Mapping of Research Projects Conducted by the National Council of Educational Research and Training
An Analytical Study

Pooja Jain* and Meera**

| Abstract |

National Council of Educational Research and Training (NCERT) is the premier institution in the country dedicated to achieving the highest standards in both school education and teacher training nationwide. NCERT focuses on holistic and multidisciplinary education to develop individuals' intellectual, professional, aesthetic, social, physical, emotional and moral capacities. This includes Arts, Humanities, Languages, Sciences, Social Sciences, Vocational and Technical fields with bunch of communication, and socio-cultural skills to develop a civilised citizen for the country. This paper provides an in-depth analysis of research projects conducted by NCERT faculty members in various areas of school education during the financial years 2017–2022, as outlined in NCERT's Annual Reports. The study aims to identify the year-wise distribution of research projects, the educational stages under focus, specific areas of concentration within school education and the geographical scope of these research endeavors. The findings will serve as a guide for NCERT to pinpoint focused areas and address research gaps, offering a foundational

Research Scholar, Ph.D, Department of Library and Information Science, University of Delhi and *Assistant Librarian,* Library and Documentation Division, National Council of Educational Research and Training (NCERT).

**Professor*, Department of Library and Information Science, Faculty of Arts, University of Delhi.

reference for similar research initiatives by institutions with a primary research mandate. This study holds particular relevance in the context of India's large and diverse population, encompassing various languages, cultures, standards of living, and social values.

INTRODUCTION

Established in 1961, the National Council of Educational Research and Training (NCERT) serves as a pinnacle national organisation dedicated to establishing quality standards in school education. Over the past six decades, NCERT has been instrumental in developing national curriculum frameworks, syllabi and textbooks. The organisation's primary objective revolves around devising effective teaching-learning methods for classroom transactions, with a key focus on improving the education quality and student achievements. This commitment extends to inclusive education, and the integration of new Information and Communication Technology (ICT) for widespread dissemination of school education.

NCERT is responsible for the development of textbooks, covering Grades I to XII in English, Hindi, Urdu and Sanskrit (from Classes VI to XII). In addition to textbooks, NCERT actively engages in development of supplementary and non-textual materials to support dynamic, and enjoyable learning experiences for both students and teachers.

NCERT is a research-oriented institution. It conducts research on various aspects, including the status and implementation of specific schemes, diverse interventions to analyse performance, and the integration of arts into education. The research areas span the periphery of school education, encompassing Elementary Education, Early Childhood Care and Education, Inclusive Education, Women's Education and Gender Studies, Mathematics Education, Science Education, Art-Integrated Education, Teacher Education, Educational Psychology, Social Science Education, Value Education, Language Teaching-Learning, Monitoring and Implementation, Educational Technology, and Vocational Education.

In addition to research, NCERT develops various materials in published or unpublished forms, such as manuals, training packages, modules, guidelines, source books, handbooks, and glossaries tailored to specific subjects and state requirements. The organisation also provides training to master trainers, teachers, and other education stakeholders, facilitating the implementation of these resources in their respective states and schools.

NCERT, as a national institution, has established a pervasive presence across India, catering to the specific educational requirements of every state. The organisation currently comprises eight constituent units,

strategically located in different regions of the country:

- National Institute of Education (NIE), New Delhi.
- Regional Institutes of Education (RIE), Ajmer.
- Regional Institutes of Education (RIE), Bhopal.
- Regional Institutes of Education (RIE), Bhubaneswar.
- Regional Institutes of Education (RIE), Mysuru.
- North-East Regional Institutes of Education (NERIE), Umiam, (Meghalaya).
- Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE), Bhopal.
- Central Institute of Educational Technology (CIET), New Delhi.

ABOUT NCERT RESEARCH PROJECTS

NCERT employs a meticulous three-tier system for the assessment, selection, scrutiny and approval of its research, development, training, and extension programmes. These initiatives undergo thorough evaluation and approval within the Program Advisory Committee (PAC), presided over by the Director of NCERT. The hierarchical structure of boards and committees involved in this process includes the Departmental Advisory Board (DAB) at the departmental level, the Academic Committee (AC) or Institution Advisory Board (IAB) at the institute level, and the overarching Programme Advisory Committee (PAC) at the NCERT level. These bodies consist of external eminent experts from various regions, two faculty members with department heads from each NIE department, and the Principal along with the Head of the Department of Education and Extension from the seven other constituent units of NCERT.

Since its establishment, NCERT has categorised its programmes into four types; Research, Development, Training, and Extension, aimed at fortifying the school education system. The rigorous evaluation process unfolds in three stages:

1. Departmental Advisory Board (DAB): The programme undergoes scrutiny at this level, involving 3–5 external experts in the relevant subject area. Various aspects are discussed during this stage.

2. Academic Committee (AC): Upon approval by DAB, the programme, along with suggestions and modifications, is presented at the AC meeting. Feasibility, cost, implementation, monitoring and follow-up studies are considered for final approval.

3. Programme Advisory Committee (PAC): At the highest and final level, the programme is presented at the PAC meeting, involving subject experts from across India. This stage entails comprehensive evaluation and approval.

Following these rigorous evaluation processes, the approved

programmes are slated for implementation in the upcoming financial year. These programmes encompass defined activities, key performance indicators, timelines and specified budget allocations, along with the requisite staff requirements, including Junior Project Fellows, Consultants, Senior Research Associates, etc.

Relevance of this Study

As a key player in the Indian education school system, NCERT holds the primary responsibility of conducting research studies across diverse interdisciplinary areas of school education at local, regional, state and national levels. Given its sustained commitment to undertaking, promoting, and coordinating research in school education and teacher education since its inception, it becomes imperative to scrutinise the specific subjects that have been the focus of these studies. This analysis aims to provide an in-depth exploration of the subjects under study, shedding light on the patterns evident in the research conducted by various departments within NCERT and its constituent units spread throughout the country.

Review of Literature

The literature review is an integral component of research, offering insights into the existing body of knowledge and providing a foundation for understanding the concept under investigation. In this context, several recent studies have been selectively reviewed to build the understanding of the subject matter.

Gupta and Agarwal (2019) explored shifts in the Indian education system, especially the transition from school to higher education, emphasising the growing prominence of online education. The study assessed the advantages and disadvantages of this shift, concluding that India is rapidly embracing online platform-based education, with active governmental involvement in dismantling associated barriers.

Bozkurt et al. (2015) conducted an extensive exploration of current trends in distance education research from 2009 to 2013, reviewing 861 research studies from seven peer-reviewed scholarly journals. The study identified potential research fields and highlighted areas for further investigation.

Murthy and Ramchand (2020) conducted a comprehensive review of research on Elementary Education spanning from the year 2000, with a specific focus on key aspects such as access, retention, dropout rates, quality of education, teaching-learning processes, education of disadvantaged groups, teacher training and policy issues. Their work aimed to identify research gaps in these domains and provide recommendations for future research.

Koireng (2020) reviewed Science Education research conducted post-

2000, addressing various issues and concerns related to the teaching and learning of science in Indian schools. The article encompassed science pedagogy, textbooks, teaching-learning materials, assessment and evaluation methods, creativity, gender issues, science achievement, and environmental concerns. The review also highlighted trends in science education research and suggested directions for future studies.

Srinivasan, M.V. (2019) brought together a comprehensive review of research and major debates in the Social Science curriculum and material from 2000 to 2015. The aim was to analyse the substantial gap between curriculum expectations and the acceptance level of social science teachers.

Meganathan, R. (2019) examined school education from the language policy perspective, emphasising the role and place of the English language, multilingualism, language curriculum design, teaching materials in English, teaching methods, and the functioning of English language classrooms in diverse Indian contexts. The review also highlighted the importance of the mother tongue as a medium of instruction, the need for communication-oriented processes, the development of suitable materials and continuous professional development of teachers.

Gowramma, Gangmei, and Behera, (2018) provided a comprehensive framework and trend analysis of research in the field of education for children with disabilities, particularly focusing on inclusive education. The paper covered a historical overview of the term disability, national and international perspectives, literacy rates among children with disabilities, Early Education, integrated education, the role of family and community, nutrition and disability, transition, employment, higher education, teacher education, teacher competency, development of materials and research related to other types of disabilities, policy, and programme implementation.

Sharma, (2018) conducted a review of research trends in environmental education under six broad themes; awareness, and attitude of students and teachers, curricular frameworks and materials (such as syllabi, textbooks, and teaching-learning materials), teaching-learning processes, teacher development (including teacher education curriculum and training), and policy and systemic issues. The review aimed to identify gaps and offer suggestions for future research in the field of environmental education.

Chen et al. (2015) discussed the mapping of the research trends by co-word method analysis based on keywords from funded project. The author used the cluster analysis and social network analysis to study the relationship of each research topic, and trend of research.

Humphrey (2013) maps out research in professional education with reference to a threefold typology of paradigms, i.e., the positivist, interpretivist and critical paradigms with reference to its philosophical premises.

The objectives of this study are as follows:

- To examine year-wise growth of coordinated research projects by NCERT.
- To determine department-wise or institution-wise contribution to research.
- To identify the number of research projects according to School Education stages.
- To identify the major areas addressed in NCERT's research projects.
- To analyse the geographical distribution of research projects.

Scope and Methodology

This research constitutes a descriptive quantitative study focusing on research projects coordinated by NCERT faculty members and funded through the PAC budget. The study covers a comprehensive analysis of data extracted from Annual Reports spanning a period of five financial years, specifically from 2017 to 2022. The primary data source is the full-text content of Annual Reports accessible on the NCERT website, obtained from the 'Important Document' section via the link https://ncert.nic.in/annual-report.php

The initial phase of data collection involved downloading the full-text annual reports for the specified five-year duration. Subsequently, detailed Excel sheets were meticulously prepared to systematically organise information on research projects undertaken by various constituent units of NCERT. Key project details, including the title of the research project, year of initiation, subject of research and States or Union Territories (UTs) of India involved, were systematically cataloged.

The analysis primarily focused on discerning patterns related to the year-wise distribution of research projects, categorisation of projects based on the stages of education (Primary, Upper Primary, Secondary and Senior Secondary), exploration of the thematic areas underpinning the research projects in school education and a comprehensive understanding of the geographical coverage of these initiatives.

To facilitate this analysis, MS Excel software was employed, allowing for systematic data organisation and enabling insightful interpretations. This quantitative study aims to provide a detailed and objective understanding of the research landscape within NCERT over the specified five-year period, shedding light on the key dimensions of the institution's scholarly contributions to school education in India.

Data Analysis and Interpretation

Year-wise Distribution of Research Projects

- Alternative academic calendar.
- PRAGYATA guidelines on digital education.

Table 1
Year-wise Distribution of Research Projects Conducted by the NCERT

S. No.	Year (Financial Year)	No. of Research Projects	Cumulative	% of Total	Cumulative %
1.	2017–18	54	-	26.61	-
2.	2018–19	44	98	21.67	48.28
3.	2019–20	43	141	21.18	69.46
4.	2020–21	30	171	14.78	84.24
5.	2021–22	32	203	15.76	100
	Total	**203**		**100%**	

The data in Table 1 indicates a total of 203 projects coordinated by NCERT. The most prolific year was 2017–18, recording 54 projects (26.61 per cent), while the lowest productivity was observed in 2020–21, with 30 projects (14.78 per cent). Despite a declining trend in the subsequent years, it is essential to contextualise this decrease in light of the additional responsibilities shouldered by NCERT due to the COVID-19 pandemic. Following the directives of the Ministry of Education (MoE), Government of India, NCERT played a crucial role in addressing the challenges posed by the pandemic to prevent disruptions in the education system. The organisation contributed to several new initiatives and developments during this period. Some of them are:

- NISHTA-National Initiatives for School Heads and Teachers for their Holistic Advancement (online).
- Review of syllabi (course curtailed).
- Development of online education national level programmes for school education and teacher education.
- PM eVidya channels (For Grades I to XII for each subjects).
- Orientation programmes on educational technology through webinar series.
- Production and dissemination of e-contents for children with special needs.
- Development of the guidelines or booklet for cyber safety, and cyber bullying for students, parents and teachers.

- MANODARPAN cell created to provide psychosocial support for mental health and well-being of students during the COVID-19 outbreak and beyond.
- Counselling services for school children, live interactive sessions called 'SAHYOG'.
- Guidance for mental well-being of children.
- Online quizzes for students and teachers, Continuous Professional Development (CPD) courses on DIKSHA.
- Created a SSP mobile app (Android) for delivery of e-contents.
- Community radio in remote areas with no online education access.

Certainly, NCERT faced a formidable challenge in delivering optimal performance for school education in India. Amidst numerous responsibilities borne by the faculty members, NCERT successfully conducted a substantial number of research studies across various stages of education and diverse states in India. These studies were strategically designed with specific objectives, aiming to comprehensively understand the education system in India. The focus extended to assessing interventions, implementing various schemes and conducting thorough evaluations. This concerted effort by the NCERT reflects its commitment to enhancing the educational landscape in the country through rigorous research and strategic initiatives.

Department-Wise or Institution-Wise Contribution to Research

In the National Institute of Education (NIE), Delhi, there are a total of 18 departments, divisions and cells. Additionally, there are seven other institutes located across different regions of India. The subsequent table delineates the department-wise and institution-wise contributions to research projects:

Table 2
Department-wise or Institution-Wise Contribution in Research Projects

S. No.	NIE Departments/ Institutions	2017– 18	2018– 19	2019– 20	2020– 21	2021– 22	Total	%
1.	Regional Institute of Education (RIE), Bhubaneswar	11	05	04	-	10	30	14.78
2.	North East Regional Institute of Education (NERIE), Umaiam, Meghalaya	04	03	07	02	04	20	9.85
3.	Department of Education in Science and Mathematics (DESM), NIE	04	06	01	04	01	16	7.88

4.	Regional Institute of Education (RIE), Ajmer	01	03	03	04	05	16	7.88
5.	Regional Institute of Education (RIE), Bhopal	06	-	05	05	-	16	7.88
6.	Department of Elementary Education (DEE), NIE	05	03	02	02	02	14	6.90
7.	Educational Survey Division (ESD), NIE	03	04	-	02	01	10	4.93
8.	Regional Institute of Education (RIE), Mysuru	02	02	03	03	-	10	4.93
9.	Department of Education in Social Sciences (DESS), NIE	02	02	01	02	02	09	4.43
10.	Department of Gender Studies (DGS), NIE	-	02	03	03	-	08	3.94
11.	Department of Teacher Education (DTE), NIE	-	03	04	01	-	08	3.94
12.	Central Institute of Educational Technology (CIET), Delhi	02	05	-	-	01	08	3.94
13.	Rashtriya Madhyamik Shiksha Abhiyaan (RMSA) Project Cell, NIE	06	01	-	-	-	07	3.44
14.	Department of Curriculum Studies (DCS), NIE	04	01	01	-	-	06	2.96
15.	Planning and Monitoring Division (PMD)	01	02	02	-	01	06	2.96
16.	Department of Education of Groups with Special Needs (DEGSN), NIE	-	02	02	-	01	05	2.46
17.	Department of Education in Languages (DEL), NIE	-	-	03	01	-	04	1.97
18.	Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE), Bhopal	-	-	01	-	03	04	1.97
19.	Department of Education in Arts and Aesthetics (DEAA), NIE	01	-	-	01	01	03	1.48

20.	Department of Educational Psychology and Foundations of Education (DEPFE), NIE	02	-	01	-	-	03	1.48
	Total	**54**	**44**	**43**	**30**	**32**	**203**	**100**

The analysis of the provided table reveals that the National Institute of Education (NIE), Delhi, has undertaken a total of 99 (48.77 per cent) research projects across various departments, divisions and cells. In comparison, the remaining units of NCERT have collectively conducted 104 research studies. Among the regional institutes, RIE, Bhubaneswar, leads with 30 (14.78 per cent) research projects, closely followed by NERIE, Shillong, which has undertaken 20 (9.85 per cent) research projects addressing region-specific requirements. RIE, Ajmer, and Bhopal, along with the Department of Education in Science and Mathematics (DESM) at NIE, have each contributed 16 (7.88 per cent) research projects. Notably, the Department of Elementary Education (DEE), with a focus on Primary and Early Childhood Education, has undertaken 14 (6.90 per cent) projects, covering crucial aspects of this foundational stage of education. The Educational Survey Division (ESD) in Delhi has contributed 10 (4.93 per cent) projects, including a national-level educational achievement survey. RIE, Mysuru, has conducted 10 (4.93 per cent) research projects, marking the lowest among all regional institutes within the NCERT framework.

Research projects as per the Four Stages of School Education

During the analysis of the research project summaries, a critical aspect emerged pertaining to the categorisation of education stages as outlined in the National Curriculum Framework (NCF) of 2005. The delineation comprises four key stages; Primary, Upper-Primary, Secondary, and Senior Secondary, reflecting the structure of school education in India.

It is noteworthy that the term 'school' universally refers to Grades I to X across the country, with some States extending it to include Grade XII, while in other States, Grades XI and XII are considered as pre-university or junior college. Additionally, certain schools incorporate two to three years of pre-school classes.

The segmentation of schooling into these four 'stages' extends beyond administrative convenience. From the perspectives of curriculum design and teacher preparation, these stages hold developmental validity. The All-India School Education survey, a comprehensive assessment, affirms the existence of these four stages in the landscape of school education:

- Primary stage (Grade I to V) (also includes early childhood care and Education).
- Upper Primary stage (Grade VI to VIII).
- Secondary stage (Grade IX and X).
- Higher Secondary Schools (XI and XII). Other category of school includes the combination of two or more than two such as.

Primary and Upper Primary, Secondary and Higher Secondary, Upper Primary and Secondary, Higher Education and not specified.

Table 3 will outline the distribution of research projects across the four stages of school education, discerning the predominant focus during research endeavors. This categorisation aims to identify the stage that receives the most substantial attention in terms of research initiatives within the realm of school education.

Table 3 reveals a notable emphasis on the 'Other' category, incorporating combinations of two or more stages, with 46 (22.66 per cent) research projects. Conversely, the Senior Secondary stage attracted the least research studies. The Secondary Stage closely follows with 44 (21.67 per cent) projects, while pre-primary and primary education together account for 43 (21.18 per cent) projects. This underscores the importance of the Primary stage as the foundation and the Secondary stage as crucial for future career prospects.

Subject-Wise Contribution in Research Projects

After an in-depth examination of NCF 2005 and the established departments within NCERT, coupled with an assessment of research project titles and their corresponding summaries outlined in the Annual

Table 3
Distribution of Research Projects among Four Stages of School Education

S. No.	Year	Pre-primary or Primary Stage	Upper Primary Stage	Secondary Stage	Senior Secondary Stage	All stages of Education	Others	Total	%
1.	2017–18	09	07	16	04	09	09	54	26.61
2.	2018–19	09	03	09	07	06	10	44	21.67
3.	2019–20	10	03	10	03	09	08	43	21.18
4.	2020–21	08	03	07	01	04	07	30	14.78
5.	2021–22	07	04	02	02	05	12	32	15.76
	Total	**43**	**20**	**44**	**17**	**33**	**46**	**203**	**100**
	%	**21.18**	**9.85**	**21.68**	**8.37**	**16.26**	**22.66**	**100**	

Report, these titles have been systematically classified under 20 overarching subject headings. These subject headings encompass a comprehensive range of topics within the domain of school education and its interdisciplinary subjects.

Table 4
Subject-Wise Contribution in Research Projects

S. No.	Subject	2017–18	2018–19	2019–20	2020–21	2021–22	Total	%
1.	Arts in Education	01	-	01	02	01	05	2.46
2.	**Assessment and Evaluation***	**08**	**02**	**05**	**02**	**04**	**21**	**10.34**
3.	Curriculum studies	02	05	-	02	-	09	4.43
4.	Educational Achievement Survey	02	04	-	-	01	07	3.45
5.	Educational Psychology	02	01	01	-	01	05	2.46
6.	Elementary Education or Early Childhood Care and Education	03	03	-	-	01	07	3.45
7.	Educational Technology (Application of ICT in Education)	04	06	-	-	-	10	4.93
8.	Gender Studies	01	02	03	03	-	09	4.43
9.	Habitat and Learning (Environmental Education)	02	-	-	-	02	04	1.97
10.	Health and Physical Education	-	-	-	-	01	01	0.49
11.	Inclusive education	04	03	02	01	03	13	6.40
12.	Interventions in Education and Evaluation	01	03	05	04	04	17	8.37
13.	Language Education	04	-	03	02	02	11	5.42
14.	Mathematics Education	02	01	01	02	-	06	2.96

15.	**School Education ****	**04**	**03**	**08**	**02**	**03**	**20**	**9.85**
16.	**Science Education**	**06**	**05**	**04**	**03**	**01**	**19**	**9.35**
17.	Social Science	-	02	02	-	03	07	3.49
18.	**Teacher Education**	**05**	**04**	**07**	**03**	**02**	**21**	**10.34**
19.	Textbook Analysis	02	-	-	04	01	07	3.44
20.	Vocational Education	01	-	01	-	02	04	1.97
	Total	**54**	**44**	**43**	**30**	**32**	**203**	**100**

*Assessment and evaluation includes CCE, RTE Act 2009, learning outcome, performance of students, schemes of study and assessment, No detention policy, remedial teaching, Quality assessment and NTSE).
**School Education includes school enrolment, education of minorities, school and classroom environment, school Infrastructure, school monitoring, quality education, research in education, and school management).

Within the domain of school education, a comprehensive scope is covered, including school enrolment, education of minorities, school and classroom environment, school infrastructure, school monitoring, quality education, research in education, and school management. The ongoing study of over 203 research projects involves an in-depth subject analysis aimed at identifying the core concentrated areas of research. The following are the findings:

- Teacher education, and assessment and evaluation are the most concentrated subjects in which highest number of research projects with 21 (10.34 per cent) projects in each category.

- School education emerges as the second-highest concentrated subject, featuring 20 (9.85 per cent) projects that develop into various aspects of school education. These projects cover a wide spectrum, including school enrolment, education of minorities, school and classroom environment, school infrastructure, school monitoring, quality education, research in education, and school management, among others.

- Science education secures the third position with 19 (9.35 per cent) projects. It's noteworthy to mention that Mathematics, although a part of the Science branch, is treated separately due to its distinct challenges with school-going children across different education levels. If combined, Science education would have led with a total of 25 (12.32 per cent) research studies.

- Additionally, a crucial area of focus involves 17 (8.37 per cent) projects centered on interventions in education and evaluation, aimed at assessing performance and results.
- The findings suggest research gaps in areas such as Health and Physical education, Environmental education, and Vocational education, despite their inclusion in the Social Science branch. On a broader level, Arts in education and educational psychology emerge as areas requiring more research projects.

Table 5
State and UT-Wise Contribution in Research Projects

S. No.	State, UTs or other specific categories	2017–18	2018–19	2019–20	2020–21	2021–22	Total	%
1.	Andhra Pradesh	-	-	03	01	-	05	2.46
2.	Arunachal Pradesh	-		01	-		-	-
3.	Assam	-			-		-	-
4.	Bihar	-			01		01	0.49
5.	Chhattisgarh	01		01			02	0.99
6.	Goa	01			02		03	1.48
7.	Gujarat	-					-	-
8.	Haryana	02					02	0.99
9.	Himachal Pradesh	-					-	-
10.	Jharkhand	02		01		01	04	1.97
11.	Karnataka	-	01		01		02	0.99
12.	Kerala	01					01	0.49
13.	**Madhya Pradesh**	**04**	**-**	**03**	**03**	**-**	**10**	**4.92**
14.	Maharashtra	-	01	01			02	0.99
15.	Manipur	-		01	01		02	0.99
16.	Meghalaya	02		04	-		06	2.95
17.	Mizoram	-			01		01	0.49
18.	Nagaland	-	02	01	-		03	1.48
19.	**Odisha**	**08**	**03**	**02**	**-**	**07**	**20**	**9.85**
20.	Punjab	-					-	-
21.	**Rajasthan**	**02**	**04**	**02**	**03**	**03**	**14**	**6.90**
22.	Sikkim	01		01	-	01	03	1.48
23.	Tamil Nadu	-	-	-	-	-	-	-

No.	Name						Total	%
24.	Telangana	-	01	-	-	-	01	0.49
25.	Tripura	01	-	-	-	01	02	0.99
26.	Uttar Pradesh	01	-	-	-	-	01	0.49
27.	Uttarakhand	-	-	-	-	-	-	-
28.	West Bengal	-	01	-	-	-	01	0.49
29.	Andaman and Nicobar Island	-	-	01	-	-	01	0.49
30.	Delhi or NCR	03	04	-	-	02	09	4.43
31.	**National (All States and UTs)**	**10**	**16**	**06**	**07**	**05**	**44**	**21.67**
32.	North Eastern Region	02	01	-	01	01	05	2.46
33.	RIEs DM school	01	01	-	01	-	03	1.48
34.	Not Specified	02	02	04	02	04	14	6.90
35.	Northern States	01	-	-	-	01	02	0.99
36.	Southern States	01	-	-	-	01	02	0.99
37.	**Combination of two or more states or UTs**	**07**	**05**	**10**	**05**	**05**	**32**	**15.76**
38.	**International**	**01**	**02**	**01**	**01**	**-**	**05**	**2.46**
	Total	**54**	**44**	**43**	**30**	**32**	**203**	**100**
	%	**26.61**	**21.67**	**21.18**	**14.78**	**15.76**		

From the data presented in Table 5, it is evident that Odisha emerges as the most concentrated State among all States and Union Territories of India, with 20 (9.85 per cent) specific research studies centered on Bhubaneswar. Rajasthan follows as the second concentrated state with 14 (6.90 per cent) research projects, while Madhya Pradesh takes the third spot with 10 (4.92 per cent) research projects, each serving distinct objectives and evaluation purposes. The North-eastern part of India contributes 17 individual projects, and there are 5 projects dedicated to the entire North-east region, totalling 22 projects (constituting more than 10.84 per cent) for the north-eastern states-a commendable contribution.

Research Projects from National perspective

From a national perspective, there are a total of 44 projects (comprising 21.67 per cent) categorised as National projects, with the scope of study spanning the entire nation or covering multiple States and Union Territories. Additionally, 32 projects (representing 15.76 per cent) involve a

combination of two or more districts, states, and block-level studies.

Research Projects from International Perspective

An important revelation is the presence of four research studies conducted from an international perspective, each offering valuable insights into diverse educational landscapes. These studies include:

- A comprehensive examination of Social Science syllabus and textbooks (Upper Primary to Higher Secondary stage) from different countries, with data collected through internet research, and few published documents from Australia, Canada, England and Wales, Pakistan, South Africa, Singapore, Sri Lanka, Germany, Finland, Japan, Korea, Netherlands, and Norway.

- A meticulous review and analysis of the Economic syllabi and textbooks at the Higher Secondary stage. This study engaged with twenty countries, including Switzerland, California, China, Sri Lanka, United Kingdom and Japan, and different boards such as ICSE and IB Boards. Conducted by the Department of Social Sciences, NCERT, Delhi, it spanned the years 2017–18 and 2018–19.

- Policy research on education and skill development from the perspective of gender Equality-A comparative study of India and Korea. This project, undertaken by the Department of Gender Studies, NCERT Delhi, spanned the years 2018–2020. (in the above table, this project is treated as an individual project in each year).

- A comprehensive review of Mathematics syllabi at the Primary, Upper Primary, Secondary and Higher Secondary Stages, studied internationally for comparative analysis. Conducted by the Department of Education in Science and Mathematics, NCERT, Delhi, this project unfolded in the year 2020–21.

FINDINGS AND SUGGESTIONS

- Over the five-year period 2017–2022, a total of 203 research projects were conducted, as detailed in the NCERT Annual Report. The most productive year was 2017–18, contributing 54 projects, followed by 2018–19 with 44 projects, accounting for 26.6 per cent and 21.67 per cent of the total projects, respectively.

- Among the participating units, the National Institute of Education (NIE), Delhi, led with 99 (48.77 per cent) research projects, while the remaining seven NCERT units collectively carried out 104 (51.23 per cent) projects.

- Regional Institute of Education (RIE), Bhubaneswar, emerged as the top-performing unit, conducting 30 (14.78 per cent)

research projects during the study period. NERIE, Shillong, followed closely with 20 (9.85 per cent) research projects, while RIE, Ajmer and Bhopal shared the same pace with 16 (7.88 per cent) projects each. RIE, Mysuru, conducted the fewest research projects, totaling 10.

- Analysis based on educational stages revealed a significant concentration of 46 (22.66 per cent) research projects focusing on a combination of two or more stages, while Senior Secondary stage projects were the least represented with only 17 (8.37 per cent) studies. Primary and Secondary stages took the second, and third positions, respectively, emphasising their pivotal roles in children's development.

- Teacher education and assessment and evaluation were identified as the most concentrated research areas within NCERT, each comprising 21 (10.34 per cent) projects. School education and Science education secured the third position with 20 (9.85 per cent) and 19 (9.35 per cent), projects, respectively. The study highlighted potential research gaps in Health and Physical education, Environmental education, Vocational education, Arts in Education, and Educational psychology.

- Geographically, Odisha exhibited the highest concentration of research projects (14), followed by Rajasthan (14) and Madhya Pradesh (10). The North eastern States collectively contributed 22 projects (10.84 per cent). National-level projects accounted for 44 (21.67 per cent), while 32 projects (15.76 per cent) involved a combination of two or more districts or states in block-level studies. Additionally, five research studies adopted an international perspective.

The analysis revealed a strategic alignment of NCERT's research projects with State-specific needs and current educational system requirements. Recommendations include increased focus on emerging areas such as Health and Physical education, Environmental education, Vocational education, Arts in education, and Educational psychology. Furthermore, the electronic publication of research findings on the NCERT website is suggested to enhance accessibility and utilisation by a diverse range of stakeholders.

The study emphasises NCERT's role as a national apex organisation and recommends a continued emphasis on systematic research studies, and effective dissemination for ongoing improvement in the Indian education system.

Conclusion

NCERT assumes a pivotal role in formulating policies and strategies to foster innovations and enhancements in the school education, system. The

research projects undertaken by education systems across nations are inherently unique, shaped by factors such as population dynamics, infrastructure, linguistic diversity and inequalities on various parameters. The challenge in the Indian education system is particularly pronounced, given the vast diversity in language, culture, religions, social values and practices. Addressing the substantial youth population, disparities between rural and urban infrastructure, and prevailing societal mindsets further compound the complexities. Despite these challenges, the objective is to cultivate an education system that maximises existing resources to facilitate personal development, knowledge acquisition, and the establishment of meaningful relationships at individual, group, and national levels.

NCERT serve as valuable resources, providing crucial insights and a foundation for key decisions, policies, guidelines, and the development of tailored materials to meet specific requirements at both State and national levels. As a distinctive national institution, NCERT directs its research efforts toward diverse facets of school education with the overarching goal of elevating the quality of education in India.

To conclude, it is observed that NCERT exhibits a year-wise expansion in coordinated research projects, with notable department-wise and institution-wise contributions. The categorisation of research projects based on school education stages emphasises the foundational role of the Primary stage and the critical significance of the Secondary stage in shaping future career prospects. The comprehensive scope of NCERT's research projects spans 20 major areas, showcasing the diversity of research endeavours. Additionally, the geographic distribution of research projects at international, national, and state levels highlights a diverse and impactful contribution. This study has a potential for extension with similar findings of collaborative initiatives at both intra and inter-institutional levels, as well as intra and inter-state levels.

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