ITEP: An Idiosyncratic Programme for Generating Teachers with 21st Century Skills

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Abstract

Education is a process of transforming humans into socially productive individuals. The teacher are the backbone of education and who is a knowledge repository who propagates knowledge to society and is called a 'Guru' with great regard for shaping children through their experience of knowledge. One popular Sanskrit phrase asserts that "Matha (Mother), Pitha (Father), and Guru (Teacher) - all are my gods," expressing the significance of honoring the teacher, where the teacher serves as the children's second parent. The teacher's role extends beyond teaching to encompass an assortment of responsibilities, such as playing the role of social reformer, national builder, guide, counselor, and so on. Furthermore, teaching is one of the noblest and the mother of all other professions. Producing such a distinctive, responsible, and dedicated teacher is a challenging task in the teacher education program. Nowadays, due to modern technology, more departments have been emerged and students seek employability with mono or multi-disciplinary skills along with 21st-century knowledge. This prioritizes the generation of multidisciplinary teachers who cater to the need for quality education in the 21st century. Based on this reflection, the National Education Policy (NEP) 2020 has proposed the Integrated Teacher Education Program (ITEP). The pilot version of ITEP is currently being implemented at the Institute of Eminence (IoE), Institutions of National Importance (IoNI), and Central and State Universities. This article asserts that ITEP strengthens graduates' professional employability along with 21st-century skills which will be attire and adornment for future teachers.

Keywords: Dual Major System, 21st-Century Skills, Employability, Holistic Education, ITEP, NEP-2020.

Introduction

"Teacher education is vital in creating a pool of school teachers that will shape the next generation" - The National Education Policy (NEP). Teachers are the backbone of national growth and development and so they are called as "national builders." The teaching profession is both respectful and accountable for shaping students' lives while advocating progress in society. Any teacher at any institution not only propagates knowledge to students but also develops them into productive individuals for social development. Because future generations are the ones who are responsible for the nation's progress. Therefore next generation will be made ready for the advancement of national growth. Today, our nation faces many issues such as poverty, unemployment, and pollution problems (1) and these have to be rectified only by providing proper and quality education to students. The development of the students to be good citizens depends on the teacher and the elongation of the teacher by the teacher education Program. Teacher education program is significant in producing a pool of school teachers who will shape the next generation and it is a teacher preparation activity that requires a multidisciplinary perspective and knowledge, formulation of values, and development of practice in real life (2). The NEP 2020 intends to provide such a quality-enhancing education to every Indian (3). Everyone should recognize that today's youth are tomorrow's leaders, creators, investors, builders, and inventors. In the present scenario, young people are growing up with technology and aspire to be professionals after they graduate. Thus NEP-2020 emphasizes a pilot version of ITEP to prepare teacher graduates employable with 21st-century skills through holistic education to produce quality teachers to cater to and fulfill the needs ofthe educational system. The ITEP was initiated under

NEP2020 at the Institute of Eminence (IOE) (IoE), the Institution of National Importance (IoNI), and Central and state universities. This article provides a foundational understanding of how the ITEP produces graduates with professional employability and 21st-century skills in a relative period. Teachers are not born and they are carved as dedicated and sacrificed professionals by the teacher education. Teacher has more responsibility for the development of students, society, the nation, and the universe. Teachers are the greatest assets of the school, transmitting knowledge, skills, and values (4).Teacher education from its commencement produces capable teachers to make their service to society more responsible. In the real sense, Teachers are not producing the students, but they are producing a mass of youth for social as well as national development. Teachers are now co-travelers with the students, the complexities of the 21st century, which demand proficiency in understanding post-modern, and cyphernative environments (5). National Council for Teacher Education (NCTE) is the saturated body of the Government of Indiaestablished under the NCTE Act, 1993 on 17th August 1995. The NCTE aims to achieve planned and coordinated development of teacher education and to govern the regulation and proper maintenance of norms and standards for teacher education throughout the country (6). It recognizes the institutions that are ready to conduct teacher education programme such as Diploma in Preschool Education (DPSE). Diploma in Elementary Education (D.El.Ed.), Bachelor of Elementary Education (B.El.Ed.), Bachelor of Education (B.Ed.), Master of Education (M.Ed.), Diploma in Physical Education (D.P.Ed.), Bachelor of Physical Education (B.P.Ed.), Master of Physical Education (M.P.Ed.), Diploma in Elementary Education –open and distance learning (D.EL.Ed.-ODL), Bachelor of Education – Open and Distance Learning (B.Ed.-ODL), Diploma in Arts Education (Visual Arts), Diploma in Arts Education (Performing Arts), 4-years Integrated programme (B.A. B.Ed./B.Sc. B.Ed), 3 years integrated B.Ed. M.Ed.), Integrated Teacher Education Programme (ITEP) and Master in Science Education (M.Sc.Ed.), Diploma in Teacher Education (D.T.Ed) and Bachelor of Education (B.Ed) are the renowned course that produces the teacher working in teacher at primary and secondary education

respectively. The NCTE has started a unique programme as a milestone in teacher education is ITEP. The ITEP is different from the earlier 4-year integrated B.Ed. programme. The 4-year integrated Bachelor of Education (B.Ed.) program combines a comprehensive B.Ed. curriculum with specialized subjects. ITEP has provides an opportunity to the students that they can choose their area of specialization from various disciplines, including language, mathematics, science, and social science, etc. However, according to the NEP-2020, ITEP prepare teachers in foundational, preparatory, middle, and secondary stages concerning the school structure of NEP 2020 (7). ITEP available in B.A. B.Ed., B.Sc. B.Ed., and B.Com. B.Ed., and this programme will prepare teachers for a new school structure such as foundational, preparatory, middle and secondary stage (5+3+3+4) as mentioned in NEP-2020.

ITEP is a dual major holistic course that aims at the dual purpose of providing disciplinary knowledge as well as professional knowledge to the student-teacher in an integrated manner (8). Also, it is aimed to cater to 21st-century skills and is well grounded with Indian values, languages, knowledge, ethos, tribal tradition, and advances in pedagogy. The curriculum framework (9) of ITEP insisted, 'ITEP envisions the creation of passionate, motivated, qualified, professionally trained, and well-equipped teachers capable of designing and implementing developmentally appropriate learning experiences for students at different stages of school education', as the main feature.The NCTE released the norms and standards of unrivaled ITEP on 26th October 2021 and 1st May 2022 it invites online applications for 1st phase of the pilot of ITEP from aspiring institutions nationwide. Based on this, the pilot version of ITEP was initiated at 42 institutions with the recognition of NCTE includingthe Indian Institute of Technology (IIT), National Institute of Technology (NIT), Regional Institute of Education (RIE), and government colleges for the academic year 2023-24 (10). The list of glittering and luminescence of ITEP is described statistically with the following research questions.

R1: How many institutions were started ITEP from the academic year 2023-24 with respect to regional centre and institutions?

R2: Is there any changes in annual growth index (AGI) of ITEP at secondary stage with respect to type of institutions?

R3: How many institutions are started ITEP at secondary stage with respect to type of institutions?

R4: Is there any changes in annual growth index (AGI) of ITEP at secondary stage with respect to regional centers?

R5: How many institutions are started ITEP at secondary stage with respect to regional centers?

R6: Is there any changes in annual growth index (AGI) of ITEP at secondary stage along its programme specification with respect to regional centers?

R7: How many institutions are started ITEP at secondary stage along its programme specification with respect to regional centers?

R8: Is there any changes in annual growth index (AGI) of ITEP at secondary stage along its programme specification with respect to academic years?

R9: How many institutions are started ITEP at secondary stage along its programme specification with respect to academic years?

R10: Is there any changes in annual growth index (AGI) of ITEP at secondary stage along its programme specification with respect to type of institutions?

R11: How many institutions are started ITEP at secondary stage along its programme specification with respect to type of institutions?

Methodology

External secondary research was conducted with the external secondary data which have been available in academic journals, open data repositories, competitor research, data from government and government institutions purposively. The secondary data were purposively collected from Indian educational institutions from the academic year 2023-24 to till. The purposive data are presented in the following tables and the Annual Growth Index (AGI) was calculated for identifying the growth of ITEP in India.

R1: How many institutions were started ITEP from the academic year 2023-24 with respect to regional centre and institutions?

Table 1: Region, State, and Academic Year Wise List of ITEP (11)

Sl. No.	State	No. of Institutions have Started in the Academic Year 2023-24						No. of Institutions have Started in the Academic Year 2024-25						Total
		IIT	NIT	CU	SU	CO/IN	Sub-Total	IIT	NIT	CU	SU	CO/IN	Sub-Total	
Eastern Regional Centre (ERC)														
1.	Arunachal Pradesh	-	-	1	-	-	1	-	-	-	-	-	0	1
2.	Assam	-	-	-	-	2	2	-	-	-	-	2	2	4
3.	Bihar	-	-	-	-	-	0	-	-	-	-	-	0	0
4.	Jharkhand	-	-	-	-	-	0	-	-	-	-	-	0	0
5.	Manipur	-	-	-	-	-	0	-	-	-	-	-	0	0
6.	Meghalaya	-	-	-	-	1	1	-	-	1	-	-	1	2
7.	Mizoram	-	-	-	-	-	0	-	-	1	0	-	1	1
8.	Nagaland	-	-	-	-	-	0	-	-	-	-	-	0	0
9.	Odisha	1	-	-	-	1	2	-	-	-	-	-	0	2
10.	Sikkim	-	-	-	-	-	0	-	-	-	-	-	0	0
11.	Tripura	-	1	-	-	-	1	-	-	-	-	-	0	1
12.	West Bengal	1	-	-	-	-	1	-	-	-	-	-	0	1
Sub-Total		**2**	**1**	**1**	**0**	**4**	**8**	**0**	**0**	**2**	**0**	**2**	**4**	**12**
Western Regional Centre (WRC)														
13.	Chhattisgarh	-	-	-	-	-	0	-	-	-	-	1	1	1
14.	Dadra and Nagar Haveli	-	-	-	-	-	0	-	-	-	-	-	0	0
15.	Daman and Diu	-	-	-	-	-	0	-	-	-	-	-	0	0

Sl. No.	State	No. of Institutions have Started in the Academic Year 2023-24						No. of Institutions have Started in the Academic Year 2024-25						Total
		IIT	NIT	CU	SU	CO/IN	Sub-Total	IIT	NIT	CU	SU	CO/IN	Sub-Total	
16.	Goa	-	-	-	-	-	0	-	-	-	-	-	0	0
17.	Gujarat	-	-	-	-	-	0	-	-	-	1	-	1	1
18.	Madhya Pradesh	-	-	2	-	1	3	-	-	1	-	-	1	4
19.	Maharastra	-	-	1	1	-	2	-	-	-	2	-	2	4
20.	Rajasthan	-	-	1	-	1	2	1	-	1	-	-	2	4
Sub-Total		**0**	**0**	**4**	**1**	**2**	**7**	**1**	**0**	**2**	**3**	**1**	**7**	**14**
Northern Regional Centre (NRC)														
21.	Chhattisgarh	-	-	-	-	-	0	-	-	-	2	-	2	2
22.	New Delhi	-	-	1	1	2	4	-	-	1	1	1	3	7
23.	Haryana	1	-	-	2	-	3	-	-	-	2	-	2	5
24.	Himachal Pradesh	-	-	-	-	-	0	-	-	-	-	-	0	0
25.	Punjab	-	1	-	1	-	2	1	-	1	1	-	3	5
26.	Uttar Pradesh	-	-	1	2	-	3	-	-	-	-	-	0	3
27.	Uttarakhand	-	-	1	1	-	2	-	-	-	-	-	0	2
Sub-Total		**1**	**1**	**3**	**7**	**2**	**14**	**1**	**0**	**2**	**6**	**1**	**10**	**24**
Southern Regional Centre (SRC)														
28.	Andhra Pradesh	-	-	1	1	-	2	-	-	-	-	-	0	2
29.	Lakshadweep	-	-	-	-	-	0	-	-	-	-	-	0	0
30.	Andaman and Nicobar	-	-	-	-	-	0	-	-	-	-	-	0	0
31.	Tamil Nadu	-	-	1	-	-	1	-	1	-	-	-	1	2
32.	Puducherry	-	1	1	-	-	2	-	-	-	-	-	0	2
33.	Telangana	-	1	1	-	1	3	-	-	-	-	-	0	3
34.	Karnataka	-	-	-	1	0	1	-	-	-	-	-	0	1
35.	Kerala	-	1	1	-	-	2	-	-	1	-	-	1	3
Sub-Total		**0**	**3**	**5**	**2**	**1**	**11**	**0**	**1**	**1**	**0**	**0**	**2**	**13**
Total		**2**	**5**	**15**	**10**	**10**	**42**	**2**	**1**	**6**	**10**	**3**	**22**	**64**

Note: IIT – Indian Institute of Technology, NIT – National Institute of Technology, CU – Central University, SU – State University and CO/IN – College/Institute

Vide Table 1, NRC has the highest number of institutions having the ITEP Programme followed by WRC, SRC, and ERC. Assam state in ERC, Madya Pradesh, Maharatra and Rajasthan in WRC, New Delhi in NRC, and Telungana and Kerala in SRC havethe highest number of ITEP programme. States like Bihar, Jharkhand, Manipur, Nagaland, and Sikkim in ERC, Dadra and Nagar Haveli, Daman and Diu, Goa in WRC, Himachal Pradesh in NRC and Lakshadweep, and Andaman and Nicobar in SRC have not initiated the ITEP programmes.

In the first phase, the ITEP was established at 42 institutions with 3950 seats and it was extended to 22 institutions in the second phase with 2150 additionally. Phase three is expected to implement the ITEP in more than 500 institutions. Now, the establishment of the ITEP in multi-disciplinary instructions is increasing year by year. At present 19 central universities, 21 state universities, 7 NITs, 3 IITs, and 14 colleges (a total of 64 institutions) were entered into the ITEPfora total of 6000 seats. The following chart indicates how the ITEP is flowering in the educational institutions year by year.

R2: Are there any changes in annual growth index (AGI) of ITEP at secondary stage with respect to type of institutions?

Table 2: Institution-wise list of ITEP at the Secondary Stage (11)

| Institution Type | Number of institutions established ITEP | | | | | | Annual Growth Index |
| | 2023-24 | | 2024-25 | | Aggregate | | |
	N	%	N	%	N	%	
IITs	2	4.76	1	4.55	3	4.69	0.50
NITs	5	11.90	2	9.09	7	10.64	0.40
Central University	13	30.95	6	27.27	19	29.69	0.46
State University	11	26.19	10	45.45	21	32.81	0.91
Colleges/Institutes	11	26.19	3	13.64	14	21.88	0.27
Total	**42**	**100**	**22**	**100**	**64**	**100**	**0.52**

Vide Table 2, the AGI of the central university, state university, NITs, IITs, and Colleges for establishing the ITEP are 0.46, 0.91, 0.40, 0.50, and 0.27 respectively. It means 46 percent of central universities, 91 percent of state universities, 40 percent of NITs, 50 percent of the IITs, and 27 percent of colleges have started the ITEP programme in the academic year 2023-24 of the earlier year of the respective institutes. In this, state university has the highest AGI, and colleges have the lowest AGI. In the institutions holding ITEP, AGI of B.A. B.Ed. is 0.60, followed by B.Sc. B.Ed. is 0.44 and B.Com. B.Ed. is 0.13 and the growth occurred maximum. Among the institutions, the Western Regional Centre has an AGI of 1.00 followed by the Northern Regional Centre, Eastern Regional Center, and Southern Regional Centre has 0.56, 0.50, and 0.18 respectively.

R3: How many institutions are started ITEP at secondary stage with respect to type of institutions?
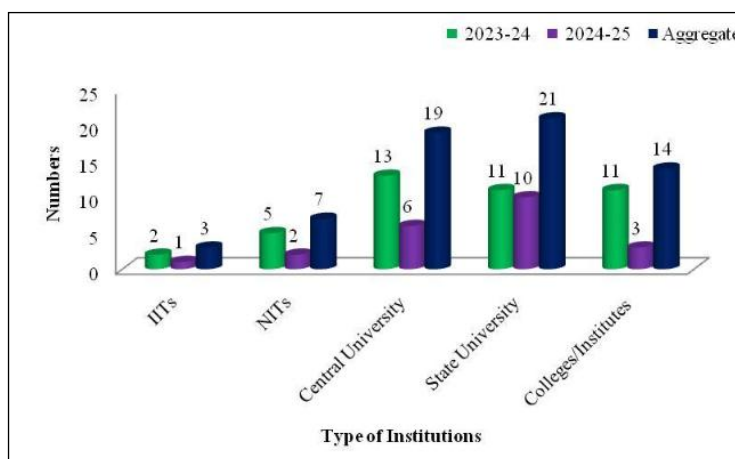
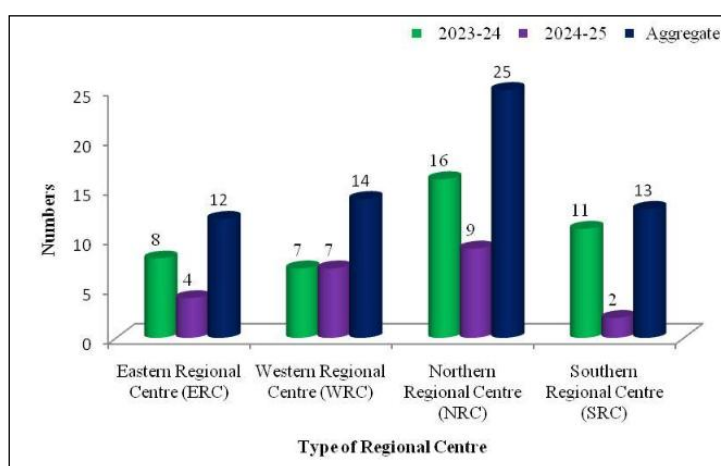**Figure 1:** Institution-wise List of the ITEP (11)

Vide Figure 1, the number of the central university, state university, NITs, IITs, and Colleges for establishing the ITEP are 2 and 1, 5 and 2, 13 and 6, 11 and 10, and 11 and 3 to the academic years 2023-24 and 2024-25 respectively. In the academic year 2023-24, ITEP started high in central university and least in IIT, and in the academic year 2024-25, state universities has high ITEP startups and IIT has the least startups. The figure clearly indicated that state universities also has high startups of ITEP than other institutions and IITs hold the least in startups of ITEP by comparing the differences between the academic years and the aggregate data. This clearly depicts the state universities showing much interest than other institutions to start ITEP.

R4: Are there any changes in the annual growth index (AGI) of ITEP at secondary stage with respect to regional centers?

Table 3: Regional Centre-Wise List of the ITEP at Secondary Stage (11)

| Regional Centre | Number of institutions established ITEP | | | | | | Annual Growth Index |
| | 2023-24 | | 2024-25 | | Aggregate | | |
	N	%	N	%	N	%	
Eastern Regional Centre (ERC)	8	19.05	4	18.18	12	18.75	0.50
Western Regional Centre (WRC)	7	16.66	7	31.82	14	21.88	1.00
Northern Regional Centre (NRC)	16	38.10	9	40.90	25	39.06	0.56
Southern Regional Centre (SRC)	11	26.19	2	9.10	13	20.31	0.18
Total	**42**	**100**	**22**	**100**	**64**	**100**	**0.52**

Figure 2: Regional Centre-Wise List of the ITEP

Vide Table 3, the AGI of the ERC, WRC, NRC, and SRC are 0.50, 1.00, 0.56, and 0.18 respectively. WRC has the highest growth of the ITEP and the overall growth is 52 percent the institutions established the ITEP in the academic year 2023-24. R5: How many institutions are started ITEP at secondary stage with respect to regional centers? Vide Figure 2, the number of the Eastern Regional Centre (ERC), Western Regional Centre (WRC), Northern Regional Centre (NRC) and Southern Regional Centre (SRC) for establishing the ITEP are 8 and 4, 7 and 7, 16 and 9, and 11 and 2, to the academic years 2023-24 and 2024-25 respectively. ITEP started high in NRC and least in ERC in the academic year 2023-24, and NRC has high ITEP startups and SRC has the least startups in the academic year 2024-25. The figure clearly indicates NRC also has high startups of ITEP than other institutions and SRC hold the least in startups of ITEP by comparing the differences between the academic years and the aggregate data. This depicts the institutions under NRC are showing much interest to start ITEP than other institutions.

R6: Is there any changes in annual growth index (AGI) of ITEP at secondary stage along its programme specification with respect to regional centers?

Vide Table 4 (below), the AGI of B.A. B.Ed., B.Sc. B.Ed., and B.Com. B.Ed in regional centers depicts that the B.Com. B.Ed. has newly started in ERC, B.Sc. B.Ed. has high growth in WRC, B.A. B.Ed. has high growth in NRC and SRC, and overall 46 percent of programmes growth has occurred from the number of institutions available in the academic year 2023-2024.

R7: How many institutions are started ITEP at secondary stage along its programme specification with respect to regional centers?

Table 4: Course cum Regional Centre wise list of ITEP at Secondary Stage (11)

| Regional Centre | Programme Specification | Number of institutions established ITEP | | | | | | Annual Growth Index |
| | | 2023-24 | | 2024-25 | | Aggregate | | |
		N	%	N	%	N	%	
Eastern Regional Centre (ERC)	B.A. B.Ed.	6	50.00	3	42.86	9	47.37	0.50
	B.Sc. B.Ed.	6	50.00	3	42.86	9	47.37	0.50
	B.Com. B.Ed	0	0.00	1	14.28	1	5.26	1.00
Sub-Total		**12**	**100**	**7**	**100**	**19**	**100**	**0.58**
Western Regional Centre (WRC)	B.A. B.Ed.	5	45.46	6	46.16	11	45.83	1.20
	B.Sc. B.Ed.	4	36.36	5	38.46	9	37.50	1.25
	B.Com. B.Ed	2	18.18	2	15.38	4	16.67	1.00
Sub-Total		**11**	**100**	**13**	**100**	**24**	**100**	**1.18**
Northern Regional Centre (NRC)	B.A. B.Ed.	12	44.44	6	66.67	18	50.00	0.50
	B.Sc. B.Ed.	8	29.63	3	33.33	11	30.56	0.38
	B.Com. B.Ed	7	25.93	0	0.00	7	19.44	0.00
Sub-Total		**27**	**100**	**9**	**100**	**36**	**100**	**0.33**
Southern Regional Centre (SRC)	B.A. B.Ed.	6	14.29	1	50.00	7	35.00	0.17
	B.Sc. B.Ed.	10	23.81	1	50.00	11	55.00	0.10
	B.Com. B.Ed	2	11.11	0	100	2	10.00	0.00
Sub-Total		**18**	**100**	**2**	**100**	**20**	**100**	**0.11**
	Total	**68**	**100**	**31**	**100**	**99**	**100**	**0.46**

Note: The total indicates the institution including B.Sc. B.Ed. or B.A. B.Ed. or B.Com. B.Ed. alone or a combination of any two or all three
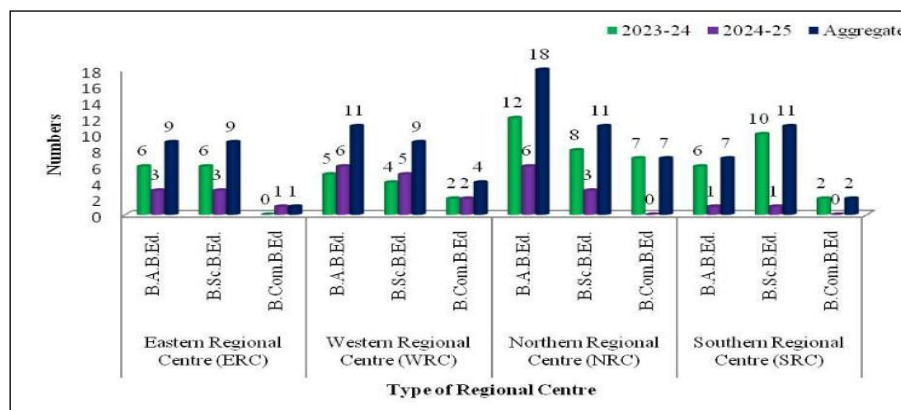
Figure 3: Course Cum Regional Centre Wise List of the ITEP at Secondary Stage

Vide Figure 3, Focusing on the number of institutions has started ITEP programme especially B.A. B.Ed., B.Sc. B.Ed., and B.Com. B.Ed. in ERC, WRC, NRC and SRC, NRC has high B.A. B.Ed. and B.Com. B.Ed. startups, WRC, NRC and SRC has equal B.Sc. B.Ed. startups. Though, fluctuation is available in the ITEP specialization according to the academic years and the regional centers. The figure clearly depicts that the institutions available at NRC are showing much interest in starting ITEP in all three specializations than others.

R8: Is there any changes in annual growth index (AGI) of ITEP at secondary stage along its programme specification with respect to academic years?
Vide Table 5 (below), the AGI of B.A. B.Ed., B.Sc. B.Ed., and B.Com. B.Ed. are 0.55, 0.43, and 0.27 respectively, and the B.A. B.Ed. programme has the highest growth than other programmes.
R9: How many institutions are started ITEP at secondary stage along its programme specification with respect to academic years?

Table 5: Academic Year Wise Programme List of ITEP at Secondary Stage (11)

Programme Specification	Number of institutions established ITEP						Annual Growth Index
	2023-24		2024-25		Aggregate		
	N	%	N	%	N	%	
B.A. B.Ed.	29	42.65	16	51.61	45	45.45	0.55
B.Sc. B.Ed.	28	41.18	12	38.71	40	40.40	0.43
B.Com. B.Ed	11	16.17	3	9.68	14	14.14	0.27
Total	**68**	**100**	**31**	**100**	**99**	**100**	**0.46**
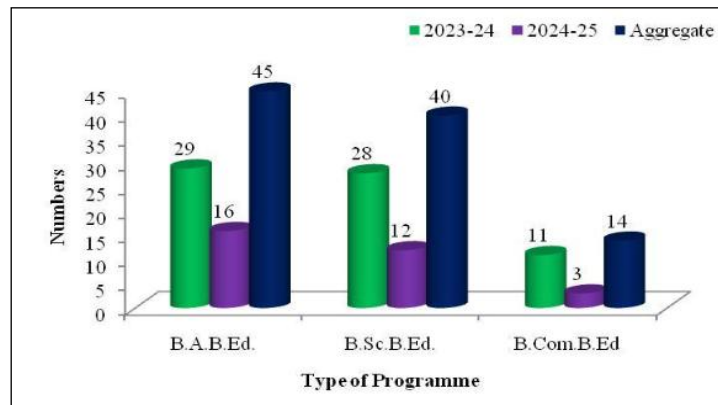
Figure 4: Academic Year Wise Programme List of the ITEP

Vide Figure 4, focusing on the number of institutions has started ITEP programme especially B.A. B.Ed., B.Sc. B.Ed., and B.Com. B.Ed. to the academic year 2023-24 and 2024-25, B.A. B.Ed. and B.Sc. B.Ed. has started high in the academic years 2023-24 and 2024-25 respectively. The figure clearly indicates the institution shows much interest in starting B.A. B.Ed. than other specialization. Though, the B.Sc. B.Ed. specialization has started near to the number of institutions holding B.A. B.Ed. But the 1/3 of the institutions holding B.A. B.Ed. shows interest on B.Com. B.Ed specialization.
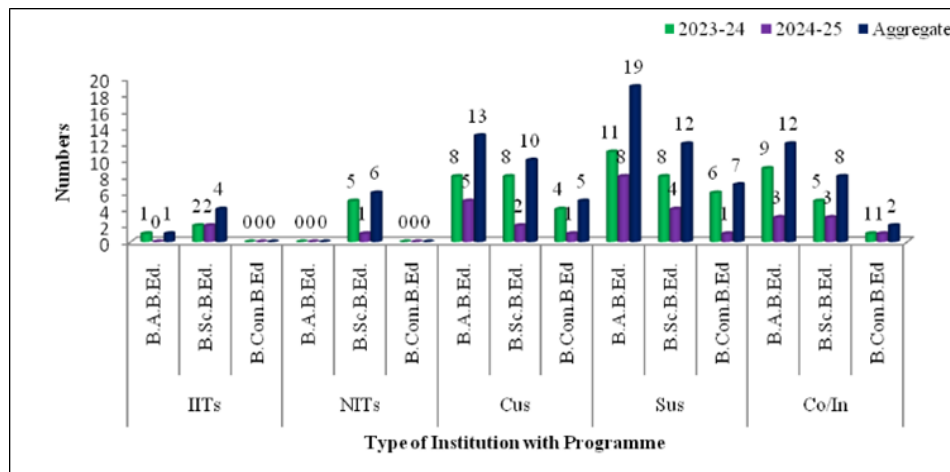
R10: Is there any changes in annual growth index (AGI) of ITEP at secondary stage along its programme specification with respect to type of institutions?

Table 6: Institution Cum Programme Wise List of the ITEP at Secondary Stage (11)

Institution Type	Progarmme Specification	Number of institutions established ITEP						
		2023-24		2024-25		Aggregate		Annual Growth
		N	%	N	%	N	%	Index
IITs	B.A. B.Ed.	1	33.33	0	0.00	1	20.00	1.00
	B.Sc. B.Ed.	2	66.67	2	100	4	80.00	1.00
	B.Com. B.Ed	0	0.00	0	0.00	0	0.00	0.00
Sub-Total		**3**	**100**	**2**	**100**	**5**	**100**	**0.67**
NITs	B.A. B.Ed.	0	0.00	0	0.00	0	0.00	0.00
	B.Sc. B.Ed.	5	100	1	100	6	100	0.20
	B.Com. B.Ed	0	0.00	0	0.00	0	0.00	0.00
Sub-Total		**5**	**100**	**1**	**100**	**6**	**100**	**0.20**
Central University	B.A. B.Ed.	8	40.00	5	62.50	13	46.43	0.63
	B.Sc. B.Ed.	8	40.00	2	25.00	10	35.71	0.25
	B.Com. B.Ed	4	20.00	1	12.50	5	17.86	0.25
Sub-Total		**20**	**100**	**8**	**100**	**28**	**100**	**0.40**
State University	B.A. B.Ed.	11	44.00	8	6.54	19	50.00	0.73
	B.Sc. B.Ed.	8	0.32	4	30.77	12	31.58	0.50
	B.Com. B.Ed	6	24.00	1	7.69	7	18.42	0.17
Sub-Total		**25**	**100**	**13**	**100**	**38**	**100**	**0.52**

Colleges/Institutes	B.A. B.Ed.	9	60.00	3	42.86	12	54.55	0.33
	B.Sc. B.Ed.	5	33.33	3	42.86	8	36.36	0.60
	B.Com. B.Ed	1	6.67	1	14.28	2	9.09	1.00
Sub-Total		**15**	**100**	**7**	**100**	**22**	**100**	**0.47**
Total		**68**	**100**	**31**	**100**	**99**	**100**	**0.46**

Figure 5: Institution Cum Programme Wise List of the ITEP

Vide Table 6 (above), the AGI of B.A. B.Ed., B.Sc. B.Ed., and B.Com. B.Ed. programmes at IITs, NITs, Central University, State Universities, and Colleges/Institutes that B.Sc. B.Ed. programme only is started in the IITs and NITs, B.A. B.Ed. programme in central and state universities, and B.Sc. B.Ed. programmes in colleges/institutes have been having high growth levels.

R11: How many institutions are started ITEP at secondary stage along its programme specification with respect to type of institutions?

Vide Figure 5 (above), focusing on the institutions has started ITEP programme especially B.A. B.Ed., B.Sc. B.Ed., and B.Com. B.Ed. to the academic year 2023-24 and 2024-25, IITs and NITs have give preference to start B.Sc. B.Ed. specialization than others. Among Central universities, state universities and colleges show more interest on starting B.A. B.Ed. followed by B.Sc. B.Ed. and B.Com. B.Ed. specialization. The figure clearly indicates the central universities, state universities and colleges shows more interest on starting ITEP with lab less specialization.

Results and Discussion

ITEP has initiated at different institutions under different regional centers from the academic year 2023-24 with 42 institutions and 22 additional startups were done in the academic year 2024-25. As total 64 institutions are running the ITEP courses with different specialization such as B.A.

B.Ed., B.Sc. B.Ed. and B.Com. B.Ed. Based on the data, NRC has more institutions which start ITEP in the academic year 2023-24 followed by SRC, ERC and WRC and this is not same for the academic year 2023-24 that NRC holds the same place but WRC got second place followed by ERC and WRC. Within the regional centers, ERC prefers B.A. B.Ed. and B.Sc. B,Ed . specialization, WRC and NRC prefers B.A. B.Ed. specialization, and SRC prefers B.Sc. B.Ed specializations. As a whole, most of the institutions available in the regional centre prefer in starting ITEP-B.A. B.Ed. specialization followed by B.Sc. B.Ed. and B.Com. B.Ed. specialization.

Focusing on the institutions, state universities have the high startups of ITEP course followed by central university, colleges, NITs and IITs. Among the institutions, NITs and IITs has mostly preferring to start science specialization such as B.Sc. B.Ed. than arts and vocational B.A. B.Ed. and B.Com. B.Ed. Central universities, state universities and colleges are given more preferred to B.A. B.Ed. specialization followed by B.Sc. B.Ed. and B.Com. B.Ed. specializations. All the institutions are giving less preference to the B.Com. B.Ed. specialization and NITs have not given any preference to science and vocation specializations yet.

Focusing on the ITEP specializations, B.A. B.Ed. specialization has been much focused by the institutions than other two specializations because of its lab less character. B.Sc. B.Ed. specialization has been focused merely to B.A. B.Ed.

specialization and B.Com. B.Ed. has less focus even it is a lab less course.

All the data clearly indicates that the regional wise, intuitions wise and specialization wise interest on establishing ITEP are varied. Starting ITEP with existing lab is easy and establishing the lab with short period is difficult to the institutions. The reputed institutions like IITs, NITs, central universities, state universities and colleges are having labs but IITs and NITs only prefer lab specialization to start. NITs are only preferred to start science specialization than others. Central university, state university and colleges have given more preference to lab less specialization than lab specialization. However, those institutions are giving less preference to the lab less specialization B.Com. B.Ed. Based on the discussion, the preference may be varied concerning the resources, course running and demographic need of the courses.

Thematic Discussion Based on Shifting ITEP from Holistic B.Ed. Programme

Teaching is considered a noble career and the teachers are respected since the Gurukula educational system and the teacher are called 'Guru'. In the Gurukula education system, the students are called disciples and they learn what the teacher experienced. Guru taught education for their peaceful livelihood. Afterwards Gurukula system and the independent India, a separate system of education areenumerated. In the education system Bachelor of Teacher (B.T.) The course was started and the duration of the course was one year. Then it is modified as B.Ed., and further it is a year programme for ensuring the quality of teacher education. As per the recommendation of the NEP 1986, some teacher training schools were upgraded to District Institute of Education and Training (DIET) and some training colleges were upgraded to College of Teacher Education (CTE) and Institute of Advanced Study in Education (IASE) (12). Furthermore, the integrated B.Ed. programme was started which provides professional knowledge and content knowledge simultaneously. The teacher education should give the following,

"Teacher Education (TE) = Content Knowledge + Pedagogical Knowledge + Professional Skills (CPK + PS)"

Teacher education from past to present only focuses on the CPK+PS within the stipulated period. Teachers should be trained on hardware and software that will become common in the 21st century and the content based on this should be taken into account in the curriculum of the teacher education (13). In earlier days, the standalone B.Ed. and integrated B.Ed. programme focusedon specialized subjects such as anyone subjects from, language, science, mathematics, and social sciences with pedagogical disciplines and so they are called holistic dual-major courses. However, the ITEP is a new programme based on the new school structure recommended in NEP 2020 and aimed to prepare the teacher for foundational, preparatory, middle, and secondary stages with a focus on the new school structure. ITEP comprehensive four-year integrated course that emphasizes the dual-major approach and ensures that outstanding students enter the teaching profession by catering 21st century skills (14). Also, ITEP prepares the teacher with sound knowledge of our Indian values, languages, ethos, tribal tradition, and updated pedagogical advances. The ITEP can be simply given as follows,

"Integrated Teacher Education Programme (ITEP) = Content Knowledge + Pedagogical Knowledge + Professional and 21st CenturySkills (CPK + $P^2K_{21}S$)"

Since ITEP prepares teachers with 21st-century skills and an understanding of the Indian social system, it represents more challenges than the comprehensive B.Ed. program. The implementation of ITEP through NEP 2020 subsequently accentuates all of these aspects.

Thematic Discussion Based on Uniqueness of ITEP

ITEP is different from the standalone B.Ed. Programme which is running at present at all teacher education institutions and it has the following distinctiveness.

The Dual – Major System: This is a dual-major, holistic course. In this course, students undergo two undergraduate courses simultaneously in which one in arts and sciences (B.A. or B.Sc.) and another in education (B.Ed.). Every year, students have to study both education and major courses. Major courses, like arts or science classes, are offered until the third year and the last year the students will study the education courses alone.

Holistic Approach: It promotes lifelong learning, attitude to overcome challenges, and also integrates physical, intellectual, emotional, social, artistic, creative, aesthetic, and spiritual growth

(15). It includes a child-centered strategy and it will be employed to promote an inclusive and collaborative learning environment during the programme.

Catering 21st Skills: It sharpens the knowledge of the teacher trainees with the latest advancements in pedagogy. Also, it caters to 21st-century skills like creativity, critical thinking, problem-solving, collaboration, communication, leadership, and social skills among the prospective teachers.

Providing Indian Knowledge System (IKS): It provides an excellent foundation of Indian values, languages, knowledge development, ethos, culture, politics, laws, tradition, art and craft, and ancient medicinal practices.

Multidisciplinary Outcomes: ITEP ensures students' mastery of disciplinary as well as pedagogical courses. These course are administered by a multidisciplinary higher education institution (8) and enables learners to utilize all the physical resources available in the institutions. This encourages students to collaborate on their academics and provides them with multidisciplinary outcomes.

Different stages in Teacher Training: Earlier days D.El.Ed is the qualification for handling classes at 1 to 8 grades, a bachelor's degree with a B.Ed. or Integrated B.Ed. for handling classes at 9 and 10 grades and a master's degree with a B.Ed. or Integrated B.Ed. in concern discipline for handling the classes from 11 and 12 grades is mandatory. However, the ITEP is unique in this process and has four stateless as per the suggested school education system 2+3+3+4 by NEP-2020. ITEP with Foundational stage specification is 3-8 years for Anganwadi, I and II grades. ITEP with the preparatory stage is for grades 3 to 5. ITEP withthe middle specification is for grades 6 to 8 and ITEP with secondary specification is for grades 9 to 12. In the secondary stage, student's teacher does not need to acquirea master's degree in disciplinary subjects to handle the classes in grades 11 and 12. But in B.Ed. or integrated B.Ed., the student - Teacher need to complete a master's degree for handling the grades 11 and 12.

National Professional Standards for Teachers (NPST): NCTE has conducted the 2-day long regional consultation meeting for evaluation of the programme and seminar for sharing best practices on NPST held on 16th and 17th meeting February 2024 at NCTE, India. Patel defined NPST as

"ShikshakSammanDastavez" (16). The NPST includes three domains (core values and ethics; knowledge and practice; and professional growth and development) and three levels (plan of action, applicability and periodical review) for define and evaluate teacher and teaching quality is a unique of ITEP.

Centralized Admission Process (CAP): The ITEP admission process involves a centralized admission process in which the students who wants to enroll in ITEP needs to appear the National Common Entrance Test (NCET) conducted by the National Testing Agency (NTA) and it is the prerequisite for the CAP.

Diverse Cultural Enhancement: The CAP admission processes enables ITEP with diverse cultural students from whole India and it fostering understanding and appreciation for the diverse backgrounds of these students.

Route to Two Research Programme: NEP-2020 allows four-year integrated courses to directly pursue research degrees without master's degrees, allowing students to pursue Ph.D. in relevant disciplines or education.

Minimum Qualification for Teachers: NEP-2020 aims to establish the ITEP as a minimum qualification for teachers at foundational, preparatory, middle and secondary stages of school education by 2030.

Extendable Duration: A student-teacher will be permitted to complete the program within six years of admission if they are unable to complete any semester, ensuring an extended duration for their education (8).

Generate Teachers with Competent: ITEP fosters social engagement and prepares student-Teacher with skills like problem-solving, critical thinking, communication, ethical and moral reasoning.

Multiple Entry, Exit and Re-Entry: ITEP offers multiple entry, exit, and re-entry points for student-teachers, with appropriate certifications for exits after one, two, three, or four years of completion. Students will be awarded certification (one year), diploma (two year), Degree (three year) in the disciplinary and dual-major degree (four year) with respect to the year of successful completion along its minimum grade attainment.

Conclusion

As per the NEP 2020, NCTE has been implemented in the multi-disciplinary institution and sustains

the quality by ensuring the criteria for the institutions that applied for starting ITEP. For maintaining the quality of the teacher education institutions, NCTE has proposed a short listing criterion for selection of institution and the minimumpoint for processing the application of the institution is 10 out of 18. The shortlisting criteria were categorized into four domains such as type of institution with its National Assessment and Accreditation Council (NAAC) grade (8 points), National Institutional Ranking Framework (NIRF) Ranking (4 points), Multi-disciplinary institutions years of running (4 points), and institution running NCTE course (2 points) and this short listing criteria (17) ensures the quality and successful multi-disciplinary institution will start the ITEP course. The holistic B.Ed. programmes such as standalone B.Ed. Programme and Integrated Teacher Education Programme havea duration of 2 and 4 years respectively. Institutions like RIE's provided integrated B.Ed. programme and standalone B.Ed. programme are provided by the institutes and colleges of education. The standalone B.Ed. the programme requires an undergraduate (UG) course essentially to complete a graduate programme in education. But in the integrated B.Ed. programme there is no need for a person to be a graduate and it can be obtained after completing their secondary education. It makes the person Professional in 4-years of the programme. Both holistic standalone B.Ed. and integrated B.Ed. programme produced the individuals' employability. They can be eligible for services as teachers in school education. Also, ITEP offers a comprehensive, focused path to becoming a teacher, focusing on content knowledge and pedagogical skills (18). It prepares student teachers for various teaching positions, including traditional classroom teaching and alternative educational programs (19). Thus, NEP 2020 aims to strengthen the education system and make the country a recognized developed nation globally through a well-equipped quality teacher by introducing an ITEP, despite potential implementation challenges, fostering a more robust and well-developed education system academically as well as professionally (20). There is no doubt, the ITEP generate teachers with 21st – Century skills.

Nonetheless, like holistic integrated B.Ed., ITEP is a 4-year integrated programme. ITEP is the distinguished flagship Programme recommended in NEP 2020 that produces the teacher with content cum pedagogical knowledgeand strengthens professional with 21st-century skills. It also gives background knowledge about our Indian values, ethos, and tribal tradition. In addition to that the ITEP generates the teachers with an exact coincidence of the new school structure which is recommended by NEP 2020. The inclusion of ITEP may more than 500 institutions is expected and by focusing on the AGI the Western Regional Centre (WRC) and the colleges have high value and most of the institutions offered B.A. B.Ed., it will be assured. Finally, it is concluded that ITEP is idiosyncratic programme for generating teachers with 21st – Century skills.

Abbreviations

AGI: Annual Growth Index, B.Ed-ODL: Bachelor of Education – Open and Distance Learning, B.Ed: Bachelor of Education, B.Ed: Bachelor of Education, B.El.Ed: Bachelor of Elementary Education, B.P.Ed: Bachelor of Physical Education, CAP: Centralized Admission Process, CO/IN: College/Institute, D.El.Ed: Diploma in Elementary Education, D.EL.Ed: Diploma in Elementary Education –open and distance learning, D.P.Ed: Diploma in Physical Education, DPSE: Diploma in Preschool Education, D.T.Ed: Diploma in Teacher Education, IIT:Indian Institute of Technology, IoE : Institute of Eminence, IoNI: Institution of National Importance, ITEP: Integrated Teacher Education Program, M.Sc.Ed: Master in Science Education, M.Ed: Master of Education, M.P.Ed: Master of Physical Education, NAAC: National Assessment and Accreditation Council, NCTE: National Council for Teacher Education, NEP-2020: National Education Policy, NIT: National Institute of Technology, NIRF: National Institutional Ranking Framework, NPST: National Professional Standards for Teachers, RIE: Regional Institute of Education, WRC: Western Regional Centre.

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The authors declare that they have no conflict of interest.

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