMATE AS PERCEIVED BY HIGHER EDUCATION TEACHERS WITH RESPECT TO TYPE OF COLLEGE

The objective was to find out the difference in the organizational climate of government, private and autonomous colleges. After administrating the organizational climate scale, mean, standard deviation, One-Way ANOVA for organizational climate of teachers in the government, private and autonomous colleges were computed and the results have been presented in table 4.12.

H_o: There exists no significant difference in the organizational climate of government, private and autonomous higher education teachers.

TABLE 4.12
Mean and Standard Deviation of organizational climate of Higher Education teachers with respect to type of college

Type of College	N	Mean	SD
Government	71	137.63	17.07
Private	118	145.56	16.10
Autonomous	161	141.03	16.90

INTERPRETATION

As depicted in Table 4.12, the mean of organizational climate scores of governments, private and autonomous colleges are 137.63, 145.56 and 141.03 and their standard deviation are 17.07, 16.10 and 16.90 respectively. The mean of organizational climate scores of Government college is found to be the lowest and the Private college is the highest.

To explore the significance of differences between means of organizational climate among government, private and autonomous colleges, One-Way ANOVA was applied. The summary of One-Way ANOVA is given in table 4.13

TABLE 4.13
Summary of One-Way ANOVA for organizational climate in government, private and autonomous colleges

SOV	SS	df	MS	F- ratio	S/NS
Between the groups	2993.54	2	1496.77	5.38	P<0.05 S*
Within the groups	96448.40	347	277.94		
Total	99441.95				

Table values of F- ratio for df (2 &347) at 0.05 level of confidence is 3.02

The F- value as seen in table 4.13 is 5.38 which reach significance with a p-value of 0.00. Therefore, the stated hypothesis that there exists no significant difference in the organizational climate of government, private and autonomous higher education teachers is rejected. Hence, there exists significant difference in the organizational climate of government, private and autonomous higher education teachers.

The results so far reveal a statistically significant difference between the groups as a whole but not in particular. So, Post Hoc test was used to know which groups differed from each other.

TABLE 4.13.1
Summary of Post Hoc test for organizational climate of higher education teachers in government, private and autonomous colleges

Type of College	Type of College	Mean Difference	Sig.
Government	Private	-7.98*	.00
	Autonomous	-3.38	.32
Private	Government	7.98*	.00
	Autonomous	4.59	.05
Autonomous	Government	3.38	.32
	Private	-4.59	.05

The multiple comparisons in the table 4.13.1 reveal that there is a significant difference between the government and private colleges, and the mean shows that teachers in private colleges (145.56) have better organizational climate as compared to government (137.63).

4.10 RESULT PERTAINING TO DIFFERENCE IN ORGANISATIONAL CLIMATE AS PERCEIVED BY HIGHER EDUCATION TEACHERS WITH RESPECT TO STREAM OF TEACHING

The objective was to find out the difference in the organizational climate in science, commerce and arts stream. After administrating the organizational climate scale, mean, standard deviation, One-Way ANOVA for organizational climate of teachers teaching in different streams was computed and the results have been presented in table 4.14.

H_o: There exists no significant difference in the organizational climate of arts, science, and commerce stream of higher education teachers.

TABLE 4.14
Mean and Standard Deviation of Organisational Climate Higher Education teachers with respect to stream of teaching

College	N	Mean	SD
Arts	206	143.35	17.45
Science	102	139.35	16.37
Commerce	42	140.71	14.59

INTERPRETATION

As depicted in Table 4.14, the mean of organizational climate scores of arts, science, and commerce stream are 143.35, 139.35 and 140.71 and their standard deviation are 17.45, 16.37 and 14.59 respectively. The mean organizational climate of arts, science, and commerce stream of higher education teachers is found to be the lowest in science and arts stream the highest.

To explore the significance of differences between means of organizational climate of arts, science, and commerce stream, One-Way ANOVA was applied. The summary of One-Way ANOVA is given in table 4.15.

TABLE 4.15
Summary of One-Way ANOVA for Organisational climate of higher education teachers teaching in arts, science, and commerce stream

SOV	SS	df	MS	F- ratio	S/NS
Between the groups	1153.25	2	576.62	2.03	P>0.05 NS*
Within the groups	98288.70	347	283.25		
Total	99441.95				

Table values of F- ratio for df (2 &347) at 0.05 level of confidence is 3.02

The F- value as seen in table 4.15 is 2.036 which does not reach significance with a p-value of 0.132 and is not significant at 0.05 level of confidence. Therefore, the stated hypothesis that there exists no significant difference in the organizational climate of arts, science, and commerce stream of higher education teachers is accepted.

4.11 RESULT PERTAINING TO DIFFERENCE IN ORGANISATIONAL CLIMATE AS PERCEIVED BY HIGHER EDUCATION TEACHERS WITH RESPECT TO YEARS OF EXPERIENCE

The objective was to find out the difference in the organizational climate as perceived by teachers with respect to teaching experience of 1-10, 11-20, 21-30 years. After administrating the organizational climate scale, mean, standard deviation, One-Way ANOVA for organizational climate having different years of teaching experience was computed and the results have been presented in table 4.16.

H_o: There exists no significant difference in the organizational climate with teaching experience of 1-10, 11-20, 21-30 years of higher education teachers.

TABLE 4.16
Mean and Standard Deviation of Organizational Climate of Higher Education teachers with respect to years of experience

Years of experience	N	Mean	SD
1-10	218	141.64	16.67
11-20	88	141.92	17.80
21-30	44	142.91	16.33

INTERPRETATION

As depicted in Table 4.16, the mean of organizational climate scores with respect to teaching experience of 1-10, 11-20, 21-30 years are 141.64, 141.92 and their standard deviation are 16.67, 17.80 and 16.33 respectively. The mean organizational climate scores of both 1-10 and 11-20 is found to be the lowest and 21-30 the highest.

To explore the significance of differences between means of organizational climate with teaching experience of 1-10, 11-20, 21-30 years, One-Way ANOVA was applied. The summary of One-Way ANOVA is given in table 4.17.

TABLE 4.17
Summary of One-Way ANOVA for Organizational Climate with teaching experience of 1-10, 11-20, 21-30 years

SOV	SS	df	MS	F- ratio	S/NS
Between the groups	59.50	2	29.75	0.10	P>0.05 NS*
Within the groups	99382.45	347	286.40		
Total	99441.95				

Table values of F- ratio for df (2 &347) at 0.05 level of confidence is 3.02

The F- value as seen in table 4.17 is 0.10 which does not reach significance with a p-value of 0.90 and is not significant at 0.05 level of confidence. Therefore, the stated hypothesis that there exists no significant difference in the organizational climate with teaching experience of 1-10, 11-20, 21-30 years of higher education teachers is accepted.

4.12 RESULT PERTAINING TO DIFFERENCE IN PROFESSIONAL COMPETENCY AMONG HIGHER EDUCATION TEACHERS WITH RESPECT TO GENDER

The objective was to find out the difference in professional competency of male and female Higher Education teachers. After administrating the professional competency scale, mean, standard deviation, standard error of difference and t'-value of professional competency of male and female Higher Education teachers were computed and the results have been presented in table 4.18.

H_o: There exists no significant difference in the professional competency of male and female higher education teachers**.**

TABLE 4.18
Significance of Difference between Means of Professional Competency of male and female Higher Education teachers

Gender	Mean	SD	N	SE_D	t'-value	S/NS
Male	160.72	21.50	170	2.14	2.18	P<0.05 S*
Female	165.41	18.66	180			

Table values of t' (df=348) at 0.05 level of confidence is 1.97

INTERPRETATION

Table 4.18 shows the mean scores, standard deviation, standard error of difference and t'-value of professional competency of male and female Higher Education teachers. The table reveals that the mean scores of male and female Higher Education teachers in professional competency are 160.72 and 165.41 respectively. It may be concluded that the female teachers' professional competency is better as compared to male teachers. The value of standard deviation in case of male is 21.50 and in case of female teachers it is 18.66. The p-value of male and female teachers in terms of professional competency comes out to be 0.03 which is significant at 0.05 level of confidence. It shows that male and female higher education teachers differ significantly from each other in professional competency.

Therefore, the stated hypothesis that there exists no significant difference in the professional competency of male and female Higher Education teachers is rejected at 0.05 level of confidence.

4.13 RESULT PERTAINING TO DIFFERENCE IN PROFESSIONAL COMPETENCY AMONG HIGHER EDUCATION TEACHERS WITH RESPECT TO TYPE OF COLLEGE

The objective was to find out the difference in the professional competency of Higher Education teachers in the government, private and autonomous colleges. After administrating the professional competency scale, mean, standard deviation, One-Way ANOVA for professional competency of teachers in the government, private and autonomous colleges were computed and the results have been presented in table 4.19.

H_o: There exists no significant difference in the professional competency of government, private and autonomous higher education teachers.

TABLE 4.19
Mean and Standard Deviation of Professional Competency of Higher Education teachers with respect to type of college

Type of College	N	Mean	SD
Government	71	162.55	24.72
Private	118	171.06	13.42
Autonomous	161	157.57	20.33

INTERPRETATION

As depicted in Table 4.19, the mean of professional competency scores of governments, private and autonomous colleges are 162.55, 171.06 and 157.57 and their standard deviation are 24.72, 13.42 and 20.33 respectively. The mean of professional competency scores of autonomous is found to be the lowest and private the highest.

To explore the significance of differences among means of professional competency of government, private and autonomous colleges, One-Way ANOVA was applied. The summary of One-Way ANOVA is given in table 4.20.

TABLE 4.20
Summary of One-Way ANOVA for Professional Competency of higher education teachers teaching in government, private and autonomous colleges

SOV	SS	df	MS	F- ratio	S/NS
Between the groups	12417.62	2	6208.81	16.56	P<0.05 S*
Within the groups	130043.59	347	374.76		
Total	142461.21				

Table values of F- ratio for df (2 &347) at 0.05 level of confidence is 3.02

The F- value as seen in table 4.20 is 16.56 which reach significance with a p-value of 0.00. Therefore, the stated hypothesis that there exists no significant difference in the professional competency of teachers teaching in government, private and autonomous colleges is rejected. Hence, there exists significant difference in the professional competency of government, private and autonomous higher education teachers.

The results so far reveal a statistically significant difference between the groups as a whole not in particular. So, Post Hoc test was used to know which groups differed from each other.

TABLE 4.20.1
Summary of Post Hoc test for Professional Competency of higher education teachers teaching in government, private and autonomous colleges

Type of College	Type of College	Mean Difference	Sig.
Government	Private	-8.51	.01
	Autonomous	4.98	.16
Private	Government	8.51	.01
	Autonomous	13.49	.00
Autonomous	Government	-4.98	.16
	Private	-13.48	.00

The multiple comparisons in the table 4.20.1 reveal that there is a significant difference between the private and government colleges, and the mean shows that teachers in private colleges (171.06) have better professional competency as compared to government (162.57). And a significant difference between autonomous and private colleges, the mean shows that teachers in private colleges (171.06) have better professional competency as compared to autonomous (157.57).

4.14 RESULT PERTAINING TO DIFFERENCE IN PROFESSIONAL COMPETENCY AMONG HIGHER EDUCATION TEACHERS WITH RESPECT TO STREAM OF TEACHING

The objective was to find out the difference in the professional competency of teachers teaching in science, commerce and arts stream. After administrating the professional competency scale, mean, standard deviation, One-Way ANOVA for professional competency belonging to different streams was computed and the results have been presented in table 4.21.

H_o: There exists no significant difference in the professional competency of arts, science, and commerce stream higher education teachers.

TABLE 4.21
Mean and Standard Deviation of professional competency of Higher Education teachers with respect to stream of teaching

Stream of teaching	N	Mean	SD
Arts	206	162.56	20.44
Science	102	159.12	21.05
Commerce	42	175.64	9.56

INTERPRETATION

As depicted in Table 4.21, the mean of professional competency of arts, science, and commerce stream are 162.56, 159.12 and 175.64 and their standard deviation are 20.44,

21.05, and 9.56 respectively. The mean of professional competency scores of science stream is found to be the lowest and commerce stream the highest.

To explore the significance of differences between means of professional competency of teachers teaching in science, commerce and arts stream, One-Way ANOVA was applied. The summary of One-Way ANOVA is given in table 4.22.

TABLE 4.22
Summary of One-Way ANOVA for Professional Competency of teachers teaching in arts, science, and commerce stream

SOV	SS	df	MS	F- ratio	S/NS
Between the groups	8284.30	2	4142.15	10.71	P<0.05 S*
Within the groups	134176.91	347	386.67		
Total	142461.21				

Table values of F- ratio for df (2 &347) at 0.05 level of confidence is 3.02

The F- value as seen in table 4.22 is 10.71 which reach significance with a p-value of 0.00 significant at 0.05 level of confidence. Therefore, the stated hypothesis that there exists no significant difference in the professional competency of arts, science, and commerce stream higher education teachers is rejected. Hence, there exists significant difference in the professional competency of arts, science, and commerce stream higher education teachers.

The results so far reveal a statistically significant difference between the groups as a whole not in particular. So, Post Hoc test was computed to know which groups differed from each other.

TABLE 4.22.1
Summary of Post Hoc test for Professional Competency of higher education teachers in arts, science, and commerce stream

Stream of teaching	Stream of teaching	Mean Difference	Sig.
Arts	Science	3.44	.31
	Commerce	-13.08*	.00
Science	Arts	-3.44	.31
	Commerce	-16.52*	.00
Commerce	Arts	13.08*	.00
	Science	16.52*	.00

The multiple comparisons in the table 4.22.1 reveal that there is a significant difference between the arts and commerce stream, the mean reveal that teachers teaching in commerce stream (175.64) have better professional competency as compared to arts stream (162.56). There is a significant difference between the science and commerce stream, the mean reveal that teachers teaching in commerce stream (175.64) have better professional competency as compared to science stream (159.12).

4.15 RESULT PERTAINING TO DIFFERENCE IN PROFESSIONAL COMPETENCY AMONG HIGHER EDUCATION TEACHERS WITH RESPECT TO YEARS OF EXPERIENCE

The objective was to find out the difference in the professional competency of Higher Education teachers with teaching experience of 1-10, 11-20, 21-30 years. After administrating the professional competency scale, mean, standard deviation, One-Way ANOVA for professional competency of teachers having different years of teaching experience was computed and the results has been given in table 4.23.

H_o: There exists no significant difference in Professional Competency of teachers with teaching experience of 1-10, 11-20, 21-30 years.

TABLE 4.23
Mean and Standard Deviation of Professional Competency with respect to years of experience

Years of experience	N	Mean	SD
1-10	218	165.72	16.69
11-20	88	163.23	26.67
21-30	44	150.11	16.09

INTERPRETATION

As depicted in Table 4.23, the mean of professional competency scores of teaching experience of 1-10, 11-20, 21-30 years are 165.72, 163.23 and 150.11 and their standard deviation are 16.69, 26.67 and 16.09 respectively. The mean professional competency scores of 21-30 years teaching experience is found to be the lowest and 1-10 years teaching experience is the highest.

To explore the significance of differences between means of professional competency with teaching experience of 1-10, 11-20, 21-30 years, One-Way ANOVA was applied. The summary of One-Way ANOVA is given in table 4.24.

TABLE 4.24
Summary of One-Way ANOVA for professional competency of teachers with teaching experience of 1-10, 11-20, 21-30 years

SOV	SS	df	MS	F- ratio	S/NS
Between the groups	8912.96	2	4456.48	11.57	P<0.05
Within the groups	133548.25	347	384.86		S*
Total	142461.21				

Table values of F- ratio for df (2 &347) at 0.05 level of confidence is 3.02

The F- value as seen in table 4.24 is 11.57 which reach significance with a p-value of 0.000. Therefore, the stated hypothesis that there exists no significant difference in Professional Competency of teachers with teaching experience of 1-10, 11-20, 21-30 years is

rejected. With F-ratio revealing the differences has not occurred by chance. Hence, there exists significant difference in the professional competency of teachers with teaching experience of 1-10, 11-20, 21-30 years.

The results so far reveal a statistically significant difference between the groups as a whole not in particular. So, Post Hoc test was used to know which groups differed from each other.

TABLE 4.24.1
Summary of Post Hoc test for Professional Competency of higher education teachers with teaching experience of 1-10, 11-20, 21-30 years

Teaching experience	Teaching experience	Mean Difference	Sig.
1-10	11-20	-2.49	.57
	21-30	15.60	.00
11-20	1-10	-2.49	.57
	21-30	13.11	.00
21-30	1-10	15.60	.00
	11-20	13.11	.00

The multiple comparisons in the table 4.24.1 reveal that there is a significant difference between the teaching experience of 1-10 and 21-30 years, and the mean reveal that teachers who have teaching experience of 1-10 years (165.75) have better professional competency as compared to 21-30 years (150.11). There is a significant difference between the teaching experience of 11-20 years and 21-30 years, and the mean reveal that teachers who have teaching experience of 11-20 years (163.23) have better professional competency as compared to 21-30 years (150.11).

4.16 RESULT PERTAINING TO RELATION BETWEEN ATTITUDE OF TEACHERS TOWARDS CHOICE BASED CREDIT SYSTEM AND ORGANISATIONAL CLIMATE

The objective was to find the relationship between attitude of higher education teachers towards Choice Based Credit System and Organisational Climate. The r-value was calculated using the Pearson Product Moment Correlation Method, after administering the scales pertaining to attitude of higher education teachers towards CBCS and Organisational Climate. The results are shown in table 4.25.

H_a: There exists a significant positive relationship between the attitude of Higher Education Teachers towards Choice Based Credit System and Organisational Climate.

TABLE 4.25
Relation between attitude of higher education teachers towards CBCS and Organisational Climate

Variables	N	df	r-value	S/NS
Attitude towards CBCS	350	348	0.96	P<0.05
Organisational Climate				S*

Critical value of r (df=348) at 0.05 level of confidence is 0.113

INTERPRETATION

Data presented in table 4.25 indicate that the value of Pearson Product Moment Correlation Coefficient between attitude of higher education teachers towards CBCS and Organisational Climate is 0.96. This value of correlation (0.96) is positive and statistically significant at 0.05 level of confidence. Thus, the stated hypothesis that Organisational Climate has significant influence on attitude of higher education teachers towards Choice Based Credit System is not rejected.

Hence, attitude of higher education teachers towards CBCS and Organisational Climate are strongly correlated, revealing that the better the Organisational Climate of a college the favorable the teachers' attitude will be towards CBCS.

4.17 RESULT PERTAINING TO RELATION BETWEEN ATTITUDE OF TEACHERS TOWARDS CHOICE BASED CREDIT SYSTEM AND PROFESSIONAL COMPETENCY

The objective was to find the relationship between attitude of higher education teachers towards Choice Based Credit System and Professional Competency. The r-value was calculated using the Pearson Product Moment Correlation Method, after administering the scales pertaining to attitude of higher education teachers towards CBCS and Professional Competency. The results are shown in table 4.26.

H_a: There exists a significant positive relationship between the attitude of Higher Education Teachers towards Choice Based Credit System and Professional Competency.

TABLE 4.26
Relation between attitude of higher education teachers towards CBCS and Professional Competency

Variables	N	df	r-value	S/NS
Attitude towards CBCS	350	348	0.95	P<0.05
Professional Competency				S*

Critical value of r (df=348) at 0.05 level of confidence is 0.113

INTERPRETATION

Data presented in table 4.26 indicate that the value of Pearson Product Moment Correlation Coefficient between attitude of higher education teachers towards CBCS and Professional Competency is 0.95. This value of correlation (0.95) is positive indicating a strong correlation and statistically significant at 0.05 level of confidence. Thus, the stated hypothesis that Professional Competency has significant influence on attitude of higher education teachers towards Choice Based Credit System is not rejected.

Hence, attitude of higher education teachers towards CBCS and Professional Competency are strongly correlated, revealing that the better the Professional Competency of a teacher the favorable their attitude will be towards CBCS.

4.18 RESULT PERTAINING TO RELATION BETWEEN PROFESSIONAL COMPETENCY AND ORGANISATIONAL CLIMATE

The objective was to find the relationship between Professional Competency and Organisational Climate. The r-value was calculated using the Pearson Product Moment Correlation Method, after administering the scales pertaining to Professional Competency and Organisational Climate. The results are shown in table 4.27.

H_a: There exists a significant positive relationship between Professional Competency and Organisational Climate among higher education teachers.

TABLE 4.27
Relation between Professional Competency and Organisational Climate among higher education teachers

Variables	N	df	r-value	S/NS
Professional Competency	350	348	0.96	P<0.05
Organisational Climate				S*

Critical value of r (df=348) at 0.05 level of confidence is 0.113

INTERPRETATION

Data presented in table 4.27 indicate that the value of Pearson Product Moment Correlation Coefficient between Professional Competency and Organisational Climate is 0.96. This value of correlation (0.96) is positive and statistically significant at 0.05 level of confidence. Thus, the stated hypothesis that there exists a significant positive relationship between Professional Competency and Organisational Climate among higher education teachers is not rejected.

Hence, Professional Competency and Organisational Climate are strongly correlated, revealing that the better the Organisational Climate the higher the Professional Competency of teachers.

4.19 RESULTS PERTAINING TO INFLUENCE OF PROFESSIONAL COMPETENCY AND ORGANISATIONAL CLIMATE ON ATTITUDE OF TEACHERS TOWARDS CHOICE BASED CREDIT SYSTEM

The objective of the study was to analyze the influence of Professional Competency and Organisational Climate on attitude of higher education teachers towards CBCS. After administering the Professional Competency and Organisational Climate scale and attitude towards CBCS scale, Regression has been computed and results have been presented in table 4.28 and 4.29.

H_a: Professional Competency and Organisational Climate has significant influence on attitude of higher education teachers towards CBCS.

TABLE 4.28-Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.972[a]	0.94	0.94	2.49

a. Predictors: (Constant), Professional Competency and Organisational Climate

TABLE 4.29 -ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	**Regression**	36275.03	2	18137.51	2920.33	0.000[b]
	Residual	2155.14	347	6.21		
	Total	38430.17	349			

a. Dependent Variable: Attitude towards CBCS

b. Predictors: (Constant), Professional Competency and Organisational Climate

INTERPRETATION

From the regression table 4.28 and 4.29, it is clear that Professional Competency and Organisational Climate yielded coefficient Regression(R) of 0.97 and R square for the same is found to be 0.94. This indicates that 94.4% variation in attitude towards CBCS is explained by Professional Competency and Organisational Climate in the modal. The variation of 94.4% is significant at 0.05 level of significance. So, it is evident that 94.4% of the attitude towards CBCS has been explained by the Professional Competency and Organisational Climate in case of higher education teachers and 5.6% variation is explained by other variables, which are beyond the scope of this study.

TABLE 4.30 -Coefficients of Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	**Std. Error**	**Beta**		
1	**(Constant)**	42.02	1.12		37.21	0.00
	Professional Competency	0.17	0.02	0.33	6.58	0.00
	Organisational Climate	0.40	0.03	0.64	12.83	0.00

a. Dependent Variable: Attitude

INTERPRETATION

From the table 4.30 of coefficients of regression, the regression analysis is

Attitude towards CBCS =

42.029 +0.172 (Professional Competency) + 0.402 (Organisational Climate)

If Y is Attitude towards CBCS, X_1 is PC and X_2 is OC. Then regression equation for the prediction of Attitude towards CBCS is **$Y=42.029+0.172\ X_1 +0.404X_2$**

So, with one unit increase in Professional Competency there will be 0.172 times increase in attitude towards CBCS of higher education teachers and with one unit increase in

Organisational Climate there will be 0.402 times increase in attitude towards CBCS of higher education teachers. The B value of PC (0.172) and OC (0.402) reveal that OC is a higher predictor of attitude of higher education teachers towards CBCS.

Hence, the Professional Competency and Organisational Climate are the strong predictors of attitude towards CBCS of higher education teachers.

4.20 RESULTS PERTAINING TO THE ISSUES FACED BY HIGHER EDUCATION TEACHERS IN THE IMPLEMENTATION OF CBCS

In order to find out the issues faced by higher education teachers in the implementation of CBCS, an opinionnaire of four statements of which one is open-ended was constructed by the researcher. For which the results are shown in table 4.31, 4.32, 4.33 and 4.34.

TABLE 4.31 Response in number and percentage (1)

Item No.	Statement	Response	N	%
1.	Does your institution/university have well-equipped infrastructure for CBCS?	Yes	114	33%
		No	50	14%
		To some extent	186	53%
		If Yes/To some extent, Classrooms are		
		i. Spacious	185	61.7%
		ii. Properly ventilated	189	63.0%
		iii. Well-lighted	293	97.7%
		iv. ICT enabled	38	12.7%
	v. Laboratories are well equipped with latest equipment and software		70	23.3%
	vi. Provides a Wi-Fi Campus		300	100.0%

INTERPRETATION

From the frequencies table 4.31 it is clear that, teachers who found that their institution/university were well-equipped with infrastructure for CBCS as per percentage are

33%; 14% did not have well-equipped infrastructure for CBCS; while 53% responded to some extent. From among the 350 teachers whoever said Yes /To some extent, to the question whether institution/ university have well-equipped infrastructure for CBCS, are 300 teachers. For which the number and percentage of classrooms being Spacious is 185 (61.7%); Properly ventilated is 189 (63.0%); Well-lighted is 293 (97.7%); ICT enabled is 38 (12.7%); Laboratories are well equipped with latest equipment and software is 70 (23.3%); Provides a Wi-Fi Campus is 300 (100%) are given in table 4.31 above.

TABLE 4.32 Response in number and percentage (2)

Item No.	Statement	Response	N	%
2.	Have you been oriented relating to CBCS?	Yes	183	52.4%
		No	167	47.6%
	If yes, i. Who provided such orientation?	Administration	96	52.5%
		HOD	87	47.5%
	ii. Do you feel the orientation provided to you was adequate to carry out the task as a teacher under CBCS?	Yes	72	39.3%
		No	38	20.8%
		To some extent	73	39.9%
	If No, do you feel the need of such orientation?	Yes	119	100.0%
		No	-	-

From the frequencies table 4.32 it is clear that from among 350 teachers, 183 (52%) have been oriented to CBCS and 167 (47.6%) were not. Out of which 96 (52.5%) teachers were oriented by the Administration and 87 (47.5%) by their respective departmental heads. 72 (40%) felt that to some extent the orientation provided was adequate to carry out the task as a teacher under CBCS; 38 (21%) felt the orientation provided was not adequate; 73 (39%) felt adequate. 119 (100%) teachers felt the need of an orientation of CBCS.

TABLE 4.33 Response in number and percentage (3)

Item No.	Statement	Response	N	%
3.	Has the introduction of CBCS affected your functioning as a teacher?	Yes	274	78.3%
		No	76	21.7%
		If yes,	259	94.5%
		i. My workload has increased in terms of conducting class tests, assignments, seminars, field reports.		
		ii. I rarely get time for professional growth.	181	66.1%
		iii. The workload has negative impact on my teaching.	74	27.0%
		iv. Unable to cope with the innovative skills, drive me to leave the job.	90	32.8%

From the frequencies table 4.33 it is clear that from among 350 teachers, 274 (78.3%) teachers revealed that CBCS has affected their functioning as a teacher. Wherein, 259 (94.5%) agreed that their workload has increased in terms of conducting class tests, assignments, seminars, field reports; 181(66%) rarely get time for professional growth; 74 (27%) found that the workload has negative impact on their teaching; 90 (33%) were unable to cope with the innovative skills which drive me to leave the job.

TABLE 4.34 Response in number and percentage (4)

Item No.	Statement	Response	N	%
4.	What are the challenges faced by you, in the implementation of CBCS	i. Overcrowded classroom	205	58.6%
		ii. Lack of appropriate facilities	204	58.0%
		iii. Lack of human resources	211	60.3%
		iv. Inability to comprehend the complex nature of CBCS	293	83.7%

From the frequencies table 4.34 it is clear that from among 350 teachers, 205 (59%) find Overcrowded classroom; 204 (58%) Lack of appropriate facilities; 211 (60.3%) Lack of human resources; 293 (84.7%) Inability to comprehend the complex nature of CBCS as challenges in the implementation of CBCS.

Other challenges as mentioned by the higher education teachers in the implementation of CBCS are:

1. Departments in the college do not closely work with each other.
2. Large number of students in the classroom creates problems to cater to individual needs.
3. Some students choose subjects that apparently seems easier for them, not really assessing its implications or relevance.
4. Allotment of open electives across departments creates chaos with such a situation at hand, adopting lateral entry through Multiple entry and Exit option will be a major challenge.
5. Lack of proper orientation on CBCS and the notification on colleges affiliated to Nagaland University having to adopt to the revised CBCS has created confusion.
6. Increased testing and evaluative exercises under CBCS hamper the time left for teaching and also the quality delivery of content in the classroom.
7. The allotted time given to complete the prescribed syllabus with practical/ experiment is not sufficient.
8. The timely conduct of classes for the core and subject specific courses are hindered due to the long distance between the departments.
9. Lack of effective training on understanding credit allotments and grading system has lowered the confidence as a teacher.
10. Institutions are more centered on their own development, which should be broadened through a Memorandum of Understanding between institutions. This could remove the extra burden on teachers because the skill-based courses are narrowed down only to the classroom making it impractical.
11. Organizing fieldwork and summer internship are also a big challenge.

12. With the introduction of FYUGP after only a semester under CBCS, and a lack of awareness about the CBCS teachers are still confused with how credits are distributed, and credits calculated.
13. Shortage of teaching faculty and classrooms.

In the next chapter i.e. chapter-five, a detail summary and discussion of the study will be discussed in detail.

CHAPTER V

SUMMARY, CONCLUSIONS AND SUGGESTIONS

5.1 SUMMARY OF THE STUDY

The present chapter deals with the summary of the research, objectives, hypotheses, research question, methodology in brief, major findings, discussions, educational implications of the study, delimitations and suggestions for further research**.**

Need and Rationale of the study

CBCS in Nagaland University was notified to be implemented in the academic session 2021-2022 by the Vice Chancellor Prof. Pradeshi Lal on 5th July 2021. The stage of experimenting and making adjustments to the new system of CBCS in Nagaland University was only one academic session i.e. 2021-2022, adopting CBCS under NEP2020 in 2022-23 session. Although St. Joseph College, Kohima Science College and Patkai College adopted CBCS under the semester system of teaching-learning examination and evaluation. However, the full-fledged execution of the schemes' flexibility in credit transfers and ease of mobility still remains questionable. Such questions underlying its revised implementation and its full execution have to be considered as this is what the future of our education depends upon which may stand in the way for the successful implementation of CBCS under NEP2020. Since teachers play a pivotal role in the execution, there was need to study the attitude towards the change in the education system and find the challenges which could be avoided. Other factors that take place with or without a person's control can influence the attitude. Hence, the researcher was keen to know to what extend the Organisational Climate and Professional Competency affect the attitude of teachers towards CBCS.

Statement of the problem

The problem is stated as "Attitude of Higher Education Teachers towards CBCS in relation to Organisational Climate and Professional Competency."

Operational definitions

i. Organisational Climate

It refers to the environment of the college which influences the attitude of teachers towards CBCS in the Colleges affiliated to Nagaland University. It is determined through a scale; measuring the perception of the teachers towards their organisational climate under 7 dimensions given by Bandhu (2006) i.e. Disengagement, Alienation, Espirit, Intimacy, Psycho-physical hindrance, Production emphasis and Humanized thrust.

ii. Professional Competency

It refers to the skills, knowledge and attributes which influences higher education teachers' attitude towards CBCS, it is measured through a questionnaire constructed by the researcher on 4 dimensions i.e. Conceptual and Content competencies, Competencies related to Professional practice, Professional ethics and values and Competencies related to Professional Development and growth.

iii. Higher Education Teachers

Higher Education Teachers means all teachers teaching in higher education colleges across Nagaland.

iv. Attitude Towards CBCS

Attitude means positive or negative reaction of teachers towards CBCS in colleges.

v. Choice Based Credit System

It is an internationalized pattern of curriculum management with flexibility in designing curriculum and assigning credits based on the course content and hours of teaching (UGC Guidelines, 2015) focusing on Semester system, Credit system, Comprehensive continuous assessment, Grading and Choice based course structure.

OBJECTIVES OF THE STUDY

1. To assess the level of attitude of Higher Education Teachers towards Choice Based Credit System and Professional Competency.

2. To assess the Organisational Climate as perceived by Higher Education Teachers.
3. To explore the difference in the attitude of teachers towards Choice Based Credit System, Organisational Climate, Professional Competency with respect to gender, type of college, stream of teaching and experience.
4. To determine the relationship between teachers' attitude towards Choice Based Credit System and Professional Competency.
5. To determine the relationship between teachers' attitude towards Choice Based Credit System and Organisational Climate.
6. To determine the relationship between Organisational Climate and Professional Competency.
7. To analyse the influence of Organisational Climate and Professional Competency on teachers' attitude towards Choice Based Credit System.
8. To know the challenges faced by teachers in the implementation of CBCS in Nagaland.

HYPOTHESES OF THE STUDY

1. There exists no significant difference in the attitude of male and female higher education teachers towards Choice Based Credit System**.**
2. There exists no significant difference in the attitude of teachers in government, private and autonomous colleges towards Choice Based Credit System.
3. There exists no significant difference in the attitude of teachers in arts, science, and commerce stream towards Choice Based Credit System.
4. There exists no significant difference in the attitude of teachers towards Choice Based Credit System with teaching experience of 1-10, 11-20, 21-30 years.
5. There exists no significant difference in the organizational climate of male and female Higher Education teachers**.**

6. There exists no significant difference in the organizational climate of government, private and autonomous higher education teachers.
7. There exists no significant difference in the organizational climate of arts, science, and commerce stream of higher education teachers.
8. There exists no significant difference in the organizational climate with teaching experience of 1-10, 11-20, 21-30 years of higher education teachers.
9. There exists no significant difference in the professional competency of male and female higher education teachers**.**
10. There exists no significant difference in the professional competency of government, private and autonomous higher education teachers.
11. There exists no significant difference in the professional competency of arts, science, and commerce stream higher education teachers.
12. There exists no significant difference in professional Competency of teachers with teaching experience of 1-10, 11-20, 21-30 years.
13. There exists a significant positive relationship between the attitude of Higher Education Teachers towards Choice Based Credit System and Organisational Climate.
14. There exists a significant positive relationship between the attitude of Higher Education Teachers towards Choice Based Credit System and Professional Competency.
15. There exists a significant positive relationship between Professional Competency and Organisational Climate among higher education teachers.
16. Organisational Climate and Professional Competency has significant influence on the attitude of Higher Education Teachers towards Choice Based Credit System.

RESEARCH QUESTION

I. What are the issues faced by higher education teachers in the implementation of CBCS in Nagaland?

METHODOLOGY

Descriptive survey method was employed to conduct the research. It involved the collection and analysis of quantitative data and part of the dependent variable through open-ended qualitative data. Data was collected through scales; to achieve the objectives of the present research, the quantitative data were collected and for the dependent variable the qualitative data was also collected to support the conclusions of the study. Through a simple random sampling technique, the researcher decided a sample size of 350 teachers across colleges in Nagaland. Four tools were used to collect the data i.e. Attitude Scale on Choice Based Credit System, Opinionnaire for teachers on the issues faced by them in the implementation of CBCS comprising of 4 statements of which 1 is open-ended, Professional Competency Scale (all three self-constructed) and the Institutional Climate Inventory (For Colleges) Constructed & Standardised by Dr. Tarlok Bandhu (2006) Himachal Pradesh University.

FINDINGS

1. 35.10% of Higher education teachers have less favourable attitude of teachers towards CBCS category while 34.30% fall in unfavourable and the rest 30.60% in favourable attitude towards CBCS category. Therefore, Higher education teachers in Nagaland have less favourable attitude towards CBCS.
2. Percentage of Higher education teachers falling in the poor and good level of Organisational Climate is 33.70 % and in the level of better Organisational Climate is 32.60%. Hence, the Organisational Climate as perceived by Higher education teachers in Nagaland is at both Poor and Good level.

3. The Percentage of Higher education teachers falling in low Professional Competency is 33.40 %, average at 34.60% category and high at 32%. It can be concluded that the Professional Competency of Higher education teachers in Nagaland is of an Average level.
4. Male and female higher education teachers do not differ significantly from each other in attitude towards CBCS. The means of both the group are the same revealing that both the gender share the same attitude towards Choice Based Credit System.
5. Government, private and autonomous colleges do not differ significantly from each other in attitude towards Choice Based Credit System. This means that with respect to type of college the teachers share the same attitude towards CBCS.
6. Arts, science and commerce stream do not differ significantly from each other in attitude towards Choice Based Credit System. Revealing that with respect to stream of teaching the teachers share the same attitude towards CBCS.
7. Teaching experience in 1-10, 11-20, 21-30 years of higher education teachers do not differ significantly from each other in attitude towards Choice Based Credit System. This means that with respect to teaching experience the teachers share the same attitude towards CBCS.
8. The perception of Male and female higher education teachers differs significantly from each other in their organizational climate. Thus, with respect to gender the teachers do not share the same perception towards their organizational climate. Female teachers with mean of 164.51 have better perception towards their organizational climate compared to mean of male 159.50.
9. There exists significant difference in the organizational climate of government, private and autonomous higher education teachers. And there is a significant difference between the private and government colleges, and the mean shows that

teachers in private colleges (145.56) have better organizational climate as compared to government (137.63).

10. Arts, science, and commerce stream do not differ significantly in their organizational climate. Revealing that teachers share the same perception towards their organizational climate with respect to stream of teaching.
11. Higher education teachers with teaching experience of 1-10, 11-20, 21-30 years do not differ significantly in terms of their organizational climate. This means that teachers share the same perception towards their organizational climate irrespective of their teaching experience.
12. Male and female higher education teachers differ significantly from each other in professional competency. Irrespective of gender the professional competency of teachers is not the same, the mean reveal that female (165.41) teachers have better professional competency as compared to male (160.72).
13. There exists significant difference in the professional competency of government, private and autonomous higher education teachers. There is a significant difference between the private and government colleges, and the mean shows that teachers in private colleges (171.06) have better professional competency as compared to government (162.57). And a significant difference between autonomous and private colleges, the mean shows that teachers in private colleges (171.06) have better professional competency as compared to autonomous (157.57).
14. There exists significant difference in the professional competency of arts, science, and commerce stream higher education teachers. There is a significant difference between the arts and commerce stream, the mean reveal that teachers teaching in commerce stream (175.64) have better professional competency as compared to arts stream (162.56). There is a significant difference between the science and commerce stream,

the mean reveal that teachers teaching in commerce stream (175.64) have better professional competency as compared to science stream (159.12).

15. There exists significant difference in the professional competency of teachers with teaching experience of 1-10, 11-20, 21-30 years. There is a significant difference between the teaching experience of 1-10 and 21-30 years, and the mean reveal that teachers who have teaching experience of 1-10 years (165.75) have better professional competency as compared to 21-30 years (150.11). There is a significant difference between the teaching experience of 11-20 years and 21-30 years, and the mean reveal that teachers who have teaching experience of 11-20 years (163.23) have better professional competency as compared to 21-30 years (150.11).
16. With a strong and significant positive correlation (r=0.968) between the attitude of higher education teachers towards CBCS and Organisational Climate. It can be concluded that the better the Organisational Climate of a college the favourable the teachers' attitude will be towards CBCS.
17. With a strong and significant positive correlation (r=0.958) between the attitude of higher education teachers towards CBCS and Professional Competency. It can be concluded that the better the Professional Competency of a teacher the favourable their attitude will be towards CBCS.
18. With a strong and significant positive correlation (r=0.968) between Professional Competency and Organisational Climate. It can be concluded that the better the Organisational Climate the higher the Professional Competency of teachers and vice-versa.
19. Professional Competency and Organisational Climate are the strong predictors of attitude towards CBCS of higher education teachers in Nagaland because 94.4% of the attitude towards CBCS has been explained by the Professional Competency and

Organisational Climate. Indicating that if the Professional Competency and Organisational Climate of teachers are high or good, they will have positive attitude towards CBCS. Organisational Climate is a higher predictor of attitude of higher education teachers towards CBCS.

20. Majority (53%) of the teachers considered that their institution/university were well-equipped with infrastructure for CBCS only to some extent, were 14% did not agree. Although, 33% agreed on the matter; there is need of a change in the educational infrastructure in Nagaland as this is the basic requirement for a scheme to succeed. For instance, only 13% of the teachers were provided with ICT enabled classrooms; this condition is a concern as ICT tools in the classroom from among all its benefits can provide more time for the instructor in the class, connecting students to various e-resources and teaching abstract concepts, which contributes to higher level of learning and increase motivation in students. As the framework of CBCS centres on the improvement of quality education in India, without the fulfilment of this basic need the future of the revised CBCS remains doubtful.
21. CBCS was introduced in India since 2015, while Nagaland University adopting it in the academic session 2022- 2023. It is surprising that Nagaland still has 48 % of higher education teachers who are not oriented relating to CBCS, while 100% of the teachers who were not oriented felt the need of such initiatives. Even among the 52% who were oriented revealed that the orientation provided was adequate only to some extent to carry out the task as a teacher under CBCS at 40%.
22. 78.3% teachers revealed that CBCS has affected their functioning as a teacher. Increased workload of teachers has been a major effect in the case of Nagaland at 94.5% and the second factor is that the teachers rarely get time for their professional growth at 66%.

23. 84% of higher education teachers in Nagaland are unable to comprehend the complex nature of CBCS. This been led by the notification in adaptation of CBCS as per NEP2020 in India without even the full-fledged implementation of CBCS. Second major challenge is the lack of human resources at 60.3%; lack of appropriate facilities at 58%; and Overcrowded classroom at 59%.
24. From the challenges as mentioned by the higher education teachers in the implementation of CBCS, it can be concluded that institutions should be well-equipped to meet the needs of the teachers in terms of providing complete guidelines; recruiting sufficient faculties; organising orientations timely through experts as per the changes bought about with time; providing proper infrastructure with well-equipped facilities; supporting teachers for professional growth and creating an ease for them to collaborate across departments and with other institutions in sharing resources and ideas. The challenges the teachers face should not be ignored, as the issues they face will have a negative consequence on the students in particular and jeopardizing the quality of education system as a whole.

5.2 DISCUSSIONS BASED ON THE FINDINGS OF THE STUDY

Higher education teachers have less favourable attitude towards CBCS, this creates a problem in the implementation as it will now operate under the revised CBCS as per NEP 2020, needing teachers to have a positive attitude towards the change. National Professional Standards for Teachers (NPST) mentions that NEP 2020 positions the teacher at the center of the fundamental reform with respect to the education system. Indicating that teachers truly shape the future of an individual, and therefore, they should be passionate, well-equipped, motivated, highly qualified and trained professionally. With such leadership roles teachers are shouldered with the responsibility for the smooth functioning of CBCS. In one of the five

important measures for successful implementation of CBCS, Regel (1992) mentioned that the changed patterns in the education brought by the scheme ought to be valued and supported by all HEIs in the country. As teachers play a direct role in introducing any change that comes in the educational setting or beyond the classroom, they need to be the first to have a favourable attitude and thus play a role in successful implementation. A higher percentage of teachers (33.70%) perceived that the organizational climate in the higher educational colleges in Nagaland is poor. In the study of Mallick and Paroi (2019) the challenges in the implementation of CBCS is the lack of coordination in educational institutions, poor infrastructure and manpower; this points out the need of a better organizational climate for proper implementation of CBCS. Results show that the maximum number of higher education teachers have average level professional competency which highlights a concern as the 21st century education setting is learner-centered. Also mentioned by Biswas (2018) that CBCS will allow a shift from a teacher-centric to a student-centric structure. The state in particular and our country in general needs professionally competent teachers who can cultivate creativity and curiosity in a learner.

Results reveal that teachers' attitude towards CBCS is the same with respect to gender, type of college, stream of teaching and teaching experience of teachers. And teachers share the same perception of their organizational climate with respect to stream of teaching and teaching experience. Also revealing that male and female teachers do not share the same perceptions towards their professional competency and organizational climate. Whereas, the government, private and autonomous colleges do not share the same perception towards their organizational climate and teachers in private colleges have better organizational climate as compared to government and autonomous colleges. Indicating that government and autonomous colleges in Nagaland need to improve their organizational climate. Teachers' perception towards their professional competency is not the same with respect to gender, type

of colleges, stream of teaching and teaching experience. Where, teachers in the private have better professional competency compared to government and autonomous colleges; teachers teaching in commerce have better professional competency as compared to arts and science stream; teachers who have teaching experience of 1-10 years have better professional competency as compared to 11-20 and 21-30 years. Teachers in autonomous and government colleges, arts and science stream, with 11-20 and 21-30 years of teaching experience in Nagaland should focus on their Professional capabilities as Yue & Ji (2020) pointed out the assurance of professional teachers is students' efficiency, academic achievement, mental health, teacher-student rapport, extended knowledge, better learning. Hence, in order to carry out the qualitative evaluation successfully, there is need to expand and strengthen teachers' professional competencies. In a wider perspective, proficient teachers have a huge role to play in achieving the goal and objectives of an educational institution.

There is a strong and significant positive correlation between the attitude of higher education teachers towards CBCS and Professional Competency; and also, between Professional Competency and Organisational Climate. Which means that the better the Professional Competency of a teacher the favourable their attitude will be towards CBCS and the better the Organisational Climate the higher the Professional Competency of teachers. So much so that Professional Competency and Organisational Climate are the strong predictors of attitude towards CBCS of higher education teachers. This sets an alarm to all the HEIs in Nagaland to make progress in instilling the right attitude of teachers towards CBCS, in introducing quality teacher competencies and creating a healthy organisational climate. The major challenges the teachers faced with respect to increased workload, unable to comprehend the complex nature of CBCS, lack of human resources, lack of appropriate facilities and overcrowded classroom; lights a concern that such issues should not be left

untouched for they will have a negative consequence on the students in particular and jeopardizing the quality of education system as a whole.

5.3 EDUCATIONAL IMPLICATIONS OF THE STUDY

The findings of the present study have certain educational implications:

1. Higher education teachers in Nagaland have less favourable attitude towards CBCS. It is necessary to change the mindset of the higher education teachers for the smooth functioning of CBCS, as the framework has a lot of advantage for the future of India and improving the quality of education thus raising the status of teaching as a profession.
2. Organisational Climate as perceived by Higher education teachers in Nagaland is at a poor level. There is a significant difference on the organizational climate of higher education teachers in Nagaland, as per the type of colleges they teach which throws concern on the need of institutions to provide good and better Organisational Climate. Results also show that the better the Organisational Climate of a college the favourable the teachers' attitude will be towards CBCS. Therefore, colleges should be provided with good Organisational Climate for teachers to have high attitude towards CBCS.
3. Professional Competency of Higher education teachers in Nagaland is of an Average level. There exists significant difference in the professional competency of higher education teachers as per their stream, teaching experience and type of college. Results revealing that the better the Professional Competency of a teacher the favourable their attitude will be towards CBCS, makes the authorities rethink and improve the Professional Competency of teachers.
4. Results conclude that Professional Competency and Organisational Climate are the strong predictors of attitude towards CBCS of higher education teachers in Nagaland.

These two variables being strong predictors will help higher education at state level, principals and administrators to make efforts to improve Professional Competency and Organisational Climate of teachers and to change their mindset towards CBCS positively.

5. The challenges faced by the teachers in implementing CBCS, will give an idea to higher education at state level, principals and administrators to introspect and improve the education system. Some of the educational implications pointed out by the researcher as per the findings are:

i. The concept of CBCS is broad, therefore there should be a close working between departments. This will exercise the choice of electives to be flexible and wider across the departments and help in teachers' professional development through the exchange of ideas and resources.

ii. Once students take admission in a course proper orientation regarding CBCS needs to be provided so that teachers do not feel that the subject they teach has no value. As been reported that one of the challenge teachers encounter in teaching-learning is that some students choose subjects that apparently seems easier for them, not really assessing its implications or relevance. Orientation at an appropriate time could remove the issue and help students benefit from the flexibility of electives.

iii. There is a need of an expert academic advisor in each department so that students will not have to face problem with the cafeteria of choices, and the one in charge may assist the students in selection of their courses at the expense of best combination.

iv. With its unique features especially with the revised CBCS, resource persons with appropriate expertise should be invited to provide regular orientation for the faculty, principals and HODs on how to smoothly execute CBCS. The initiatives taken in Nagaland by the higher education sector to orient the principals on CBCS is not

enough, all colleges and the higher education department at the state level should collaborate to combat the problem of adopting CBCS without proper deliberation.

v. For successful implementation of CBCS, there is need in the recruitment of more teachers for workload increases when there are more optional courses.

vi. Seamless mobility' across higher education institutions in Nagaland is still unclear, unless all colleges follow the same syllabus and grading system.

vii. The syllabus should be prepared with careful deliberations with all stakeholders of education to avoid the issue of limited time to complete the whole syllabus at a stipulated time.

viii. Well-equipped smart classrooms and adequate infrastructure is the need of the hour for the successful implementation of CBCS.

5.4 DELIMITATIONS

The study is delimited to the colleges which are under UGC and not the AICTE, NCTE and MCI.

5.5 SUGGESTIONS FOR FURTHER RESEARCH

There is always space for further studies, as research is a continuous and on-going process. The present study put forward the following suggestions for future research:

1. As the revised CBCS is still an area of concern under NEP2020, researchers can conduct an extensive qualitative study on the issues and concerns underlying the full-fledged implementation of CBCS under NEP2020.
2. The study giving rise to the research gap that persisted with the introduction of CBCS and the immediate execution of NEP2020, may be a stumbling block in the successful implementation of NEP2020. This may lead to future studies concerning the challenges of National Education Policy 2020 in educational institutions.

3. The researcher may also study the attitude of students towards the advantages and disadvantages the cafeteria approach offers under NEP2020.
4. The challenges the teachers and the students faced in coping with execution of the revised CBCS can be examined.
5. A comparative study on different regulations of CBCS followed by different Universities in the country.
6. An examination of the opinion of Principals and authorities on the execution of smooth functioning of the pros the CBCS has to offer.
7. A study of how the revised CBCS under NEP2020 has bought changes to the education system to the north-eastern states and to India at large can be examined.
8. A study of how the four-year undergraduate programmes operates under revised CBCS.
9. The flexibility provided by the system across different disciplines can be examined.

5.6 CONCLUSIONS

The study intended to find the level of Attitude of Higher Education Teachers towards CBCS, perceived level of their Organisational Climate and Professional Competency, the relationships between the variables and to what extent Organisational Climate and Professional Competency predict their attitude towards CBCS. Descriptive survey method was used to collect the data from teachers across colleges of Nagaland through simple random sampling technique. And the results show that the attitude of teachers is less favourable, a poor level of Organisational Climate and an average level of Professional Competency as perceived by teachers. Further a strong and significant positive correlation exists between the attitude of higher education teachers towards CBCS and Organisational Climate; attitude of higher education teachers towards CBCS and Professional Competency; Professional Competency and Organisational Climate. Concluding that the better

Organisational Climate of a college and Professional Competency of a teacher the favourable their attitude will be towards CBCS, the better the Organisational Climate the higher the Professional Competency and vice-versa. Professional Competency and Organisational Climate are the strong predictors of attitude towards CBCS of higher education teachers in Nagaland. Indicating that if the Professional Competency and Organisational Climate of teachers are high or good, they will have positive attitude towards CBCS. In addition, the study found some major challenges the teachers faced in the implementation of CBCS concerning increased workload, unable to comprehend the complex nature of CBCS, lack of human resources, lack of appropriate facilities and overcrowded classroom. So, it becomes mandatory for the administrators and higher authorities to keep a check on the quality of HEIs in Nagaland to avoid hurdles that may come in the way of proper execution of the revised CBCS as suggested by NEP 2020.

BIBLIOGRAPHY

Aboudahr, M. S. & Mohamad, B. M. (2020). Does Organisational Climate Improve Quality Management Practice? Empirical Evidence from Egyptian Higher Education. *Universal Journal of Management*, 8(6), 296 - 305.

Aboudahr, M. S. & Mohamad, B. M. (2021). Investigation of the Role of Organizational Climate in Enhancing Quality Management Practices of Higher Education. *Journal of Southwest Jiaotong University***,** 56(2). 638-65.

Al-Kurdi, O.F., El-Haddadeh, R. & Eldabi, T. (2019). The role of organisational climate in managing knowledge sharing among academics in higher education. *Journal of Industrial Engineering and Management*, 50, 217–22. https://doi.org/10.1016/j.ijinfomgt.2019.05.018.

Allen, D. K. (2003). Organisational climate and strategic change in higher education: Organisational insecurity. *Higher Education* 46, 61–92. https://doi.org/10.1023/A:1024445024385

Al- Subai, A. (2014). The supportive of organizational climate for quality assurance at Majmaah University. *Journal of Human and Administrative Sciences*, 6, 82-126.

Anandarasu, R., & Abdullah, M. (2019). A study on organizational climate for teachers in schools with respect of assured demographic variables. *Indian Journal of Applied Research*, 9(4), 31-33.

Ansie & Marike, D., W. (2007). The Value of Continuous Professional Development: Teachers' Perceptions. *South African Journal of Education*, 27(1), 53–67.

Babu, A., & Dipser, M. (2013). Organizational climate as a predictor of teacher effectiveness. *European academic research*, I (5), 553-564.

Bai, N. (2014). The relationship between school organizational climate and physical education teachers' burnout (Case study: Ramian-Iran). *Pelagia Research Library European Journal of Experimental Biology*, 4(1), 600-602.

BenĠea, C.C. (2013). Education facing contemporary world issues investigation of the organizational school climate and attitudes towards change: A study on a sample of in-service Romanian teachers. *Procedia - Social and Behavioral Sciences*, 76, 100 – 104.

Bhat, M. S. (2018). Attitude towards choice-based credit system of graduate level students in higher education: a study on government degree college for women Anantnag Kashmir. *International Journal of Indian Psychology*, 6(2), 191-195.

Bindumol, K.K. (2015). *Attitude of College Teachers towards CBCSS in Relation to their Classroom Management, Work Anxiety and Socio-Personal Adjustment*. Thesis Submitted to Mahatma Gandhi University, Kottayam in fulfilment of the requirements for the award of the degree of doctor of philosophy in education. https://shodhganga.inflibnet.ac.in:8443/jspui/handle/10603/194417

Biswas, S. (2018). Choices Based Credit System (CBCS)— An analytical study. *International journal of research and analytical reviews.* 5(3), 1362- 1367.

Boyatzis, R. (1982). *The competent manager A Model for Effective Performance*. New York: John Willey & Sons.

Budihardjo, A. (2014). The relationship between job satisfaction, affective commitment, organizational learning climate and corporate performance. *GSTF Journal on Business Review (GBR)*, 2(4).

Chahal, D., & Manan, M. (2017). Attitude towards choice-based credit system of post graduate level students in higher education: A study of central university in Haryana. *Samwaad:e-journal*. 6 (2), 63-193.

Chakraborty, T. (2017). *Impact of organisational climate on effectiveness in teaching of secondary educational institutions*. Thesis submitted for the degree of doctor of philosophy in education of the university of Burdwan West Bengal, India. http://hdl.handle.net/10603/199851

Chopra, R. (2021, September 7). Explained: what's new in Higher Education? *Indian Express*. https://indianexpress.com/article/explained/national-education-policy-delhi-university-fyup-7474539/

Chung, F. J. (2014). Organisational climate and teacher commitment: A Brunei perspective. *Jerjaya journal of Services & Management*, 1, 96-111.

College principals oriented on 'Choice Based Credit System'. (2021, April 17). *EasternMirror*, https://easternmirrornagaland.com/college-principals-oriented-on-choice-based-credit-system/

Colleges in Tamil Nadu. (2008, June 9). *Choice-based credit system: the potential and the Challenges*. www.collegesintamilnadu.com/Education-News/2008/6/Choice

Das, S. (2021). Choice Based Credit System: Implications & its Challenges. *International Journal of Research in Humanities & Soc. Sciences*, 9(6), 16-22.

Deuri, C. (2015). Attitude towards choice-based credit system of post graduate level students in higher education: a study on Gauhati university. *International journal of interdisciplinary research in science society and culture*, 1(2), 115-121.

Drovnikov, A. S., Nikolaev, L. E., Afanasev, S. A., Ivanov, N. V., Petrova, N. T., Tenyukova, G., Maksimova, L. N., & Povshednaya, V. F. (2016). Teachers Professional Competence Assessment Technology in Qualification Improvement Process. *International Review of Management and Marketing*,6 (1), 111-115.

Elmore, R., & Wong, H. (2009). Teachers are the Greatest Assets. *Teachers Net Gazette.* https://www.sciepub.com/reference/131565

Ferdinand, J. B. (2007). Teachers' effectiveness and internal efficiency in primary education. *Research Current Studies*, 2(1), 2 – 6.

Gemnafle, M., Waimuri, S., & Batlolona, J. (2018). Organizational climate of the school and teacher performance improvement in the 21st century, 7(2), 119-126.

GHK & Technopolis. (2011). *Study on the use of credit systems in higher education cooperation between the EU and the US – Final Repo.* *https://www.ab.gov.tr/files/ardb/evt/1_avrupa_birligi/1_9_politikalar/1_9_4_egitim_politikasi/us_en.pdf*

Ghosh, M., & Guha, A. (2016). Organizational Climate of Teacher Education. Institutions in West Bengal in relation to Teacher Educators' Motivation to Work. IRA International Journal of Education and Multidisciplinary Studies, 4(1). http://dx.doi.org/10.21013/jems.v4.n1.p15

Guerriero, S. (2017). Pedagogical Knowledge and the Changing Nature of the Teaching Profession, *Educational Research and Innovation*. https://doi.org/10.1787/9789264270695-en

Gundry, L., Fernandez, A., Ofstein, L., & Egea, T. (2015). Creativity and innovation management, innovating in organizations: A model of climate components facilitating the creation of new value. https://doi.org/10.1111/caim.12116

Howard, K.S., & Tondeur, J. (2023, March 13). Higher education teachers' digital competencies for a blended future. *Educational Technology Research and Development*. https://link.springer.com/article/10.1007/s11423-023-10211-6

Howlader, T. & Roy, B. (2021). Attitude towards Choice Based Credit System (CBCS) of under- Graduate students in Relation to their Academic Achievements. *International Journal of Creative Research Thoughts*, 9 (2), 702-711.

Ibad, F. (2021). Evaluation of the Professional Competency of University Faculty Members as Perceived by Higher Education Students. *Journal of Education and Educational Development*, 8(1), 141-159. http://dx.doi.org/10.22555/joeed.v8i1.372

Ilanlou, M., & Zand, M. (2011). Professional competencies of teachers and the qualitative evaluation, *Procedia - Social and Behavioral Sciences*, 29, *1143-1150*. https://doi.org/10.1016/j.sbspro.2011.11.348

Jocelyn, G., & Sammanasu, M. (2021). Teacher Competencies of College Teachers. *International Journal of Aquatic Science*, 12(2), 603-609.

Jothi, I., & Kanmani, M. (2019). Organisational Climate of School Teachers. *International Journal of Research and Analytical Reviews*, 6(4), 994-999.

Johnson, R.B., & Christensen, L. (2014). *Educational Research Quantitative, Qualitative and Mixed Approaches.* SAGE Publications, Inc.

Kapur, S. (2017, March). *Choice Based Credit System (CBCS) and Higher Education in India.* ResearchGate. https://www.researchgate.net/publication/320137076

Katoch, K. S. (2017). Choice based credit system (CBCS): Attitude of college teachers. International refereed journal of education. *Pedagogy of learning*, 3 (1), 27-35.

Kaur, H. (2019). *Organisational climate, occupational stress and life satisfaction as correlates of teacher effectiveness among teacher educators*. A thesis submitted to the faculty of education Panjab University for the degree of doctor of philosophy. http://hdl.handle.net/10603/240384

Kaushal, S. (2017). Professional Development of Teachers in Higher Education in India. *Amity International Journal of Teacher Education*, 3(1), 1-6.

Kelkar, A.S, & Shankar R. L. (2014). Choice-based credit system: boon or bane? *Current Science*, 107(8), 1229-30.

Khan, N. (2019). The Impact of Organizational Climate on Teachers Commitment. *Journal of Education and Educational Development*, 6(2), 327-342.

Khan, S., & Waris, A. (2018) Conceptual Application of Organisational Climate and Organisational Commitment In The Universities. *International Journal of Innovative Social Science & Humanities Research*, 5(1), 11-24.

Kim, J., Park, H., Kwon, T. I., & Yu, S. P. (2014). "Critical Review of Credit Bank System in South Korea: A New Mediator for Lifelong Learning?" *Adult Education Research Conference*. https://newprairiepress.org/aerc/2014/papers/4

Kuldarkhan, O., & Orazbayeva. (2018). Professional Competence of Teachers in the Age of Globalization. International Journal of Environmental & Science Education, 11(9), 2659-2672. 10.12973/ijese.2016.714

Kulkarni, S. & Patil, S. (2018). Choice Based Credit System (CBCS) - An Experiential Learning Approach. *ResearchGate*, 1-4, 10.1109/WEEF-GEDC.2018.8629671

Kumar, V. (2013). The Influence of Teacher's Professional Competence on Students' Achievement. *IOSR Journal of Engineering*, 11(3), 12-13.

Lauermann, F., & König, J. (2016). Teachers' professional competence and wellbeing: Understanding the links between general pedagogical knowledge, self-efficacy and burnout, *Learning and Instruction*, 45, 9-*19*. https://doi.org/10.1016/j.learninstruc.2016.06.006.

Logan. D. C & Hoges. I. M. (2012). *Theories of Attitude*. Nova Science Publishers, Inc.

Magno, C., & Sembrano, J. (2007). Integrating Learner Centeredness and Teacher Performance in a Framework. *International Journal of Teaching and Learning in Higher Education*, 21(2), 158-170.

Mahajan, S. (2015, June 2). CBCS will erode higher education standards in India. *Hindustan Times.*

Mahakur, S., Baral, R., & Meher, V. (2019). *Perception of teachers and students towards the implementation of choice-based credit system at undergraduate level*. ERIC. https://eric.ed.gov/?id=ED616381

Mallick, A. & Paroi, S. (2019). Perception of stakeholders of higher education about choice-based credit system (cbcs). *Education India Journal: A Quarterly Refereed Journal of Dialogues on Education*, 8(4), 28 -36.

Minimum course curriculum for undergraduate courses under choice-based credit system. (2015).https://www.google.com/search?q=MINIMUM+COURSE+CURRICULUM+FOR+UNDERGRADUATE+COURSES+UNDER+CHOICE+BASED+CREDIT+SYSTEM&oq=MINIMUM+COURSE+CURRICULUM+FOR+UNDERGRADUATE+COURSES+UNDER+CHOICE+BASED+CREDIT+SYSTEM+&aqs=chrome..69i57.1575j0j15&sourceid=chrome&ie=UTF-8

Model Christian College organises conference on Choice Based Credit System. (2019, Aug 19). *Nagaland Post.* https://easternmirrornagaland.com/model-christian-college-organises-conference-on-choice-based-credit-system/

Nagaland UG colleges set to shift to Choose Based Credit System. (2021, May 24). MorungExpress, https://www.morungexpress.com/nagaland-ug-colleges-set-to-shift-to-choice-based-credit-system

Nagaland University. (2021, May 5). *Nagaland University*, https://nagalanduniversity.ac.in/English/Notifications/20210505-CBCSSyllabusNotice.pdf

Nagaland University. (2022, July). *CBCS guidelines of Nagaland University*. https://nagalanduniversity.ac.in/files/cbcs/2022/2022-CBCS-exam-guidelines.pdf

Nagaland University. (2023, May). *Curriculum and Credit Framework guidelines for Undergraduate Programme of Nagaland University*. https://nagalanduniversity.ac.in/files/nep2020/2023-FYUGP-GuidelinesNU.pdf

Nair. P. (2017). *A Study on Identifying Teaching Competencies and Factors Affecting Teaching Competencies with Special Reference to MBA Institutes in Gujarat*. A Thesis submitted to Gujarat Technological University for the Award of Doctor of Philosophy in Management. https://www.gtu.ac.in/uploads/THESIS-%20Preeti%20Nair.pdf

Natario, S. M., & Araujo, C. (2014). Higher Education Institution Organizational Climate Survey. *International Journal of Advances in Management and Economics*, 3 (1), 107-121.

Nessipbayeva, O. (2012). *The competencies of the Modern teacher*. https://www.google.co.in/books/edition/The_Competencies_of_the_Modern_Teacher/jZBAvwEACAAJ?hl=en&bshm=rimc/1

Orazbayeva, O. K. (2016). Professional Competence of Teachers in the Age of Globalization. *International Journal Of Environmental & Science Education*, 11(9), 2659-2672.

Otrębski, W. (2022). The Correlation between Organizational (School) Climate and Teacher Job Satisfaction—The Type of Educational Institution Moderating Role. *International Journal of Environmental Research and Public Health*, 19(11), 6520. https://doi.org/10.3390/ijerph19116520

Passos, A. F. J. (2009). *A comparative analysis of teacher competence and its effect on pupil performance in upper primary schools in Mozambique and other SACMEQ countries*. (Doctoral dissertation). University of Pretoria.

Philip, M., & Ramya, K. (2017). Professional Competencies for Effective Teaching Learning Process. *International Journal of Trend in Research and Development*, 25-29.

Pramod, K., Naik, N., & Mani, U. (2018). Impact of organizational climate on teacher effectiveness. 10.13140/RG.2.2.13422.87360

Proposed Guidelines for Choice Based Credit System (CBCS). (2021, Dec 9). *Nagaland University*, https://nagalanduniversity.ac.in/English/node/1801

Proposed guidelines for Choice Based Credit System (CBCS) for Undergraduate courses (honours and pass course) under Nagaland University (Incorporating policies recommended by NEP 2020. (2022). https://nagalanduniversity.ac.in/English/Notifications/2021-ProposedCBCSguidelines.pdf

Rahayu, S., Ulfatin, N., Wiyono, B., Imron, A., & Wajdi, M. (2018). The professional competency teachers mediate the influence of teacher innovation and emotional intelligence on school security. *Journal of Social Studies Education Research*. 9 (2), 210-227.

Regel, O. (1992)**.** *The Academic Credit System in Higher Education: Effectiveness and Relevance in Developing Countries*. *The International Bank for Reconstruction and Development/TheWorldBank.* https://documents1.worldbank.org/curated/en/652361468739273645/pdf/multi-page.pdf

Salisu, J. B., Chinyio, E., & Suresh, S. (2015). The impact of compensation on the job satisfaction of public sector construction workers of Jigawa state of Nigeria. *The Business & Management Review*, 6(4), 282.

Schreurs, B., Guenter, H., Emmerik, I. H., Notelaers, G., & Schumacher, D. (2015). Pay level satisfaction and employee outcomes: the moderating effect of autonomy and support climates. *The International Journal of Human Resource Management*, 26(12), 1523-1546.

Selamat, N., Samsu, N., & Kamalu, N. (2013). The impact of organizational climate on teachers' job performance. *Educational Research eJournal*, 2(1), 71-82.

Shankar, S., Gowtham, N., & Surekha, T., P. (2019). Faculty Competency Framework: Towards a better learning profession. *ScienceDirect Procedia Computer Science*, 172, 357–363. https://doi.org/10.1016/j.procs.2020.05.055.

Shedd, M. J. (2003). *The History of the Student Credit Hour*. https://doi.org/10.1002/he.106

Shintri, S., & Bharamanaikar, R., S. *(2017).* A Theoretical Study on Evolution of Organisational Climate, Theories and Dimensions. *International journal of science technology and management*, 6(3), 652-656.

Shivasakthy, M., Sethuraman, R. K., & Adkoli, V.B. (2016). Acceptability and feasibility of choice-based credit system in BDS syllabus. *International Journal for Innovation Education and Research*, 4 (6), 73-80. http://dx.doi.org/10.31686/ijier.vol4.iss7.56

Singh, L. (2019). *Achievement of students in science and mathematics in relation to professional commitment of their teachers, school climate and administrative effectiveness of the head of the institution*. A thesis submitted to the faculty of education Panjab University, Chandigarh for the degree of doctor of philosophy. http://hdl.handle.net/10603/301716

Singh, M. (2017). Perception of Student Teacher's towards CBCS for Quality Sustenance. *International journal of research in all subjects in multi languages*. 5 (11). 62-62.

Singh, M. (2021, September 4). How to implement Choice Based Credit System. *Master Soft Accelerating Education*. https://www.iitms.co.in/blog/how-to-implement-choice-based-credit-system.html

Singh, S. K. (2022). Adoption and Implementation Status of Choice Based Credit System CBCS in Central Universities of Uttar Pradesh. *Shodhganga: a reservoir of Indian theses @ INFLIBNET*. http://hdl.handle.net/10603/452051

Smolikevych, N. (2019). The teacher's main competencies in modern higher education. *European Humanities Studies: State and Society*, 3(I), 30-42. 10.38014/ehs-ss.2019.3-I.03

Sokol, A., Gozdek, A., Figurska,I., & Blaskova, M. (2015). Organizational climate of higher education institutions and its implications for the development of creativity. *ScienceDirect*. https://doi.org/10.1016/j.sbspro.2015.04.767

Song, Q. (2008). *Research on the Relationship between College Teachers' Competency and Job Performance*. Master thesis. Guangxi Normal University, Guilin.

Swami, A. (2013). A study of b.ed students' perception towards choice based credit system. *Electronic international interdisciplinary research journal*, 11(iv), 9-15. 10.5281/zenodo.7155392

Sumithaa, V. P., Krishnamurthy, G. M., & Winfred, R. B. (2016). An empirical study to measure the perception of management students towards choice-based credit system (cbcs): *A case study. Journal of Business and Management*, 56-65.

Tam, S. & Ryan, S. (2012). *Organisational Climate Differences in Higher Education Institutions: Macau and Australia.* https://api.semanticscholar.org/CorpusID:130302081

Tazien, W. (2017). Choice Based Credit System in India: A Critical Review of Literature. *The Scholar*, 1(4),7-21.

University Grants Commission. (2022, Dec). *UGC guidelines on curriculum and credit framework for Undergraduate programme*. https://www.ugc.gov.in/pdfnews/8126011_Draft--curriculum-framework-credit-struture-FYUGP.pdf

University Grants Commission. (2015). *UGC Guidelines on Adoption of Choice Based Credit System. http://gcrjy.ac.in/pdf/UGC_Guidelines_on_CBCS.pdf*

Velasco, P. J., Learreta, B., Kober, C., & Tan, I. (2014). Faculty perspective on competency development in Higher Education: An international study. *Higher Learning Research Communications*, 4(4), 85-100. http://dx.doi.org/10.18870/hlrc.v4i4.223

Wang, C.M., & Chen, M.K. (2002). Managerial competency modeling: a structural equation testing. *Psychological Science*, 25(1), 513-516.

Wong, I. A., Ma, E., Chan, S. H. G., Huang, G. I., & Zhao, T. (2019). When do satisfied employees become more committed? A multilevel investigation of the role of internal service climate. *International Journal of Hospitality Management*, 82, 125-135.

Wood, E.R.G. & Wood, S.E. (1993). *The world of psychology*. Massachusetts, Allyn and Bacon.

What is Attitude? Definition, Types, Components, Formation, Functions, Characteristics. (2023, May). Geektonight. https://www.geektonight.com/what-is-attitude-meaning-functions-types-importance-components/#value-expressive-function

What is CBCS Syllabus? (2022, April 7). https://www.gullybaba.com/blog/what-is-cbcs-syllabus/

Xu, A. & Ye, L. (2014). Impacts of Teachers' Competency on Job Performance in Research Universities with Industry Characteristics: Taking Academic Atmosphere as Moderator. *Journal of Industrial Engineering and Management*, 7(5), 1283-1292. 10.3926/jiem.1261

Yadav, H. (2022). Choice Based Credit System CBCS in Library and Information Science in Central Universities of India A Curriculum Study. *Shodhganga: a reservoir of Indian theses @ INFLIBNET*. http://hdl.handle.net/10603/525692

Yazdani, G. (2016). *Professionalism among teacher educators of district institute of education and training (diets) in Delhi- a critical study* [Institute of advanced studies in education; a thesis submitted to the faculty of education]. Jamia Millia Islamia, new delhi-25. http://hdl.handle.net/10603/197617a

Yue, X., & Ji, R. (2020). Teacher professional competencies in education for sustainable development.10.5772/intechopen.94991

Zeiger, S. (2018). List of core competencies for educators. *Association of standardized patient educators*.

APPENDICES
POOL OF ITEMS
(Attitude of college teachers towards CBCS)
Appendix A

Sl.no	Statement
1	The semester system accelerates the teaching-learning process
2	CBCS provides flexibility in designing a curriculum
3	Foundation course develops social values among learners
4	Learners are able to improve their performance through skill enhancement course
5	The additional courses distract students from their core course
6	More number of assessments improve students' learning
7	Workload has increased due to a greater number of assessments
8	There is chance of subjectivity with respect to internal assessment
9	The system gives weight age to attendance
10	Teachers face difficulty in completing the syllabus
11	With the limited knowledge of the system teachers are stressed
12	Teachers' proficiency has increased through this approach
13	Students' benefit through this cafeteria approach
14	Teachers' are able to cope up with CBCS
15	The uniform 10-point grading scale is better than the conventional grade scale
16	Mark allotment is more rewarding than Letter Grade
17	The theoretical and practical component which is to be assessed by the external examiner increases exam stress for students
18	Students' need not repeat all courses in a given semester if they fail in one/more courses
19	The time allotted for submission of project work/dissertation is sufficient
20	Teachers are able to complete the syllabi on time
21	One credit allotted for 1 hour lecture is sufficient
22	One credit allotted for 2hours practical/field work is insufficient
23	Tutorials are a wastage of time
24	Students engage themselves actively during tutorial session
25	Here learners are the center of the education system
26	Credit system encourages students to do better in their academics
27	Letter grade eliminates unhealthy competition among students
28	CBCS creates a purposeful learning environment
29	The system removes the gap between theory and practice
30	Students need not repeat all courses, if one fails in one/more courses in a given semester
31	Semester system has made learning more joyful and meaningful
32	CBCS caters to individual difference
33	Workload of teachers hamper learners' assessment
34	The working days stipulated by UGC is sufficient to cover up the curriculum planned out for one semester
35	This approach promotes self- study
36	The system promotes understanding and application-based learning
37	Quality education is achieved through this system
38	With the freedom of subject choice, learning becomes self-paced

39	Students gain sufficient skills to be employable
40	The task laid down for the teachers has become easy through this system
41	Respecting “learner autonomy’ it further polishes pupils interest and aptitude
42	This system gives more autonomy to students
43	Cross-cultural learning environment
44	Implementing CBCS has practical limitations
45	Good infrastructure and sufficient teaching faculty is vital for successful implementation of CBCS
46	Allowing students to earn credits at their own pace makes them negligent
47	Number of course imposed, creates burden for the students
48	With the required number of course, teachers are overburdened
49	Mobility across universities effects students’ learning
50	This system of choice increases sincerity among students
51	This system will give birth to young minds full of knowledge, confidence, values and skills
52	CBCS builds a strong relationship between education, employment and skill development
53	Caters to holistic development of an individual
54	The weight of extra duties hinders teacher-student relationship
55	Calculating numerical marking is easier than grading
56	Semester-wise assessment is preferred as compared to yearly assessment
57	Students’ progress can be measured effectively through the semester system
58	The system paves the way for becoming a facilitator and motivator for students
59	Training and capacity building needs to be carried out for coping with the system
60	Continuous comprehensive assessment, improves teaching-learning process
61	Grading system illuminates rote learning
62	The availability of too many subjects creates confusion for students
63	Guidance and counselling services should be arranged for the teachers and students while choosing core papers.
64	CBCS helps to achieve transparency
65	This system provides comprehensive management
66	CBCS is a good system in assessing the overall performance of a student
67	Develops skills of analysis synthesis and argumentation.
68	Curriculum transaction is made easier through this system
69	This system encourages quality teaching and teachers
70	Individuals are supported with all-round development through this system
71	The system does not promote co-curricular activities(sports,unions,bands) as an essential part of students’ life
72	This system gives importance to extra-curricular activities
73	The implementation of a common syllabus as laid down by UGC(20% flexibility to deviate) is a right step, for achieving uniformity in the country
74	There still remains confusion in terms of implementing CBCS
75	To achieve uniformity in the country, UGC interrupts the autonomy of universities
76	The courses which are popular hold more credits, making others irrelevant
77	Imposes additional burden on teaching faculty
78	Uniform evaluation system across universities is beneficial for students
79	This system reduces the inequality of educational attainment
80	Tutorial lessons are challenging to teachers

81	The system focuses only on the cognitive abilities of students
82	CBCS provides students with advanced learning opportunities
83	The non-uniform performance assessment system putting pressure on the student at the end of the year; replaced by a uniform system has shifted the pressure to the teachers
84	Teachers need to be well trained in advising students with respect to courses that works best in combination
85	The uniformity introduced by the system ignores creativity based on socio-cultural diversity
86	CBCS will produce more active, productive, skilful, knowledge and highly employable students
87	This system gives way to congenial teaching and learning environment
88	CBCS builds teacher training and capacity in terms of technology, research, teaching and pedagogy
89	The system enables the teacher to work as facilitator as well as motivator for students
90	Grading system reduces the subjective element in assessment/evaluation
91	CBCS caters to international standards
92	This system increases students' performance
93	The introduction of CBCS gives scope for frequent curricula revisions
94	The recognition of individual learning creates fascination in students towards education
95	This system accentuates fair and transparent internal assessment
96	With proper implementation CBCS has the potential to bring laurels to the entire nation
97	The system results in unnecessary juggling of students from one department to another which results in more academic stress in them
98	There should be compulsory training programmes for faculty regarding CBCS
99	There should be additional faculty for teaching open electives in order to reduce extra burden in existing faculty
100	CBCS introduces critical thinking and analysis which leads to creativity and innovation in education system
101	Provides teachers opportunities to improvise
102	Permits universities to collaborate via academic programmes
103	Encourages teachers to opt for enhancing professional and skill developmental courses to enhance their knowledge and professional competency
104	Due to the multidisciplinary nature of the system, there is lack of content mastery among the students
105	The system has deprived many universities of their autonomy disturbing their functioning, administration and management
106	CBCS lacks in providing a guideline of choosing compatible subjects to provide holistic knowledge and development
107	There is a need of a proper guideline, or an academic counselling system to help students choose apt subjects for their proper growth.
108	The excessive pressure under CBCS leaves no time for personal professional development of teachers

Appendix B
ITEM-EVALUATION of CBCS (p-values, t-values and correlation of each item)

Sr. No	Statements	P-value	t-value	Correlation with whole scale	Remark
1	The teaching-learning process under CBCS is more effective.	P>0.05	1.03	.01	Rejected
2	Curriculum flexibility in CBCS will enhance students' learning.	P<0.05	2.59**	.56**	Accepted
3	Combination of core and elective papers hamper learners' mastery over a specific subject.	P<0.05	4.66**	.51**	Accepted
4	Internal assessments improve students' learning.	P<0.05	5.46**	.74**	Accepted
5	CBCS is skill and employment-oriented.	P<0.05	4.01**	.52**	Accepted
6	Tutorials which are meant to clarify students' doubts are a waste of time.	P>0.05	0.21	.09	Rejected
7	Teachers' proficiency increases through CBCS because the curriculum keeps pace with globalisation in education.	P<0.05	5.84**	.71**	Accepted
8	There is chance of subjectivity with respect to internal assessment in CBCS.	P>0.05	1.70	.42**	Rejected
9	Skill Enhancement courses are relevant with the present demand of the market.	P<0.05	11.51*	.92**	Accepted
10	With the more number of assessments, teachers become familiarized with the evaluation system.	P<0.05	4.82**	.66**	Accepted
11	The internationalised CBCS brings chaos to universities/colleges across India in the implementation process.	P>0.05	0.99**	.80**	Rejected
12	One credit allotted for 1 hour lecture in a week is sufficient to complete the syllabus.	P>0.05	1.59	-.28	Rejected
13	CBCS removes the gap between theory and practice in academics.	P<0.05	4.00**	.53**	Accepted
14	Teachers are stressed because of the limited knowledge of CBCS.	P>0.05	0.22	.16	Rejected
15	Credit system encourages students to do better in their academics.	P<0.05	2.36**	.03	Rejected
16	Letter grade eliminates unhealthy competition among students.	P<0.05	5.64**	.75**	Accepted
17	CBCS makes learning meaningful as students can opt for additional courses and score more credits.	P<0.05	3.18**	.48**	Accepted
18	One credit allotted for 2hours practical/field work in a week is	P<0.05	2.71**	.58**	Accepted

	insufficient.				
19	Multiple Entry and Exit option will increase drop-out rate.	P>0.05	1.43	.10**	Rejected
20	CBCS caters to individual differences by allowing students to select subjects as per their choice.	P<0.05	2.83**	.47**	Accepted
21	In CBCS 90 working days is sufficient to cover up the curriculum planned out for one semester.	P>0.05	0.29	.13	Rejected
22	The integration of STEM with arts and humanities develops students holistically.	P<0.05	4.41**	.54**	Accepted
23	CBCS promotes understanding and application-based learning.	P<0.05	2.51**	.51**	Accepted
24	Quality education is achieved through CBCS.	P<0.05	5.39**	.67**	Accepted
25	Self-paced learning is promoted in CBCS because students can earn credits as per ones' pace.	P<0.05	6.75**	.60**	Accepted
26	Competency based education under CBCS help students learn more effectively.	P<0.05	4.64**	.71**	Accepted
27	CBCS creates a beneficial learning environment by focusing on assignments, group discussions, class activities and internal exams.	P<0.05	3.08**	.61**	Accepted
28	Implementing CBCS has practical limitations.	P<0.05	2.52**	.29*	Accepted
29	10 –point grading scale makes comparison of students across universities easier.	P<0.05	3.36**	.60**	Accepted
30	Allowing students to earn credits at their own pace makes them negligent.	P>0.05	1.33	.38	Rejected
31	Physical resources are vital for the successful implementation of CBCS.	P>0.05	1.44	.08	Rejected
32	Teachers' workload has increased through CBCS.	P<0.05	2.51**	.33*	Accepted
33	The flexibility of moving across universities/institutions negatively affects students' learning.	P<0.05	5.56**	.71**	Accepted
34	This system will give birth to young minds full of knowledge, confidence, values and skills.	P<0.05	6.25**	.63**	Accepted
35	The professional competence of teachers is developed through CBCS.	P<0.05	6.17**	.74**	Accepted
36	The busy schedule under CBCS does not allow teachers to attend the problems of students outside the classroom.	P<0.05	5.75**	.65**	Accepted
37	Semester-wise assessment is better than annual-assessment.	P>0.05	1.90	.06	Rejected

38	Capacity building needs to be carried out for teachers to cope with CBCS.	P<0.05	4.01**	.40**	Accepted
39	Continuous comprehensive assessment improves teaching-learning process.	P<0.05	2.04**	.28*	Accepted
40	The availability of too many subject choices creates confusion for students.	P<0.05	2.44**	.30*	Accepted
41	There is transparent assessment system in CBCS.	P<0.05	4.05**	.49**	Accepted
42	The value-based courses in CBCS develops the overall personality of a student.	P<0.05	6.20**	.56**	Accepted
43	The workload under CBCS hampers quality teaching.	P>0.05	1.95	.19*	Rejected
44	The common syllabus under CBCS helps to achieve uniformity in higher education institutions.	P<0.05	3.54**	.52**	Accepted
45	The system encourages students to do better in their academics.	P<0.05	5.38**	.51**	Accepted
46	Popular courses under CBCS create job loss for teachers.	P<0.05	2.03**	.35**	Accepted
47.	CBCS promotes quality research in education at college level.	P>0.05	1.06	.31**	Rejected
48	The opportunity given to a teacher to design a curriculum is better than the conventional education system.	P<0.05	4.40**	.72**	Accepted
49	CBCS reduce the academic stress of students at college level.	P<0.05	2.72**	.27**	Accepted
50	The system focuses only on the cognitive abilities of students.	P>0.05	0.68	.20*	Rejected
51	CBCS provides students with advanced learning opportunities through multi and inter-disciplinary learning.	P>0.05	0.71	.18	Rejected
52	Students need clear guidance for the combination of courses under CBCS.	P>0.05	0.14	.06	Rejected
53	The uniformity introduced by the system ignores creativity based on socio-cultural diversity.	P<0.05	2.73**	.10	Rejected
54	CBCS has removed the stigma of ‘fail’.	P>0.05	0.73	-.06	Rejected
55	CBCS help students create their own understanding and knowledge of the world through their study choices.	P>0.05	1.39	.29**	Rejected
56	The system results in unnecessary juggling of students from one department to another.	P<0.05	3.18**	.45**	Accepted
57	Problems will occur in students’ learning journey through Academic Bank of Credits.	P>0.05	1.44	.25**	Rejected
58	The transfer of Credits is beneficial for students.	P<0.05	2.88**	.23*	Accepted

59	CBCS encourage teachers to enhance their knowledge.	P>0.05	1.84	.53**	Rejected
60	The system interrupts the autonomy of universities/colleges.	P<0.05	5.68**	.54**	Accepted
*0.05 level of significance Critical value for item-total correlation = .25 At .01 level of significance Critical value for item-total correlation = .19 At .05 level of significance		**0.01 level of significance Table value for t at 0.05 level=1.96 Table value for t at 0.01 level=2.57			

Appendix C
Z-score Norms for CBCS

Mean: 127.19 SD: 10.49 N: 350 Range of Scores: 38-190

Raw Score	Z-score	Raw Score	Z-score	Raw Score	Z-score
97	-2.87	123	-0.39	139	+1.12
98	-2.78	124	-0.30	140	+1.22
99	-2.68	125	-0.20	141	+1.31
100	-2.59	126	-0.11	142	+1.41
108	-1.82	127	-0.01	143	+1.50
110	-1.63	128	+0.07	144	+1.60
112	-1.44	129	+0.17	145	+1.69
114	-1.25	130	+0.26	148	+1.98
115	-1.16	131	+0.36	149	+2.07
116	-1.06	132	+0.45	152	+2.36
117	-0.97	133	+0.55	153	+2.45
118	-0.87	134	+0.64	154	+2.55
119	-0.78	135	+0.74	155	+2.65
120	-0.68	136	+0.83	156	+2.74
121	-0.59	137	+0.93	159	+3.03
122	-0.49	138	+1.03		

Appendix D
NAGALAND UNIVERSITY
DEPARTMENT OF TEACHER EDUCATION
PERSONAL DATA SHEET 2023

Name of the college:
Teaching Stream: (arts/science/mention others)
Teaching Experience: (1-5/6-10/11-15) years
Gender:

General Instructions

This form has 38 statements, kindly reply to all, read each statement carefully and decide your response on any one which describes you the best; given below are five response alternatives, viz., 'SA' represents 'Strongly Agree', 'A' represents 'Agree', Not Sure, 'D' represents 'Disagree', 'SD' represents 'Strongly Disagree', put a tick in the appropriate cell ☐

Kindly give your valuable information regarding this. Your data will be used only for the research purposes. I plead your whole hearted co-operation.

LINO K ZHIMOMI
Research scholar
Department of teacher education

ATTITUDE SCALE 2023 (FINAL FORM)
(SA-Strongly Agree, A- Agree, NS- Not Sure, D-Disagree, SD- Strongly Disagree)

(Attitude Scale on Choice Based Credit System)

Sl.no	Statements	SD	D	Not Sure	A	SA
1	Curriculum flexibility in CBCS will enhance students' learning.					
2	Combination of core and elective papers hamper learners' mastery over a specific subject.					
3	Internal assessments improve students' learning.					
4	CBCS is skill and employment-oriented.					
5	Teachers' proficiency increases through CBCS because the curriculum keeps pace with globalisation in education.					
6	Skill Enhancement courses are relevant with the present demand of the market.					
7	With more number of assessments, teachers become familiarized with the evaluation system.					
8	CBCS removes the gap between theory and practice in academics.					
9	Letter grade eliminates unhealthy competition among students.					
10	CBCS makes learning meaningful as students can opt					

	for additional courses and score more credits.					
11	One credit allotted for 2hours practical/field work in a week is not sufficient.					
12	CBCS caters to individual differences by allowing students to select subjects as per their choice.					
13	The integration of STEM with arts and humanities develops students holistically.					
14	CBCS promotes understanding and application-based learning.					
15	Quality education is achieved through CBCS.					
16	Self-paced learning is promoted in CBCS because students can earn credits as per ones' pace.					
17	Competency based education under CBCS help students learn more effectively.					
18	CBCS creates a beneficial learning environment by focusing on assignments, group discussions, class activities and internal exams.					
19	Implementing CBCS has practical limitations.					
20	10 –point grading scale makes comparison of students across universities easier.					
21	Teachers' workload has increased through CBCS.					
22	The flexibility of moving across universities/institutions negatively affects students' learning.					
23	This system will give birth to young minds full of knowledge, confidence, values and skills.					
24	The professional competence of teachers is developed through CBCS.					
25	The busy schedule under CBCS does not allow teachers to attend the problems of students outside the classroom.					
26	Capacity building needs to be carried out for teachers to cope with CBCS.					
27	Continuous comprehensive assessment improves teaching-learning process.					
28	The availability of too many subject choices creates confusion for students.					
29	There is transparent assessment system in CBCS.					
30	The value-based courses in CBCS develops the overall personality of a student.					
31	The common syllabus under CBCS helps to achieve uniformity in higher education institutions.					
32	The system encourages students to do better in their academics.					
33	Popular courses under CBCS create job loss for teachers.					
34	The opportunity given to a teacher to design a curriculum is better than the conventional education system.					
35	CBCS reduce the academic stress of students at college					

	level.					
36	The system results in unnecessary juggling of students from one department to another.					
37	The transfer of Credits is beneficial for students.					
38	The system interrupts the autonomy of universities/colleges.					

Appendix D (a)
Opinionnaire for teachers on the issues faced in the implementation of CBCS

Does your institution/university have well-equipped infrastructure for CBCS? Yes/No/To some extent
If Yes/To some extent, please put a tick in the bracket, which best suits your case.
Class rooms are :
Spacious ( ) Properly ventilated ( ) Well-lighted ( ) ICT enabled ( )
Laboratories are well equipped with latest equipment and software ( )
Provides a Wi-Fi Campus. ( )

Have you been oriented relating to CBCS? Yes/No
If Yes,
Who provided such orientation? .....
Do you feel the orientation provided to you was adequate to carry out the task as a teacher under CBCS? Yes/No/ To some extent
If No, do you feel the need of such orientation Yes/No

Has the introduction of CBCS affected your functioning as a teacher? Yes/No
If Yes, tick one or more choice that suits your condition.
My workload has increased in terms of conducting class tests, assignments, seminars, field reports. ( )
I rarely get time for professional growth. ( )
The workload has negative impact on my teaching. ( )
Unable to cope with the innovative skills, drive me to leave the job. ( )

What are the challenges faced by you, in the implementation of CBCS?
Overcrowded classroom ( )
Lack of appropriate facilities ( )
Lack of human resources ( )
Inability to comprehend the complex nature of CBCS ( )
Others challenges
…….....
.....

Appendix E
POOL OF ITEMS for PROFESSIONAL COMPETENCY

Sr. no	Statements
1.	I cater to social and cultural differences in the teaching-learning process.
2.	I present the subject matter in a simple, understandable and logical sequence.
3.	I maintain an appropriate and approachable relationship with my students.
4.	I make sure every topic is carefully planned to meet students' needs.
5.	Students are actively engaged in the learning process.
6.	I make use of appropriate ICT tools keeping in mind the learning objectives.
7.	Instructional strategies are appropriately adopted to develop student understanding.
8.	I respect and treat my students equally irrespective of their differences.
9.	Group activities are emphasised by me to make learning interesting and practical.
10.	I make use of presentation software/visual aids to enhance teaching-learning.
11.	Students are encouraged to express their own understanding and ideas related to the topic taught.
12.	I neglect the problems that occur during teaching and learning.
13.	I ensure that learning is self directed and reflective for all students.
14.	Projects and assignments are guided and self-learned.
15.	I maintain positive relationship with colleagues in my profession.
16.	Teacher relates classroom learning to real-life scenarios.
17.	I motivate students to ask questions related to the topics taught.
18.	Formative assessment is used to identify students' learning gaps.
19.	Teacher promotes self-paced learning.
20.	I provide opportunities to students to learn independently to promote intellectual curiosity.
21.	Constructive feedback is provided by me to the students.
22.	I am able to develop a course and design its content.
23.	To facilitate learning online material resources are used by me.
24.	While selecting teaching learning methodology I consider the diversity of talent and learning in students.
25.	I engage in professional discussion with colleagues for professional development
26.	Experiential learning is incorporated by me in teaching-learning when needed.
27.	I exchange ideas with my colleagues for teaching difficult concepts.
28	I present important ideas in multiple ways while teaching a particular content.
29.	Debates and discussions are stressed for optimal learning outcome.
30.	I collect and analyse data about learners and their environments to understand and improve learning outcomes.
31.	I consider new ways of teaching to improve the quality of learning.
32.	I adopt interdisciplinary teaching to help students develop their cognitive abilities.
33.	Proper assessment and feedback is made on written and practical activities.
34.	I select teaching resources and learning experiences which are curriculum and student appropriate.
35.	I identify students learning difficulties to improve their performance.
36.	I am punctual so that students may value time management.
37.	I identify and provide additional support to slow learners.
38.	I give equal importance to theory and experiential knowledge.
39.	A flexible learning environment is created to cater to varied students.

40.	I encourage and guide students to set realistic goals for their achievement.
41.	I update myself with technology developments in education and implement new technology tools in the classroom.
42.	I receive feedback from students to find out the learning needs of students.
43.	I stay updated with the recent trends in education.
44.	I participate in continuous professional development for self-improvement.
45.	I am able to provide multiple ways to solve students' doubts.
46.	I develop higher order questions to promote critical thinking in students.
47.	Teamwork and collaboration is emphasised among students.
48.	I participate in conferences, seminars/webinars when there is an opportunity.
49.	I contribute my ideas and experiences for curriculum planning and its development at institute level.
50.	Appropriate evaluation strategies are applied by me to achieve the goals and objectives of the course.
51.	I introduce the lesson effectively in order to create interest.
52.	I make my students understand the subject matter.
53.	I motivate the students to remain engaged in the topic.
54.	I summarize the lesson by consolidating the major points.
55.	I make myself available to the students beyond class hours for counselling/guidance.

Appendix F
ITEM-EVALUATION of Professional Competency (p-values, t-values and correlation of each item)

Sr. no	**Statements**	**P-value**	**t-value**	**Correlation with whole scale**	**Remarks**
1.	I cater to socio-cultural diversity in the classroom by ensuring that the curriculum is relevant to all students.	**P>0.05**	**.27**	**.05**	Rejected
2.	I present the subject matter in a simple, understandable and logical sequence.	P<0.05	15.00**	.96**	**Accepted**
3.	I maintain a friendly relationship with my students.	**P>0.05**	**1.75**	.96**	Rejected
4.	I make sure every topic is carefully planned to meet students' needs.	P<0.05	8.61**	.79**	**Accepted**
5.	I give assignments to students to check if my teaching in class is impactful.	P<0.05	8.57**	.96**	**Accepted**
6.	I use the Internet and Projector in teaching-learning keeping in mind the learning objectives.	**P>0.05**	**1.61**	.26**	Rejected
7.	I adopt instructional strategies appropriately to help students become independent learners.	P<0.05	6.74**	.91**	**Accepted**
8.	I respect and treat my students equally irrespective of their differences.	P<0.05	12.61**	.92**	**Accepted**
9.	I stay updated with the recent trends in	P<0.05	7.21**	.71**	**Accepted**

	education.				
10	I make sure that students are actively engaged in the teaching-learning process through: Discussions, and Teamwork presentations.	P<0.05	10.83**	.72**	**Accepted**
11.	The students in my classroom are unable to express their own understanding and ideas.	**P>0.05**	**1.45**	**.24**	Rejected
12.	I use formative assessment to identify students' learning gaps.	P<0.05	3.05**	.38**	**Accepted**
13.	I ensure that learning is self-directed and reflective for all students.	P<0.05	12.54**	.81**	**Accepted**
14.	I do not guide students in their projects and assignments.	P<0.05	4.93**	.56**	**Accepted**
15.	I maintain positive relationship with colleagues in my profession.	P<0.05	53.00**	.91**	**Accepted**
16.	I am open to the views and ideas of all in my teaching profession	P<0.05	11.83**	.95**	**Accepted**
17.	I provide constructive feedback to students to improve their academic performance.	**P>0.05**	**1.33**	.83**	Rejected
18.	I neglect the problems that occur during teaching and learning.	**P>0.05**	**1.49**	.80**	Rejected
19.	I promote self-paced learning.	P<0.05	4.32**	.42**	**Accepted**
20.	Students in my class come without pre-class readings/assignments.	P<0.05	3.66**	.28**	**Accepted**
21.	I encourage and motivate students who are underperformed in academics.	P<0.05	7.86**	.72**	**Accepted**
22.	I come to the classroom prepared to teach.	P<0.05	11.83**	.83**	**Accepted**
23.	I make use of e-learning material to facilitate learning.	P<0.05	8.83**	.77**	**Accepted**
24.	I avoid advising students for their career and academic opportunities because they may be mis-lead.	P<0.05	11.85**	.76**	**Accepted**
25.	I engage in professional discussion with colleagues for professional development.	P<0.05	9.44**	.73**	**Accepted**
26.	I incorporate experiential learning by focusing in real world problems in teaching-learning.	P<0.05	13.11**	.83**	**Accepted**
27.	I avoid collaborative works with my colleagues because it creates tension in the workplace.	P<0.05	15.67**	.79**	**Accepted**
28	I present important ideas in multiple ways while teaching a particular content.	P<0.05	10.64	.73**	**Accepted**
29.	I manage an interactive classroom directed towards optimal learning	P<0.05	8.88**	.73**	**Accepted**

	outcome.				
30.	I collect and analyse data about learners and their environments to understand and improve learning outcomes.	P<0.05	9.09**	.74**	**Accepted**
31.	I consider new ways of teaching to improve the quality of learning among the students.	P<0.05	5.29**	.58**	**Accepted**
32.	I adopt interdisciplinary approach by teaching with real world examples.	P<0.05	9.44**	.78**	**Accepted**
33.	I make proper assessment and feedback on written and practical activities.	P<0.05	12.36**	.80**	**Accepted**
34.	I ignore students' curiosity.	P<0.05	17.51**	.88**	**Accepted**
35.	I identify students' learning difficulties to improve their performance.	P<0.05	5.92**	.58**	**Accepted**
36.	I am punctual so that students may learn the same.	P<0.05	8.09**	.74**	**Accepted**
37.	I am unable to identify and provide additional support to slow learners.	P<0.05	10.90**	.84**	**Accepted**
38.	I give equal importance to theory and experiential knowledge.	P<0.05	7.21**	.67**	**Accepted**
39.	I create a flexible learning environment to cater to varied students.	P<0.05	16.34**	.78**	**Accepted**
40.	I encourage and guide students to set realistic goals for their achievement.	P<0.05	10.37**	.64**	**Accepted**
41.	I stress-out when need arise to use technology tools in my career as a teacher.	**P>0.05**	**1.87**	**.17**	Rejected
42.	I receive feedback from students to find out the learning needs of students.	**P>0.05**	**1.88**	**.15**	Rejected
43.	I ignore group activities in the classroom because it is time consuming.	P<0.05	16.35**	.88**	**Accepted**
44.	I apply my knowledge and skills to contribute to the growth of the institution/college.	P<0.05	13.74**	.82**	**Accepted**
45.	I am able to provide multiple ways to solve students' doubts in the classroom.	P<0.05	19.5**	.84**	**Accepted**
46.	I develop higher order questions to promote critical thinking in students.	P<0.05	4.59**	.66**	**Accepted**
47.	I promote teamwork and collaboration among students.	P<0.05	20.96**	.88**	**Accepted**
48	I participate in Conferences and Seminars for professional development and self-improvement.	P<0.05	7.24**	.74**	**Accepted**
49.	I contribute my ideas and experiences for curriculum planning and its development at institute level.	**P>0.05**	**.00**	**.12**	Rejected
50.	I do not identify students' strengths and weakness.	**P>0.05**	**1.64**	.93**	Rejected
*0.05 level of significance		******0.01 level of significance			

Critical value for item-total correlation = .25 At .01 level of significance Critical value for item-total correlation = .19 At .05 level of significance	Table value for t at 0.05 level=1.96 Table value for t at 0.01 level=2.57

Appendix G

Z-score Norms for Professional Competency

Mean: 157.35 SD: 18.90 N: 350 Range of Scores: 40-200

Raw Score	Z-score	Raw Score	Z-score	Raw Score	Z-score	Raw Score	Z-score
115	-2.24	**136**	-1.12	**157**	-0.01	**178**	+1.09
116	-2.18	**137**	-1.07	**158**	+0.03	**179**	+1.14
117	-2.13	**138**	-1.02	**159**	+0.08	**180**	+1.19
118	-2.08	**139**	-0.97	**160**	+0.13	**181**	+1.25
119	-2.02	**140**	-0.91	**161**	+0.19	**182**	+1.30
120	-1.97	**141**	-0.86	**162**	+0.24	**183**	+1.35
121	-1.92	**142**	-0.81	**163**	+0.29	**184**	+1.40
122	-1.87	**143**	-0.75	**164**	+0.35	**185**	+1.46
123	-1.81	**144**	-0.70	**165**	+0.40	**186**	+1.51
124	-1.76	**145**	-0.65	**166**	+0.45	**187**	+1.56
125	-1.71	**146**	-0.60	**167**	+0.51	**188**	+1.62
126	-1.65	**147**	-0.54	**168**	+0.56	**189**	+1.67
127	-1.60	**148**	-0.49	**169**	+0.61	**190**	+1.72
128	-1.55	**149**	-0.44	**170**	+0.66	**191**	+1.77
129	-1.49	**150**	-0.38	**171**	+0.72	**192**	+1.83
130	-1.44	**151**	-0.33	**172**	+0.77	**193**	+1.88
131	-1.39	**152**	-0.28	**173**	+0.82	**194**	+1.93
132	-1.34	**153**	-0.23	**174**	+0.88	**195**	+1.99
133	-1.28	**154**	-0.17	**175**	+0.93	**196**	+2.04
134	-1.23	**155**	-0.12	**176**	+0.98	**197**	+2.09
135	-1.18	**156**	-0.07	**177**	+1.03		

Appendix H
NAGALAND UNIVERSITY
DEPARTMENT OF TEACHER EDUCATION
PERSONAL DATA SHEET 2023

Name of the college:
Teaching Stream: (arts/science/mention others)
Teaching Experience: (1-5/6-10/11-15/others) years
Gender:

General Instructions

This form has 40 statements, kindly reply to all, read each statement carefully and decide your response on any one which describes you the best; given below are five response alternatives, viz., * **Not at all, *Rarely, *Sometimes, *Often,** and ***Most of the time** put a tick in the appropriate cell ☐

Kindly help us by giving valuable information regarding this. Your data will be used only for the research purposes. I plead your whole hearted co-operation.

LINO K ZHIMOMI
Research scholar (Department of teacher education)

(FINAL DRAFT)
PROFESSIONAL COMPETENCY SCALE

Sr.no		**Not at all**	**Rarely**	**Some times**	**Often**	**Most of the time**
1.	I present the subject matter in a simple, understandable and logical sequence.					
2.	I make sure every topic is carefully planned to meet students' needs.					
3.	I give assignments to students to check if my teaching in class is impactful.					
4.	I adopt instructional strategies appropriately to help students become independent learners.					
5.	I respect and treat my students equally irrespective of their differences.					
6	I stay updated with the recent trends in education.					
7.	I make sure that students are actively engaged in the teaching-learning process through: Discussions, and Teamwork presentations.					
8.	I use formative assessment to identify students' learning gaps.					
9.	I ensure that learning is self-directed and					

	reflective for all students.					
10.	I do not guide students in their projects and assignments.					
11.	I maintain positive relationship with colleagues in my profession.					
12.	I am open to the views and ideas of all in my teaching profession.					
13.	I promote self-paced learning.					
14.	Students in my class come without pre-class readings/assignments.					
15.	I encourage and motivate students who are underperformed in academics.					
16.	I come to the classroom prepared to teach.					
17.	I make use of e-learning material to facilitate learning.					
18.	I avoid advising students for their career and academic opportunities because they may be mis-lead.					
19.	I engage in professional discussion with colleagues for professional development.					
20.	I incorporate experiential learning by focusing in real world problems in teaching-learning.					
21.	I avoid collaborative works with my colleagues because it creates tension in the workplace.					
22.	I present important ideas in multiple ways while teaching a particular content.					
23.	I manage an interactive classroom directed towards optimal learning outcome.					
24.	I collect and analyse data about learners and their environments to understand and improve learning outcomes.					
25.	I consider new ways of teaching to improve the quality of learning among the students.					
26.	I adopt interdisciplinary approach by teaching with real world examples.					
27.	I make proper assessment and feedback on written and practical activities.					
28	I ignore students' curiosity.					
29.	I identify students' learning difficulties to improve their performance.					
30.	I am punctual so that students may learn the same.					
31.	I am unable to identify and provide additional support to slow learners.					
32.	I give equal importance to theory and experiential knowledge.					

33.	I create a flexible learning environment to cater to varied students.					
34.	I encourage and guide students to set realistic goals for their achievement.					
35.	I ignore group activities in the classroom because it is time consuming.					
36.	I apply my knowledge and skills to contribute to the growth of the institution/college.					
37.	I am able to provide multiple ways to solve students' doubts in the classroom.					
38.	I develop higher order questions to promote critical thinking in students.					
39.	I promote teamwork and collaboration among students.					
40.	I participate in Conferences and Seminars for professional development and self-improvement.					

APPENDIX I
INSTITUTIONAL CLIMATE INVENTORY
(For colleges)
Constructed & standardised by Dr. Tarlok Bandhu (2006)
HIMACHAL PRADESH UNIVERSITY
Summer Hill, Shimla – 171005

	Statements	Rarely occurs	Sometimes occurs	Often occurs	Very frequently occurs
1	The teachers are provided sufficient material for use in class room teaching.				
2	The principal himself/herself decides about all matters related to academic work.				
3	There is a tendency among teachers to oppose any view point.				
4	The teachers' closest friends are from the staff members of the college.				
5	The teachers have a feeling that their rights are protected.				
6	The principal exerts pressure that every work must be done according to his/her will.				
7	The principal communicates weakness of the faculty in a non-threatening way.				
8	The teachers have a concern for family members of their colleagues.				
9	There is a feeling of 'let us get things done' in the staff meetings.				
10	The faculty meetings in the college deal with receiving orders from principal.				
11	The principal explains reasons for his/her criticism to teachers.				
12	The principal does not involve teachers in decision-making process.				
13	The principal helps teachers to accomplish their assigned tasks.				
14	The principal holds informal interactions with the teachers.				
15	The principal makes it a point to reinforce any good work done by teachers.				
16	The principal assigns extra duties for teachers in an arbitrary manner.				
17	The teachers have a good socializing time during college hours.				
18	The principal is not available when needed.				
19	The teachers organise curricular activities in a team spirit.				
20	The principal willingly spares teachers to				

	attend in-service training programmes for professional development.				
21	The teachers exert group pressure on non-conforming staff members.				
22	The teachers spend extra time to pay individual attention to students who have personal problems.				
23	The principal is not sensitive to the feedback given by teachers.				
24	The principal considers about the moral and ethical consequences of all his/her decisions.				
25	The teachers have a concern for one another and help each other spontaneously when such help is needed.				
26	The principal promotes the habit of updating knowledge of teachers.				
27	The principal encourages faculty members to take initiatives for healthy academic practices in the college.				
28	The principal consults the teachers for developmental needs of the college.				
29	The principal is in agreement with the views expressed by teachers on different problems of the college.				
30	The teachers prefer to socialise only in small selected groups.				
31	The principal is sympathetic in dealing with problems of teachers.				
32	The principal believes in 'taking' or 'receiving' rather than 'giving' or 'sharing'.				
33	A high order team spirit is exhibited by the teachers in all the activities.				
34	The teachers enjoy, being together, on social occasions and other functions in the college.				
35	The teachers feel that 'freedom of expression' does not prevail in the college.				
36	The attitude of the principal as an administrator irritates teachers.				
37	A general feeling prevails among staff that one could have worked better in a different climate.				
38	The principal of the college encourages to have good teacher-student relationship in the college.				
39	The principal tries to minimize unnecessary procedures and encourages creativity.				
40	Senior teachers always welcome juniors				

	when approached for guidance.				
41	The atmosphere of the college is very friendly and teachers spare enough time in informal social relations.				
42	The teachers work with co-operation and trust in the college.				
43	The ideas and views of the teachers for institutional development is solicited by the principal.				
44	Supervision by the principal/ management is usually to check mistakes and 'catch' the person.				
45	The teachers talk about shifting from this college.				
46	When put together on some organizational tasks, teachers work with vigour and pleasure.				
47	Everybody puts sincere efforts to smooth over the conflicts to maintain friendly atmosphere.				
48	The teachers are informed about reports of inspection or assessment committee.				
49	Non-teaching duties are assigned to such an extent that teachers find no time for self-study and consult library during college hours.				
50	The principal of the college is respected because of his/her competence, judgement and personal qualities				