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# National Education Policy—2020 and its Influence on the Health Professions Education

Shivasakthy Manivasakan\*

The National Education Policy 2020, although not mentioned many points specific to Health Professional Education, (HPE) guidelines started changing the mode of functioning of the entire higher education system in India. Adding to this, the University Grants Commission has already issued several notifications to the higher education institutions and Universities on implementation mandates. It's high time to get sensitized on the key points of the policy which has already seeped into health professions education and the strategies to upgrade the health science university/ institution as we cannot stand alone on silos when the entire nation is moving towards a change. This paper is intended to provide better clarity for the administrators, and academicians on the influence of NEP on HPE.

## National Education Policy—2020 :Key Features

The principal aim of the National Education Policy—2020 (NEP—2020) is to provide Access, Equity, Quality, Affordability, and Accountability in the education system of the country. To achieve this, various strategies have been proposed. Some of the key strategies proposed include, Multidisciplinary under-graduation with research; implementation of the Academic Bank of Credits to facilitate credit transfer and mobility of the learners; Academic Flexibility with several lateral exit-entry options, integrated and dual degree programmes; Evaluation reforms with greater weightage to continuous internal assessment rather than the summative assessment; Online & open distance learning for enhancing the access to education and enabling the learners to pursue more courses simultaneously; Internalization of education to promote foreign institutions setting up their branches in India and vice versa and also to facilitate international students admission in Indian institutions and Indian students pursuing courses abroad; Institutional Autonomy to innovate and excel; Facilitating Merit-based faculty recruitment and career promotion and not merely by means of seniority in the work experience; Establishment of Single regulating body - National Higher Education Regulatory Authority (NHERA); Establishment of Single testing agency – National Testing Agency (NTA); Establishment of National Accreditation Authority (NAA), General Education Council (GEC), and National Higher Education Qualification Framework (NHEQF)<sup>1</sup>.

## Health Professions Education (HPE) - Explicit Details Provided in NEP—2020

There are a few details concerning health professions discussed

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in the NEP 2020. The policy mentioned that Healthcare education will be re-envisioned for duration, structure, and design; Outlined the skills that should be possessed by all MBBS graduates as medical, diagnostic, surgical, and emergency skills and emphasized that the criteria based evaluation should be done on primary care and secondary hospital settings; the policy mandated the knowledge and integration of AYUSH and allopathy; discussed that there could be a possibility of lateral entry to MBBS for BDS students; emphasized on community and preventive medicine; discussed an exclusive national accreditation body for Nursing and other substreams to improve the quality of education<sup>2</sup>.

### **The Influence of NEP on HPE**

Though very less details regarding HPE were explicitly provided in the NEP—2020, the deliberations of the policymakers and the discussions led by the members of the different disciplines all these years highlighted that the policy did not intervene much in the healthcare discipline and law. On deeper exploration, the extent of the influence of NEP on HPE is vast.

Every higher education institute or a university in the country is now mandated<sup>3</sup> to undergo the National Assessment and Accreditation Council (NAAC) accreditation<sup>4</sup> process and enroll in the National Institute Ranking Framework (NIRF) ranking<sup>5</sup> category in addition to the process of several other discipline-specific regulatory and accreditation body inspection procedures and the guidelines of the University Grants Commission(UGC). This process includes a long list of requirements that are over and above the requirements mandated by regulatory bodies like the National Medical Commission (NMC), Dental Council of India (DCI), Indian Nursing Council (INC), etc. The author has already published the details of the conglomeration of the NEP, UGC, and other accreditations, the article that clearly states the rich overlap of the parameters of NEP with all the others<sup>6</sup>. The University Grants Commission has released a series of publications to align the university with every parameter mentioned in the NEP as guideline documents<sup>7</sup>. Hence, just by being one of the higher education institutes or universities in the country, irrespective of the discipline of the programs offered, all will fall in line to align with the NEP requirements.

Given here are a few more examples to explain

the extent of influence of NEP on HPE. The single National Testing Agency mentioned in the policy is the one that conducts the NEET and the NEXT exam for the admission and qualification of the candidates of medical and dental healthcare disciplines<sup>8</sup>. The graduate attributes as given in the Learning Outcomes-Based Education Curriculum Framework of UGC to align with NEP is a broad list that includes Disciplinary knowledge, Communication Skills, Critical thinking, Problem-solving, Analytical reasoning, Research-related skills, Cooperation/Teamwork, Scientific reasoning, Reflective thinking, Information/digital literacy, Self-directed learning, Multicultural competence, Moral and ethical awareness/reasoning, Leadership readiness/qualities and Lifelong learning<sup>7</sup>. This encompasses the Indian Medical Graduate (IMG) attributes as well.

Though the STEM-based programs offered under the All India Council for Technical Education (AICTE) have been based on the Choice Based Credit System (CBCS) for many years now, the healthcare discipline remained under the traditional curriculum design. However, currently, the new Nursing curriculum<sup>9</sup> and the draft of the revised dental curriculum<sup>10,11</sup> proposed are CBCS-based. This is a major shift in the health professions education. Also, it is important to note here that regulatory bodies like NMC and DCI have already issued circulars to all the respective institutes in the country to upload the last ten years' academic data of the students including the degree certificates, marksheets, scorecards, etc to the National Academic Depository (NAD) digilocker to be accessed by the Academic Bank of Credits(ABC)<sup>12,13</sup>.

Academic flexibility envisioned by the policy was looked upon to be a distant or unrealistic dream in the healthcare discipline. To falsify that, the draft Post Graduate Medical Education Regulations (PGMER) 2023 document released by NMC<sup>14</sup> has proposed the possibility of integrated and dual-degree programs as MD-PhD degree programs. The draft BDS regulations document released by DCI has given details on BDS with an honors degree and has explicitly given about the provision for credit transfer and the compatibility with Academic Bank of Credits (ABC)<sup>10</sup>.

The statement on AYUSH allopathy integration by the policy raised several discussions and debates at multiple levels in the country. Beyond that the Post Graduate Medical Education Regulations (PGMER) 2023 document released by NMC states

to encourage inter-disciplinary collaborative research with AYUSH<sup>15</sup>. The draft BDS regulations document released by DCI has given a list of integrated dentistry category electives with AYUSH that are eligible from the third semester onwards for undergraduate dental students<sup>10</sup>.

The draft framework for accreditation and ranking of colleges regulated by the National Medical Commission<sup>16</sup> comprises the qualitative and quantitative metric criteria that are in line with the NAAC which is already aligned with NEP. The gazetted document on the establishment of Medical institutions, Assessment & Rating Regulations, 2023 for the Medical Assessment and Ranking Board (MARB) is in unison with the above.

### **Challenges Foreseen**

Considering the extent of the influence of NEP on HPE without any prejudice, a few challenges are very prominent in the present scenario. The revision of the health sciences curriculum in the past had some changes in the content of the syllabus, the methods of teaching, and to an extent the assessment. The CBCS system is new for a majority of the health professions educators in the country and the administrators of pure health sciences institutes/ universities. The routine upgrading of the knowledge and skills of the health professions educators on their specialty is no longer sufficient. The need for training in the credit system and other NEP-associated changes has become inevitable. This might lead to more demands set on academicians, which could lead to an attrition in the number of health professionals who choose to be academicians.

The policy envisions multidisciplinary training of the students to promote holistic growth and vocational training thereby reducing unemployment issues. However, when the education system becomes too flexible, the students can get distracted from the core and end up mastering none, in the absence of proper guidance. This would further increase the unemployment burden in society more than what exists at present.

More parameters are being laid down in the policy, in the process of accreditations, and in the regulations set by the governing bodies to strengthen the education institutes and to make sure that the competencies of the outgoing graduates are better. However, to practically implement all these, the human resources employed in the institutes need to be expanded to a greater

extent with proper job descriptions along with the expansion in the infrastructure requirements. Ignoring the requirements for more faculty and supporting staff and leaving them unaddressed is a major flaw that could collapse the education system completely. In that case, the institutes will only strive to build the documentation process to meet the statutory needs and compromise on the quality of teaching, patient care, and research that will ultimately dissolve the purpose of the policy changes. More documentation work than the actual teaching process will lead to faculty burnout and attrition. Education and outcomes will become a misnomer in the absence of sufficient educators and quality teaching processes.

The existing system of fee collection in higher education institutes will suffer to a great extent when lateral exit and entry become a norm. In case the student leaves in between the program to some other institute, that seat might remain vacant for the rest of the years in that batch of the program thereby creating a financial loss for the host institute. Also, lateral entry is feasible only when there is a vacancy of a seat or the number of seats remains within the prescribed norms by the UGC for allowing lateral entry.

### **The Way Ahead to Meet the Change Management**

In-service training for all those who are involved in academics of health professions is mandatory on multiple topics other than their specialty. The Choice Based Credit System (CBCS) has several advantages and is the future of the education system that will enable equivalence to International Standards in all disciplines if followed properly<sup>17-19</sup>. The training of trainers on CBCS is extremely crucial at this stage to move forward. The faculty development programs are also to be delivered in the form of micro-credentials with some form of assessments, that will enable them to accumulate their credits for transfer to higher education and merit-based career progression.

To enable curricular equivalence and to facilitate credit transfer across the institutes, the curriculum delivery should be standardized throughout the country for each discipline incorporating criterion-based evaluation reforms with more weightage for internal assessment and less weightage for external summative assessment. Work Place Based Assessments (WPBA) would make the evaluation process authentic and enhance the graduate outcomes in alignment with NEP.

Additional teaching faculty and supporting staff recruitments should be strictly emphasized by the regulators for proper implementation of the changes instilled by the policy and to improve the graduate outcomes. The “light but tight” regulations as mentioned by NEP, should be proactive in facilitating the workforce to bring in the changes in real time. There arises a dire need for a trained workforce for the smooth implementation of the major changes in the education system<sup>20</sup> following NEP. The staff members of the Office of the Registrar, Office of the Controller of Examinations (registrar-examinations), admission cell, Academic Bank of Credits (ABC cell), Office of International Affairs, etc need to be well-appraised of the changes in the system and the implementation strategies. More clarity should be given on the fee structure in case of lateral exit and entry.

The key stakeholders of the education system, including the students, the parents, and the employers need to have sufficient exposure to the changes brought in by the policy and the available opportunities to reorganize themselves. Creating awareness among all the stakeholders on the policy changes is mandatory, which is partly the responsibility of the higher education institution as well.

Establishment of a dedicated NEP cell in the institute or the university that has a deeper knowledge of the policy and the associated criteria, preparation of the Institutional Developmental Plan by the members of the Board of management in alignment with NEP, and implementation of the same with adequate training from time to time for the faculty at various levels is mandatory for progressive and successful change management. Administrators and academic leaders should keep themselves educated and be proactive in analyzing and implementing the changes for the success of their institute and the benefit of the students.

### Disclaimer

*This paper is neither for nor against the National Education Policy. No political views are expressed. The recommendations are based on personal views and earlier work done by the author and a few that are in progress. This paper is not intended to judge, whether the influence of national education policy on health professions education is good or bad.*

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# A Case-study of the Coastal Cleaning under Special Campaign 3.0 at IGNOU Regional Centre, Cochin

J S Dorothy\*

India is a Peninsula where the mainland on one side is surrounded by water bodies on three sides namely the Bay of Bengal on the East, Arabian Sea on the West and the Indian Ocean on the South. The Nine States (Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Odisha, West Bengal) and Four Union Territories (Daman and Diu, Puducherry, Andaman and Nicobar Islands, Lakshadweep Islands) in India have a coastal line (textbook, 2023). Khan (1999) opines that Open and Distance Learning is not supplementary, complementary or alternative to the conventional system, but is part of the evolution of new methodologies in teaching and learning. Consequently, for the third year, (2021 to 2023) the educational Institutions had to adhere to the guidelines related to Special Campaign 3.0 in which one of the activities is Coastal Cleaning.

The Government of India had guided the activity to be executed including planning and execution under Special Campaign 3.0. The Government has specified the Preparatory Phase from September 15 to 30, 2023; with the Launch of the Campaign on October 1, 2023; with the Special Campaign 3.0- Implementation Phase from October 2 to 31, 2023. It is pertinent to link that the International Coastal Cleanup Day falls on September 16<sup>th</sup> (Vikaspedia, 2023) and the Coastal cleaning activity has significance both under Special Campaign 3.0 and International Coastal Cleanup Day.

Of the 57 Regional Centres (www.ignou.ac.in, 2023) of IGNOU, Eight Regional Centres namely located at Mumbai in the State of Maharashtra, Panaji in the State of Goa, Chennai in the State of Tamil Nadu, Visakhapatnam in the State of Andhra Pradesh, Port Blair in the Union Territory of Andaman and Nicobar Islands and all the three Regional Centre in the State of Kerala namely Cochin, Thiruvananthapuram, Vatakara have a coastal line with access to a sea/ocean. The present study documents the report on the execution of the Coastal cleaning as an activity

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of Special Campaign 3.0 at IGNOU Regional Centre, Cochin.

## The Rationale of the Study

Special Campaign 3.0 as an activity to be adhered to by the Educational Institution is neither just an Activity nor a report of the documentation of the activity executed but it involves the employees and people associated with the execution of the task.

The Coastal Cleaning under Special Campaign 3.0 at IGNOU Regional Centre, Cochin was undertaken on 30.10.2023 for the first time. Even though the existence of the various activities under Special Campaign 1.0, 2.0 and 3.0 have been done and documented in the various Reports of the University, the report on the Coastal Cleaning under Special Campaign 3.0 done for the first time at IGNOU Regional Centre, Cochin has given lessons to be learnt which gives footsteps for others to follow. Coastal Cleaning under Special Campaign 3.0 as an activity involve both back-office tasks involving the planning, organising, and coordinating the event besides performance on the day of the cleaning activity by the same employees as a team. Hence, the need for this study which attempted to highlight the activities related to the Coastal Cleaning under Special Campaign 3.0 as an activity.

## Scope of the Study

The Coastal Cleaning as an activity under Special Campaign 3.0 is an indicator that the coast needs cleaning and all have an equal responsibility of joining hands to utilise the opportunity of cleaning the coast. The study is intended to throw light upon the various modalities taken for initiating the activity of coastal cleaning; Prominent collaborators for executing the task of coastal cleaning; the methodology adopted for identifying the collaborators to execute the task of coastal cleaning; the content of orientation for the volunteers before executing the task of coastal cleaning; the execution of the task of coastal cleaning activity; the attitude of the employees for the coastal cleaning at the field level; and the challenges for sustenance of the coastal cleaning at the field level.

The study highlights the activities related to Coastal Cleaning under Special Campaign 3.0 as an activity which involves both back-office tasks involving the planning, organising, and coordinating the event besides performance on the day of the cleaning activity by the same employees as a team.

### **Research Questions**

The study attempted to answer the following questions based on the activities related to Coastal Cleaning under Special Campaign 3.0 as an activity which involves both back-office tasks involving the planning, organising, and coordinating the event besides performance on the day of the cleaning activity by the same employees as a team at IGNOU Regional Centre, Cochin:

1. What are the various modalities taken for initiating the activity of coastal cleaning?
2. Who are the prominent collaborators in executing the task of coastal cleaning?
3. What is the methodology adopted for identifying the collaborators to execute the task of coastal cleaning?
4. What is the content of orientation for the volunteers before executing the task of coastal cleaning?
5. How is the task of coastal cleaning activity executed?
6. What is the attitude of the employees of IGNOU Regional Centre Cochin for coastal cleaning as an activity under Special Campaign 3.0?
7. What are the challenges for sustenance of the coastal cleaning at the field level?

### **Theme (Field) of Study**

The Theme (Field) of the Present Study is “Distance Education in a Regional perspective about coastal cleaning as an activity under Special Campaign 3.0”.

### **Aim and Objectives of the Study**

The study aimed to document Coastal Cleaning under Special Campaign 3.0 as an activity which involves both back-office tasks involving the planning, organising, and coordinating the event besides performance on the day of the cleaning activity by the same employees as a team. The Objectives of the Study are:

- i. To enumerate the various modalities taken for initiating the activity of coastal cleaning.
- ii. To list the prominent collaborators for executing the task of coastal cleaning.
- iii. To study the methodology adopted for identifying the collaborators to execute the task of coastal cleaning.
- iv. To specify the content of orientation for the volunteers before executing the task of coastal cleaning.
- v. To note down the execution of the task of coastal cleaning activity.
- vi. To document the attitude of the employees of IGNOU Regional Centre Cochin for coastal cleaning as an activity under Special Campaign 3.0.
- vii. To put forth the challenges for the sustenance of coastal cleaning at the field level.

### **Methodology Adopted for the Study**

The Methodology used to enumerate the experience of documenting the coastal cleaning activity at IGNOU Regional Centre, Cochin is discussed here.

The Case Study method was used to enumerate the experience of the activities related to the Coastal Cleaning under Special Campaign 3.0 as an activity which involves both back-office tasks involving the planning, organising, and coordinating the event besides performance on the day of the cleaning activity by the same employees as a team at IGNOU Regional Centre, Cochin.

A case study is a research study, which is holistic in purpose and examines in a real-life situation the existing phenomena through the description and analysis of the unit. In the Case Study on the Regional Centre, Cochin experience based on both the back-office task and on the day coastal cleaning activity at IGNOU Regional Centre, Cochin was done. The case study intended to throw light upon the various modalities taken for initiating the activity of coastal cleaning; Prominent collaborators for executing the task of coastal cleaning; the methodology adopted for identifying the collaborators to execute the task of coastal cleaning; the content of orientation for the volunteers before executing the task of coastal cleaning; the execution of the task of coastal cleaning



activity; the attitude of the employees for the coastal cleaning at the field level; and the challenges for sustenance of the coastal cleaning at the field level. The study highlights the activities related to Coastal Cleaning under Special Campaign 3.0 as an activity which involves both back-office tasks involving the planning, organising, and coordinating the event besides performance on the day of the cleaning activity by the same employees as a team of the IGNOU Regional Centre Cochin – within the scope of the study.

The IGNOU Regional Centre, Cochin experience as a unit was treated as a whole in the context of specific situations for developing a deeper understanding of the various facets related to the back-office task involving the planning, organising, and coordinating the event besides performance on the day of the cleaning activity by the same employees as a team of the IGNOU Regional Centre Cochin.

Extensive collection of data concerning internal as well as external environment of the Regional Centre Cochin, within the scope of the various facets related to the back office task involving the planning, organising, coordinating the event besides performance on the day of the cleaning activity by the same employees as a team of the IGNOU Regional Centre Cochin was carried out, in order to have completeness of the experience of how the coastal cleaning activity at IGNOU Regional Centre, Cochin was planned, organised, coordinated and executed. Participation observation technique was used in the conduct of the case study of the experience of integrating the various facets related to the back office task involving the planning, organising, and coordinating the event besides performance on the day of the cleaning activity by the same employees as a team of the IGNOU Regional Centre Cochin. This is because, the researcher is also an employee of IGNOU Regional Centre, Cochin during the conduct of the Study.

Descriptive research method design, which is concerned with describing the characteristics of a particular individual or a group using the Case-Study method and involves the description, recording, analysis and interpretation of conditions that existed at the time of the study, was used to obtain information concerning the current status of a given phenomena in the learning Activity highlighting the experience of the various facets related to the back office task

involving the planning, organising, coordinating the event besides performance on the day of the cleaning activity by the same employees as a team of the IGNOU Regional Centre Cochin can be enumerated. Certain information drawn from the Regional Centre experience for a description of the experience- by using Descriptive research method design, was used to obtain information – enumerating the various modalities taken for initiating the activity of coastal cleaning; Prominent collaborators for executing the task of coastal cleaning; the methodology adopted for identifying the collaborators to execute the task of coastal cleaning; the content of orientation for the volunteers before executing the task of coastal cleaning; the execution of the task of coastal cleaning activity; the attitude of the employees for the coastal cleaning at the field level; and the challenges for sustenance of the coastal cleaning at the field level. The study highlights the activities related to Coastal Cleaning under Special Campaign 3.0 as an activity which involve both back-office task involving the planning, organising, and coordinating the event besides performance on the day of the cleaning activity by the same employees as a team.

Both types of Observation techniques namely Structured and Unstructured Observation were used because they can complement each other; structured observation leads to more quantitative and unstructured observation leads to more qualitative data. Structured observations entail pre-specified categories and hence were used to elicit information about pre-planned, prescribed, well-defined modalities taken for initiating the coastal cleaning activity.

Since unstructured observation looks at persons and their environment in a holistic way, the same was utilised to elicit information related to the methodology adopted for the challenges encountered, and the attitude of the employee at IGNOU for the coastal cleaning activity of the IGNOU Regional Centre Cochin. The utilisation of unstructured observation was useful as this experience was a first-time event and as it dealt with people, their behaviour was different every time from the planning to the execution stage.

Special care was taken to be objective fit to the purpose of the Study and while jotting down the information falling within the scope of the personal professional experience from the research angle.

## Discussion of the Results Based on the Study

The discussion of the results based on the Study is presented here.

- i. The various modalities taken for initiating the activity of coastal cleaning are a. Brainstorming how to execute the coastal cleaning activity was the first event that happened after the Receipt of communication from the Regional Services Division, which governs the activities of the Regional Centre located across India; b. Verbal guidelines through the Receipt of encouragement calls from the Director, Regional Services Division, sharing how another coastal Regional Centre executed the coastal cleaning activity, gave confidence that coastal cleaning as an activity is executable; c. The power of “we” manifested in a Team by involving the employees voluntarily paved the way to realise the opportunity for a collaborator to execute the coastal cleaning activity.
- ii. The Prominent collaborators in executing the task of coastal cleaning are the local administration and the Non-Governmental Organisation involved in coastal cleaning. Since the sustenance of the cleaning activity is more important than the initial cleaning, the involvement of the Local Ward Councilor and the Non-governmental Organisation (NGO) which schedules the cleaning activity in an earmarked space involving volunteers from different institutions was mandatory. Since the coastal areas have a floating population and the activity has to be done when the visitors to the sea/beach are minimal, the involvement of the local administration was also essential for ensuring the safety of the employees involved. For instance, Indira Gandhi National Open University (IGNOU) Cochin Regional Centre and ‘Bhumi’, an NGO, jointly carried out cleaning at ‘Vasco Square Fort Kochi Beach’ on 30.10.2023 from 3.00p.m-5.00 p.m. The Fort Kochi Ward Councilor Sh. Anthony Kurithara facilitated the activity and provided support for the disposal of collected waste while cleaning the earmarked coastal area.

The History of the Place identified for Coastal cleaning also has significance and adds a jewel to the activity. The Cochin Port or Kochi Port is a major port on the Arabian Sea – Laccadive Sea – Indian Ocean Sea route in the city of Kochi in Ernakulam district in the State of Kerala and is one

of the largest ports in India. Vasco da Gama,( 22 November 1469, Sines, Portugal to 24 December 1524, Kochi) the first Count of Vidigueira, was a Portuguese explorer and the first European to reach India by sea. His initial voyage to India by way of Cape of Good Hope was the first to link Europe and Asia by an ocean route, connecting the Atlantic and the Indian oceans. Vasco da Gama died in Kochi in 1524 when he was on his third visit to India. In 1524, on his third visit to Kerala, the Portuguese explorer, Vasco da Gama, who reached India from Europe by sea, fell ill and died in Kochi. He was buried in St Francis Church. About 14 years later, his remains were taken back to Portugal (Wikipedia,2023). Now this place is called Vasco Square in Fort Kochi. The IGNOU Regional Centre Cochin executed the coastal cleaning activity at Vasco Square.

- iii. The Methodology adopted for identifying the collaborators to execute the task of coastal cleaning was the objectivity of purpose. Virtual search using the technology with subsequent telephonic conversation was the method used to identify the BHUMI, the Non-Governmental Organisation as a collaborator for executing coastal cleaning activity. It was ensured that a win-win situation prevails at all times in collaboration with opportunities for the sustenance of the activity. Cost leadership and working in a team with vistas to highlight IGNOU as an Institution also served as the checklist for identifying BHUMI, the Non-Governmental Organisation as a collaborator for executing coastal cleaning activity.
- iv. An Orientation to the volunteers before involving in the cleaning activity on the coastal area was also executed. The orientation targeted personal safety while manually handling the waste. As a pre-activity for the beach cleaning, an orientation was given by Sh. Anthony Kurithara, Fort Kochi ward councillor of how to pick up broken bottles, rubber footwear, plastic waste (spoons, plates, medicine bottles, water bottles, tiffin boxes, dislinked containers), Thermocol pieces- which also served as a learnt skill for use in daily life as an extension of Special Campaign 3.0 activity of Coastal Cleaning.

Bio-degradable waste like coconut shell, coconut leaf, water hyacinth plant which reached to the shore due to waves, paper plates, paper cups, and tissue paper were not a concern for removing

- as it is degradable in nature. The need for using gloves and to change gloves when soiled while touching the waste drenched in seawater or when mud/sand/slush gets into the gloves was also highlighted.
- v. The execution of the task of coastal cleaning activity is of manual nature. As a precaution, mask and gloves were given to the volunteers to protect themselves while involved in the cleaning activity. Most of the activity of cleaning the coastal area involved picking up broken bottles, rubber footwear, plastic waste (spoon, plate, medicine bottles, water bottles, tiffin boxes, dislinked containers), and Thermocol pieces using the hand. Assembling the waste and collecting it in garbage bags was the next manual work executed. The garbage bag containing the waste collected was shifted by lifting manually and kept at an earmarked point for subsequent collection by the Cochin Corporation.
  - vi. The attitude of the employees of IGNOU Regional Centre Cochin for the coastal cleaning as an activity under Special Campaign 3.0 was encouraging. The process of cleaning taught individual employees to reflect on how a plastic spoon thrown on the sand is difficult to remove, especially when it gets seeded/ partially immersed inside the sand. The cleaning activity also gave a 'life skill thought' of how every dirt in the seawater waves rests on the shore to be collected and dumped as waste, so also bad segments in one's life have to reach a shore (at different facets of age) to be dumped and not to be carried along as baggage in life. The skills related to videography and photography were also nurtured as photographs and videos were taken to document the event. Involvement in an activity other than the routine one stimulated the overall functioning of the physical body of the employees. The cleaning activity involved physical activity to bend down-pick-put inside the garbage bag and at the same time being vigilant that the garbage waste does not hurt physically. At times, with the waste soaked in water and partially immersed in sand, the waste was difficult to remove and lifted to be placed inside the garbage bag. Movement of garbage bags from the coastal area to the mainland waste collection point was also an opportunity to lift the garbage bags without being hit against the bench/tree/rock on the beach.
  - vii. The challenges for sustenance of the coastal cleaning at the field level involve repetition of the cleaning activity at frequent intervals of time. The climatic conditions with rainfall prevailing in Kerala make waste disposal a challenge. The waste materials that reach the shore due to waves may have origin in multiple spaces/locations. Monotony of space, familiarity of the people around also slows down the cleaning activity. Spectators of the cleaning activity did distract movement of garbage bags and collection of waste from the sand. Physical fatigue of not yet accustomed with the cleaning activity did slow down the cleaning activity. At times scattered behavior attracted by easily pickable waste like bottles over a wide area beyond that earmarked space was also exhibited among the volunteers. The discouraging sight of a high wave bringing more waste and dumping it in the "cleaned" space reminded me to do the activity without worrying. The collected waste kept in a place after coastal cleaning for collection by local administration does have a lag phase. During the lag phase, the non-collection of waste by local administration gets highlighted by critics, which also leads to preventing further collection of waste after coastal cleaning by involving institution volunteers. Gaining trust, and a reputation of performing with diligence always takes time at the field level in any outreach activity and coastal cleaning is no exception to this norm.

### **Limitations of the Study**

The factors that are beyond the researcher's control and that may affect the results of the study or how the results are interpreted are given as the limitations of the Present Study. The limitations of the present study are the following:

1. Due to the failure of complete details in writing, the information to document based on the back-office task involving the planning, organising, coordinating and executing the Coastal Cleaning activity at IGNOU Regional Centre, Cochin, certain information has to be arrived based on the available memory.
2. All the employees would not have been physically fit to be involved in the Coastal cleaning activity.
3. Climatic conditions, and the health of the employees add challenges to the execution of the activity

## Delimitations of the Study

The factors that affect the study over which the researcher generally does have some control are given as the delimitations of the Present Study. The delimitations of the present study are the following:

- To ensure the manageability of the data available, the study focused on the areas which fall within the scope of the study.
- The content of the data used for the study was that experienced at IGNOU Regional Centre Cochin while planning, organising, coordinating and executing the Coastal Cleaning activity and is within the approachability to the investigator for use in the study as the primary source of data.

## Conclusion

The present study attempted to enumerate the experience to document the various modalities taken for initiating the activity of coastal cleaning; Prominent collaborators for executing the task of coastal cleaning; the methodology adopted for identifying the collaborators to execute the task of coastal cleaning; the content of orientation for the volunteers before executing the task of coastal cleaning; the execution of the task of coastal cleaning activity; the attitude of the employees for the coastal cleaning at the field level; and the challenges for sustenance of the coastal cleaning at the field level. The study highlighted the activities related to Coastal Cleaning under Special Campaign 3.0 as an activity which involves both back-office tasks involving the planning, organising, and coordinating the event besides performance on the day of the cleaning activity by the same employees as a team at IGNOU Regional Centre, Cochin. The

volunteers involved in the coastal cleaning activity expect that the “better is the end of a thing than the beginning thereof” (Ecclesiastes Chapter 7Verse 8).

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# An Analysis of Contribution of Universities of West Bengal in Shodhganga Repository

Pritam Rajak\*, Sajal Roy\*\*, Manasi Roy\*\*\* and Priya Bhattacharjee\*\*\*\*

In the era of digital education, a wealth of resources can be accessed on various online platforms. Shodhganga, INFLIBNET Centre, is one such platform that serves as a hub for researchers to gain insights into current trends in Indian research. This study aims to scrutinize the doctoral theses uploaded by universities in West Bengal on the Shodhganga repository. The analysis is based on a total of 28,901 doctoral theses from 28 different universities. It's worth noting that out of the 51 universities in West Bengal, 31 have signed an MOU with the Shodhganga INFLIBNET project. However, the research highlights the University of Calcutta as the foremost contributor in terms of the number of doctoral theses, with Jadavpur University and the University of Burdwan securing the second and third positions, respectively.

The significance of ICT in the 21st century is indisputable. Information and communication technology (ICT) has a significant impact, particularly in the realm of higher education. Shodhganga provides us with a unique feature through an ICT platform that allows us to conveniently access Ph.D. theses and dissertations from several institutions in India. By utilizing the Shodhganga@inflibnet portal, we may conveniently access the doctoral dissertations from various departments across different institutions within our state. Research has been conducted on every subject or issue, ensuring that no duplication occurs and that no topic is studied twice. The UGC notification, issued on May 5, 2016, requires researchers in universities to submit electronic versions of their theses and dissertations. This is to promote open access to Indian theses and dissertations for the global academic community. The INFLIBNET Centre is responsible for hosting, maintaining, and providing access to the digital repository of Indian electronic theses and dissertations, known as 'Shodhganga', as mandated

by the Regulation. This repository is accessible to all colleges and universities. The term 'Shodhganga' refers to the digital archive of Indian electronic theses and dissertations established by the INFLIBNET Centre. The term 'Shodh' has its roots in Sanskrit and denotes the act of conducting studies and making new discoveries. The "Ganga" is considered the most sacred, biggest, and longest river in the Indian subcontinent. Shodhganga@inflibnet offers a platform for doctoral research students to submit their theses and make them accessible to the whole academic community through open access. The repository possesses the capacity to acquire, index, store, distribute, and safeguard ETDs supplied by researchers. As of 2023, a total of 734 institutions in India have entered into Memorandums of Understanding (MoUs) with the INFLIBNET Centre to actively engage in the Shodhganga project. All the materials uploaded to Shodhganga are fully accessible for reading and downloading by the global academic community in an open-access format. The archive contains more than 450,000 theses and 12,745 synopses. The establishment of the Shodhganga repository was a direct result of the University Grants Commission's regulations published in June 2009, which made it compulsory for all universities to submit electronic versions of PhD theses and MPhil dissertations to the UGC. These documents are then hosted in the INFLIBNET.

## Review of Related Studies

There have been a small number of studies on the theme selected. Ananda (2013) highlights the significance of Shodhganga as a platform that enables the submission of Ph.D. theses for open access. The author emphasizes the need to make Indian doctorate research easily accessible and archive it. In his 2015 study, Manash Esh emphasizes the necessity of universities in West Bengal submitting electronic theses and dissertations to the academic community. He also provides insight into the level of engagement at these universities. In their study, Sankar, Sudha, and Kavitha (2015) highlight the lack of a centralized repository for theses in India. They propose the establishment of a central database and explore the potential assistance from UGC for such initiatives.

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In his study, Sivakumaren (2015) does a quantitative analysis of Electronic Theses and Dissertations (ETDs) that have been submitted to Shodhganga. The study specifically examines the universities that have made the most significant contributions to Shodhganga, highlighting their major influence. Thamaraiselvi, Manthiramoorathi, and Manikandan (2016) conducted a citation analysis of doctorate theses in library and information science that were submitted to Alagappa University through Shodhganga. Their study revealed patterns in the sources of citations, authorship, and preferences for journals. Subrata Biswas (2016) assesses the involvement of universities in West Bengal, highlighting the importance of establishing a repository at the national level and emphasizing the necessity for further university participation. Deivam, M. (2016) emphasizes the lack of exploitation of theses and dissertations as significant research resources. The author presents statistical data on the number of theses stored in Shodhganga, highlighting the potential of Electronic Theses and Dissertations (ETDs). In his work, Giri Naidu (2018) explores the developing notion of efficient service and user studies, highlighting the significance of Shodhganga as a venue for research academics to share their theses and demonstrate its possibilities. Kumbhar Kalyan (2020) focuses on the impact of the top ten institutions in uploading theses and the increase in Memorandums of Understanding (MoUs) with INFLIBNET. It provides valuable insights into the current state of Shodhganga in Maharashtra. In his article, Subhash Khode (2020) presents a comprehensive summary of the contributions made by universities in Madhya Pradesh to Shodhganga. The author emphasizes the active involvement of universities in the state and identifies the primary contributor. Aasif Ahmad Mir and Rathinam Sevukan (2021) examine the accessibility, prominence, and influence of Library and Information Science (LIS) Ph.D. dissertations in Shodhganga, providing data-driven observations on citation patterns and influential research mentors in LIS research. These studies highlight the important role of Shodhganga in facilitating the storage and availability of Indian doctoral research. They also emphasize the need for more institutions in India to contribute to research progress.

### The Study

The title of the Study is: An Analysis of Contribution of Universities of West Bengal in SHODHGANGA Repository

The main Objectives of the Study are:

1. To analyse the year-wise distribution of universities of West Bengal that have signed MoU with the Shodhganga repository.
2. To find out the university-wise distribution of the number of doctoral theses uploaded in the Shodhganga repository in West Bengal.
3. To list down and discuss the discipline-wise distribution of doctoral theses uploaded by the universities of West Bengal in the Shodhganga repository.

The data for the present study were collected from the website of Shodhganga: a reservoir of Indian theses (<http://shodhganga.inflibnet.ac.in>) maintained by INFLIBNET till September 2023 and collected data were processed and analyzed according to the objectives of the present study.

Table 1 shows year year-wise distribution of Indian universities which have signed MoU with INFLIBNET to contribute full- text theses in Shodhganga. It is seen from Table 1 that 31 universities under West Bengal have signed MoU with the INFLIBNET Centre to participate in the Shodhganga project during the period of 2010-2023. The highest numbers of MoU (7) were signed in the year 2021 and no MoU were signed in the years 2010 and 2013. The reasons for the lesser contribution may be attributed to the fact that the establishment of a large number of private universities during the last five years and their doctoral programmes results are yet to come. The lack of awareness and skilled staff is another reason for less contribution in Shodhganga.

Table 2 shows the contribution of universities of West Bengal to Shodhganga project, a digital repository for doctoral theses. Out of the 51 universities in the state, 31 have signed MoU with this repository platform. Among these, 28 universities have actively contributed to the repository, while a total of 28,901 doctoral theses have been found. The University of Calcutta leads top in the contribution of doctoral theses, i.e., 14,018 theses, accounting for nearly half of the total. Following closely are Jadavpur University with 3,595 theses (12.43%) and the University of Burdwan with 3,084 theses (10.67%). The University of Kalyani and the University of North Bengal secured the fourth and fifth positions, respectively, with contributions of 2,837 (9.81%) and 2,067 theses (7.15%). Interestingly, 23 universities have yet to make any contributions

**Table No.1 : No. of Universities Signed with Shodhganga**

Year	No. of University	Name of the University	Types of University
2010	0	Nil	Nil
2011	2	University of North Bengal	State University
		The WB National University of Juridical Sciences, Kolkata	State University
2012	1	The University of Burdwan	State University
2013	0	Nil	Nil
2014	1	Visva Bharati University, Santiniketan	Central University
2015	2	University of Kalyani, Kalyani	State University
		Rabindra Bharati University, Kolkata	State University
2016	2	Jadavpur University, Kolkata	State University
		University of Calcutta, Kolkata	State University
2017	5	Presidency University, Kolkata	State University
		Vidyasagar University	State University
		The West Bengal University Of Teachers' Training, Education Planning And Administration, Kolkata	State University
		University of Gour Banga, Malda	State University
		Sidho Kanho Birsha University, Purulia	State University
2018	2	Raiganj University, Uttar Dinajpur	State University
		Ramakrishna Mission Vivekananda Educational and Research Institute, Howrah	Deemed University
2019	3	Aliah University, Kolkata	State University
		Brainware University, Kolkata	Private University
		JIS University, Kolkata	Private University
2020	4	Kazi Nazrul University , Asansol	State University
		Adamas University, Kolkata	Private University
		University of Engineering and Management, Kolkata	Private University
		Techno India University, Kolkata	Private University
2021	7	Bankura university	State University
		Maulana Abul Kalam Azad University of Technology	State University
		Amity University	Private University
		Diamond Harbour Women's University	State University
		West Bengal State University	State University
		Cooch Behar Panchanan Barma University	State University
		Seacom Skills University	State University
2022	1	The Neotia University	Private University
2023	1	St. Xavier's University	Private University
<b>Total</b>		<b>31</b>	

**Shodhganga INFLIBNET**

(<https://shodhganga.inflibnet.ac.in/>, as on 10.10.2023)

**Table No. 2: University-wise Number of Doctoral Theses**

Sl. No.	Name of the University	Total No. of Doctoral Theses uploaded	Percentage
1.	University of Calcutta	14018	48.50
2.	Jadavpur University	3595	12.43
3.	University of Burdwan	3084	10.67
4.	University of Kalyani	2837	9.81
5.	University of North Bengal	2067	7.15
6.	Visva-Bharati University	1298	4.49
7.	Vidyasagar University	812	2.80
8.	Rabindra Bharati University	313	1.08
9.	Ramakrishna Mission Vivekananda Educational and Research Institute (Formerly Ramakrishna Mission Vivekananda University)	179	0.61
10.	Raiganj University (formerly Raiganj College)	129	0.44
11.	Sidho-Kanho-Birsa University	103	0.35
12.	Presidency University (Formerly Hindoo College)	86	0.29
13.	Swami Vivekananda University	80	0.27
14.	Maulana Abul Kalam Azad University of Technology (Formerly West Bengal University of Technology)	51	0.17
15.	Cooch Behar Panchanan Barma University	43	0.14
16.	Seacom Skills University	40	0.13
17.	The West Bengal University of Juridical Science	33	0.11
18.	Adamas University	27	0.09
19.	Bankura University	22	0.07
20.	Kazi Nazrul University	18	0.06
21.	JIS University	15	0.05
22.	Brainware University	16	0.05
23.	University of Gour Banga	12	0.04
24.	University of Engineering and Management	13	0.04
25.	Techno India University West Bengal	4	0.01
26.	The Neotia University	4	0.01
27.	Diamond Harbour Women's University	1	0.003
28.	Netaji Subhas Open University	1	0.003
29.	Aliah University	0	0
30.	Alipurduar University	0	0
31.	Amity University, Kolkata	0	0
32.	Baba Saheb Ambedkar Education University (Erstwhile WBUTTEPA)	0	0
33.	Bidhan Chandra Krishi Vishwavidyalaya	0	0
34.	Biswa Bangla Biswabidyala	0	0



Sl. No.	Name of the University	Total No. of Doctoral Theses uploaded	Percentage
35.	Dakshin Dinajpur University	0	0
36.	Darjeeling Hill University	0	0
37.	Harichand Guruchand University	0	0
38.	Hindi University	0	0
39.	Indian Association for the Cultivation of Science	0	0
40.	Kanyashree University	0	0
41.	Mahatma Gandhi University	0	0
42.	Murshidabad University	0	0
43.	Rani Rashmoni Green University	0	0
44.	Sadhu Ram Chand Murmu University of Jhargram	0	0
45.	Sister Nivedita University	0	0
46.	St. Xavier's University, Kolkata	0	0
47.	The Sanskrit College and University (Formerly Sanskrit College-1824)	0	0
48.	The West Bengal University of Health Sciences	0	0
49.	Uttar Banga Krishi Vishwavidyalaya	0	0
50.	West Bengal State University	0	0
51.	West Bengal University of Animal and Fishery Sciences (Formerly Veterinary College, 1893)	0	0
<b>Total</b>		<b>28901</b>	<b>100</b>

**Table No. 3: Discipline-wise No. of Doctoral Theses**

Sl. No.	Discipline	Total No. of Theses uploaded	Percentage
1	Science	2247	7.77
2	Chemistry/ Chemistry & Chemical Technology/ Chemistry and Metallurgy/ Chemistry fuels and metallurgy	1912	6.61
3	Bengali / Bengali Language and Literature	1825	6.31
4	Botany/ Botany & Forestry	1523	5.26
5	Zoology	1497	5.17
6	Biochemistry/ Biochemistry and Biophysics/ Biochemistry and biotechnology/ Biochemistry and Nutrition/ Biotechnology	1323	4.57
7	Physics	1185	4.1
8	Economics	866	2.99
9	Geography and Applied Geography	847	2.93
10	English/ English Language and Literature	729	2.52
11	Applied Art/ Chemistry/ Mathematics/ Mechanics/ Optics and Photonics/ Physics/ Psychology/ Science	728	2.51
12	Commerce	700	2.42
13	Mathematics/ Mathematics and Geophysics	700	2.42
14	History	645	2.23

Sl. No.	Name of the University	Total No. of Doctoral Theses uploaded	Percentage
15	Sanskrit/ Sanskrit and Philosophy/ Sanskrit, Pali and Prakriti	609	2.1
16	Philosophy/ Philosophy and Religion	569	1.96
17	Physiology/ Physiology and biochemistry	460	1.59
18	Education	453	1.56
19	Political Science/ Political Science and Rural administration	441	1.52
20	Arts	390	1.34
21	Hindi	380	1.31
22	Agriculture Chemistry/ Soil Science/ Economics/ Engineering/ Extension/ Statistics/ ESS	370	1.28
23	Electrical & Electronic Engineering	364	1.25
24	COMPUTATIONAL SCIENCE/ Computer and Information Science/ Computer and system Science, etc.	338	1.16
25	Microbiology	285	0.98
26	Sociology	286	0.98
27	Chemical Engineering/ Technology	275	0.95
28	Law	273	0.94
29	Business Administration and Administration	269	0.93
30	Library and Information Science	270	0.93
31	Physical Education	264	0.91
32	Anthropology	254	0.87
33	Pharmaceutical Sciences / Pharmaceutical Science and Technology	225	0.77
34	Geological Science	204	0.7
35	Environmental Studies/Science	200	0.69
36	Mechanical Engineering	188	0.65
37	Adult and Continuing Education & Extension	181	0.62
38	Psychology	176	0.6
39	Technology	171	0.59
40	Biophysics, Molecular Biology and Bioinformatics/ Biophysics, Molecular Biology and Genetics	159	0.55
41	Ancient Indian History & Culture/ Archeology	146	0.5
42	Pure Chemistry/ Mathematics	146	0.5
43	Indian Association for the Cultivation of Science	139	0.48
44	International Relations	123	0.42
45	Statistics	117	0.4
46	Engineering (Power/ Printing/ Production)	114	0.39
47	Urdu	102	0.35
48	Pali/ Pali and Sanskrit/ PalliCharcha Kendra	96	0.33
49	Folklore	93	0.32
50	Life Science	91	0.31
51	Polymer science and technology	90	0.31
52	Radio Physics and Electronics	82	0.28

Sl. No.	Name of the University	Total No. of Doctoral Theses uploaded	Percentage
53	Arabic, Persian, Urdu & Islamic studies	72	0.24
54	Genetics/ Genetics and Plant Breeding	70	0.24
55	Medicine	67	0.23
56	Metallurgical Engineering / Metallurgical and Material Engineering	68	0.23
57	Home Science	66	0.22
58	Civil Engineering	63	0.21
59	Food and Nutrition/ Food Technology and Biochemical Engineering	62	0.21
60	Museology	59	0.2
61	Comparative Indian Language and Literature/ Comparative Literature	56	0.19
62	Journalism / Journalism & Mass Communication/ Mass Communication & Videography/ Mass Communication	57	0.19
63	General Physics and X-rays/ General Surgery	54	0.18
64	Agronomy	48	0.16
65	Information Technology	49	0.16
66	CSIR-Indian Institute of Chemical Biology	45	0.15
67	Instrumentation and Electronics Engineering	45	0.15
68	Center for Studies in Social Sciences, Calcutta	42	0.14
69	Linguistics	42	0.14
70	Management	41	0.14
71	ASEPAN	38	0.13
72	Centre for Himalayan Studies	40	0.13
73	Engineering/ Engineering & Technological Studies	40	0.13
74	Marine Science	40	0.13
75	Plant Pathology/ Plant Physiology/ Plant Protection	39	0.13
76	Plastic and Rubber technology	38	0.13
77	Music / Classical Music/ Hindusthani Classical Music/ Instrumental Music/ RabindraSangeet	36	0.12
78	Nanoscience and Nanotechnology	35	0.12
79	Oriya	36	0.12
80	Pathology/ Pathology and bacteriology	36	0.12
81	Social Work	35	0.12
82	Central Glass and Ceramic Research Institute	34	0.11
83	Human Physiology with Community Health	34	0.11
84	Nepali	34	0.11
85	School of Women's Studies	33	0.11
86	Architecture	31	0.1
87	Rabindra Music Dance and Drama	31	0.1
88	Faculty of Disability Management and Special Education	26	0.08
89	Faculty of General and Adapted Physical Education and Yoga	26	0.08

Sl. No.	Name of the University	Total No. of Doctoral Theses uploaded	Percentage
90	Pharmacy	25	0.08
91	Remote Sensing and Geographical Information System	26	0.08
92	School of Water Resources Engineering	26	0.08
93	Biomedical Laboratory Science &Mgt	22	0.07
94	Instrumentation Science	22	0.07
95	Islamic History and Culture	23	0.07
96	School of Bio-Science and Engineering	23	0.07
97	School of Materials Science and Nanotechnology	22	0.07
98	Women Studies	23	0.07
99	Atmospheric Science	20	0.06
100	Economics and Political Science/ Economics and Politics	20	0.06
101	Macromolecules	18	0.06
102	School of Engineering and Technology	20	0.06
103	School of Environmental Studies	19	0.06
104	School of Oceanographic Studies	20	0.06
105	Theoretical Physics	19	0.06
106	Agriculture	15	0.05
107	Ayurveda	17	0.05
108	Comparative Philology and Linguistics	17	0.05
109	Horticulture	17	0.05
110	Indo-Tibetan studies	16	0.05
111	Inorganic Chemistry	15	0.05
112	Molecular Biology and Biotechnology/ Molecular Pathophysiology	17	0.05
113	Pharmacology	16	0.05
114	Soil Science and Agriculture Chemistry/ Solid State Physics	15	0.05
115	Veterinary Science	17	0.05
116	Visual Art/ Vocal Music	17	0.05
117	Anatomy	13	0.04
118	Aquaculture Management and Technology	14	0.04
119	Centre for Journalism and Mass Communication	14	0.04
120	Chittaranjan National Cancer Institute	13	0.04
121	Crop Improvement, Horticulture and Agril. Botany CIHAB	12	0.04
122	Faculty centre of Integrated Rural Development and Management (IRDM)	13	0.04
123	Film Studies	14	0.04
124	Fishery Sciences	14	0.04
125	Optics	12	0.04
126	Physical Chemistry	12	0.04
127	Rural Studies/ Development and Management/ Extension Centre/	14	0.04
128	Sports Science and Yoga	14	0.04

Sl. No.	Name of the University	Total No. of Doctoral Theses uploaded	Percentage
129	Animal Physiology	9	0.03
130	Bose Institute	9	0.03
131	Centre for Culture studies	9	0.03
132	Magnetism	9	0.03
133	Medical	9	0.03
134	Medical Entomology/ Medical Microbiology and Parasitology	9	0.03
135	S.N. Bose National Centre for Basic Sciences	11	0.03
136	Santali	10	0.03
137	School of Energy Studies	11	0.03
138	School of Management and Sciences	9	0.03
139	Seed Science and Technology	9	0.03
140	South and South East Asian Studies	10	0.03
141	Community Medicines	6	0.02
142	Construction Engineering	7	0.02
143	Dance	8	0.02
144	Haematology	7	0.02
145	Indian Statistical Institute	8	0.02
146	ISERC	6	0.02
147	Metallurgy	7	0.02
148	Musicology	8	0.02
149	Neurological Science	8	0.02
150	Obstetrics and Gynaecology	6	0.02
151	Organic Chemistry	7	0.02
152	Persian	7	0.02
153	Raja N L Khan Womens College Autonomous	6	0.02
154	S N Pradhan Centre for Neurosciences	6	0.02
155	School of Biotechnology and Biological Sciences	7	0.02
156	School of Cultural Texts and Records	7	0.02
157	School of International Relations and Strategic Studies	6	0.02
158	School of Language and Linguistics	6	0.02
159	School of Mobile Computing and Communication	8	0.02
160	Textile Technology	6	0.02
161	Tourism Management	8	0.02
162	Tumour Biology	7	0.02
163	Assamese	3	0.01
164	Atomic Energy	4	0.01
165	Calcutta School of Tropical Medicine	5	0.01
166	Central Forensic Science Laboratory	3	0.01
167	Ecological studies	3	0.01
168	Enzyme Engineering	4	0.01
169	French	4	0.01

Sl. No.	Name of the University	Total No. of Doctoral Theses uploaded	Percentage
170	Graphics Art	5	0.01
171	Horticulture and Postharvest Technology	3	0.01
172	Hygiene and Public Health	4	0.01
173	Indian Institute of Experimental Medicine	3	0.01
174	Institute of Development Studies Kolkata	3	0.01
175	Integrated Rural and Tribal Development and Management (IRTDM)	5	0.01
176	Integrated Science Education and Research Centre	3	0.01
177	Jute and Fibre Technology	4	0.01
178	Languages	3	0.01
179	Lifelong Learning and Extension	4	0.01
180	National Institute of Cholera and Enteric Diseases	4	0.01
181	School of Automotive Engineering	4	0.01
182	School of Cognitive Science	3	0.01
183	School of Educational Technology	5	0.01
184	School of Illumination Science, Engineering and Design	4	0.01
185	School of Nuclear Studies and Application	3	0.01
186	Sericulture	3	0.01
187	ShilpaSadan	3	0.01
188	Tamil Studies	4	0.01
189	Anesthesiology	2	0
190	Bacterial Immunology	1	0
191	Basic Science and Humanities	2	0
192	Biochemical Engineering	2	0
193	Bioinformatics	1	0
194	Bio-science	1	0
195	Cardiology	1	0
196	Cell Biology	1	0
197	Central Food Technological Research Institute	2	0
198	Centre for Mathematics Education	2	0
199	Ceramic Technology	2	0
200	CFRTRI	1	0
201	Chinese Language and Culture	2	0
202	Cultural Studies	2	0
203	Department of Electronics & Communication Engineering, B. P. Poddar Institute of Management & Technology	1	0
204	Design Textile Ceramic Glass	1	0
205	Embryology	1	0
206	Endocrinology	2	0
207	Entomology	1	0
208	Epidemiology	2	0

Sl. No.	Name of the University	Total No. of Doctoral Theses uploaded	Percentage
209	Experimental Medical Sciences	1	0
210	Haemato-Oncology and Medical Oncology	1	0
211	Humanities and Social Sciences	2	0
212	ICMR Virus Unit	1	0
213	Japanese	1	0
214	Materials Science and Technology	2	0
215	Midnapore College	1	0
216	Mining Engineering	1	0
217	Nutrition	1	0
218	Ophthalmology	1	0
219	Oral and Dental Science	2	0
220	Orthopaedic Surgery	1	0
221	Paediatrics	1	0
222	Painting	2	0
223	Parasitology	2	0
224	Physical and earth Science division	1	0
225	Radiotherapy	1	0
226	School of Advanced Studies in Industrial Pollution Control	1	0
227	School of Biological Sciences	1	0
228	School of Laser Science and Engineering	2	0
229	School of Life Sciences	1	0
230	School of Natural Product Studies	1	0
231	Sculpture	2	0
232	Tea Science	1	0
233	Toxicology	1	0
234	Variable Energy Cyclotron Centre	1	0
235	Virology	2	0
<b>Total</b>		<b>28901</b>	<b>100</b>

to Shodhganga, indicating a significant portion of universities have not yet utilized the repository for their theses.

Table 3 provides the subject-wise distribution of theses contributed by universities of West Bengal in Shodhganga. From the contribution of various universities of West Bengal, it was found that the Science group ranked first with 2247 (7.77%) theses. The Second most contributing subject was Chemistry related groups (Chemistry/ Chemistry & Chemical Technology/ Chemistry and Metallurgy/ Chemistry fuels and metallurgy) with 1912 (6.61%) theses, followed by the Bengali or Bengali Language and Literature 1825 (6.31%). The Botany or Botany &

Forestry is in fourth Position with 1523 (5.26%) theses, followed by Zoology with 1497 (5.17%) theses. It's considering doctoral theses in Education, we may find very small percentage of 453 (1.56%).

### Conclusion and Recommendations

The open-access repositories are very useful especially for researchers in developing countries to get information about the latest research and development in their field where researchers and many educational institutions cannot afford for costly publications. The finding of this study revealed that the overall contributions of theses in Shodhganga are increasingly satisfactory. Many universities though signed MoU

with Shodhganga but have not started contributing their theses yet. It was found that the overall contribution of universities of West Bengal in Shodhganga is satisfactory but contribution on many subjects is very less and 23 universities of West Bengal have not yet contributed in Shodhganga. About 48.5% of the total contribution of universities of West Bengal is only made by the University of Calcutta. The Shodhganga repository is very useful for those universities and educational institutions which cannot create their digital repository. We found that the percentage of doctoral theses in Education is 1.56% and among these theses, Calcutta University contributed the highest number of theses. It is recommended that INFLIBNET should organize regular awareness and training programmes regarding Shodhganga outside their campus in every state so that a large number of professionals can participate from every state. The Universities should collaborate with INFLIBNET in organizing awareness and training programmes on their campus. The benefits should be given in NAAC accreditation to all those universities who deposit their theses in Shodhganga to encourage universities to provide facilities and staff to deposit their theses in Shodhganga.

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# Technology Enhanced Assessment towards Enhanced Productivity of Educational Systems Resources

Ashok G Matani\*

Online teaching and learning is not a new phenomenon. For the last many years, it has been mainly used as a part of face-to-face teaching. Assessment is an essential part of teaching and learning as it establishes the achievement of course learning outcomes by the students. Computer-based assessment has been in place for a long time now, however, online assessments in India have been less practiced. This is because of the issues of validity, reliability, and dishonesty. During the COVID-19 pandemic, the educational environment has taken a paradigm shift in all educational systems, both nationally and internationally. This situation demands a method of assessment that is safe, valid, reliable, acceptable, feasible, and fair. This paper describes the different tools and apps of online assessment and their application in formative and summative assessments during and after the COVID-19 pandemic.

## E-assessment

E-assessment is the use of information technology in innumerable ways to assess performance and measure student learning. The notion of e-assessment was presented to overcome all the inadequacies of traditional pen-and-paper assessment modes. Electronic assessment arises from the use of Web-specific tools for assessment. It can be used to assess theoretical knowledge (using e-testing software) as well as practical skills (using e-portfolios or simulation software). It is also called the online assessment/computer-based assessment in which information technology is used to assess students' academic progress

Assessment is the measurement of the learning of a student. It can be divided into 'assessment of learning' (summative) and 'assessment for learning' (formative). Formative assessments occur within an online course or lesson and are used to determine how well a student is learning the material. They're best when they are ongoing, consistent, and provide critical feedback to learners. Summative assessments are sometimes referred to as final examinations and measure what the student has learned after completing a course. They

can validate how well students' content supports the course's overall learning goals. Summative assessment is used for pass/fail decisions, whereas formative assessment for providing feedback. Whatever the method used, the assessment of students comprises of measuring knowledge, skill, and attitude. The knowledge is usually assessed through multiple choice questions, short essay questions, and long essay-type questions. Skill is tested through OPSE, OSCE, Practical, Vivas, Short and Long cases. Pre-COVID-19, these domains of learning were assessed face to face (f2f). With the arrival of COVID-19 pandemic, there has been a paradigm shift from traditional face-to-face (f2f) teaching and learning to online technology-enhanced learning. As predicted this transformation in the educational environment will bring long-lasting effects on teaching and learning, assessment procedures and methods also require a change.

There are more than 20 different types of online assessment tests. A few of the most popular tests cover skill assessment, communication assessment, cognitive assessment, behavioral assessment, etc. The tests are conducted over the Internet to measure a candidate's job-related skills and personality. Compared to pen-and-paper methods of assessments, online or e-assessment methods are less labor-intensive and more secure.

## Significant Effects of Online Assessment on the Educational Sector

Online assessment is a significant technological advancement that should be involved in the education system. Conducting tests now-a-days should not be stressful as technology has revolutionized the whole education system. Conducting assessments online has become easier today as there is no requirement to use the paper-and-pencil option. Examinations are conducted on a computer which ultimately saves not only time but also the most important product, that is paper. These are the reasons why this online method is accepted by every educational institute that has computers and an internet connection available.

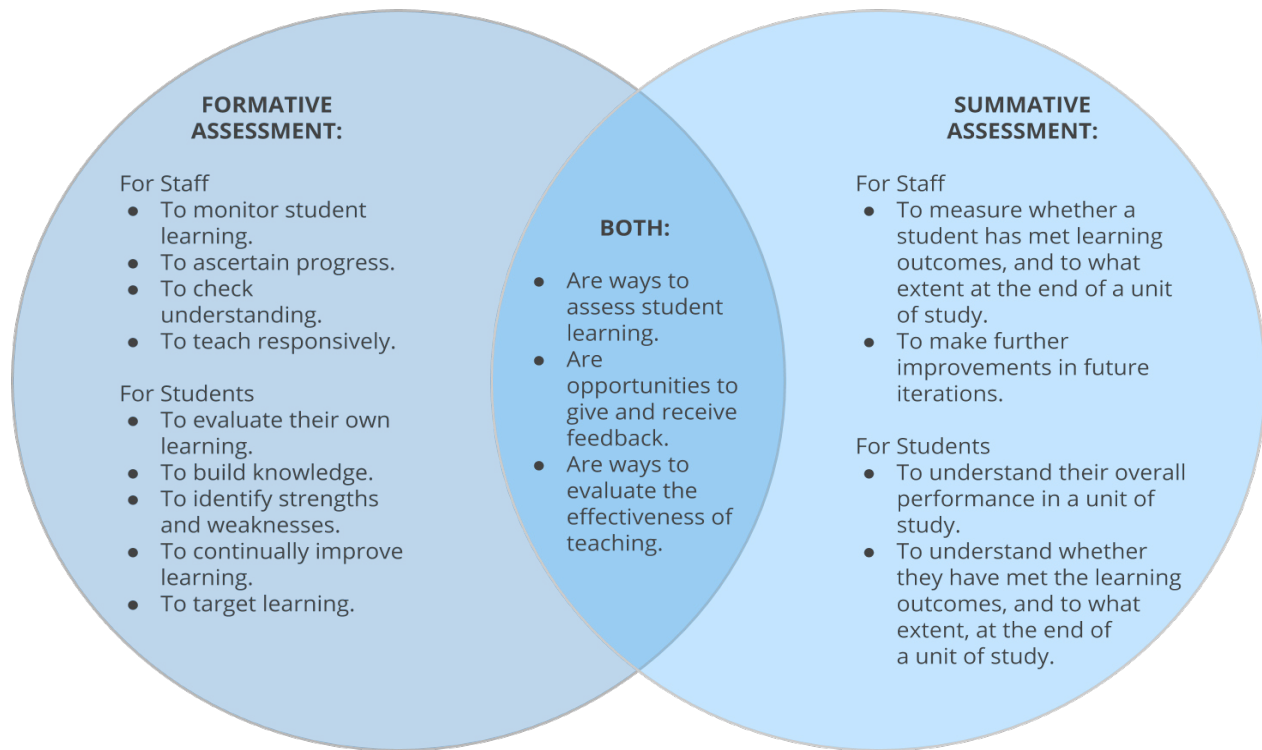
## Importance of Quality Assessment

Assessments are the most significant part of the education system as it gives an accurate picture to

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## Assessment and Feedback: Choosing Types of Assessment

### *Formative and Summative Assessment*



the students of where they stand. It acts as a catalyst and positive reinforcement to learners by encouraging them to perform better. Therefore, quality assessment is very important as it focuses on a targeted area with complete precision. In order for an assessment to be stated as a quality one, it must present the following characteristics:

- The content should be simple, clear, and easy for candidates to understand. It should always comply with the syllabus and the specific topic taught.
- The test should have a measurable outcome; i.e., there should not be any flaws as regards the content. Moreover, it should be 100% accurate.
- The test should grasp students' interest, and that is mainly the reason why the test should be objective at all times. It should be creative and, of course, not boring for the students.

### **Why Choose Online Assessment Over Traditional Assessment?**

An online assessment gives students the advantage of speed and accuracy when compared with a traditional assessment method. The robust online tools eliminate

any chances of malpractice, streamline hiring, and guarantee a positive candidate experience. Many institutions are relying on online assessment for various reasons, as follows:

- Online assessment saves lots of time and money
- No need to hire a specialist
- Ensures consistency in the examination session
- It is accurate and secure
- It can be tailor-made according to the learner

The impact of technology on the education sector is beneficial. Teaching and evaluating students are two actions which should not be limited within the walls of a classroom but they can be both performed anytime, anywhere with the aid of computers and the internet. It's not surprising that the industries are gradually moving from using the traditional assessment methods to using more practical ones which are almost always towards technological solutions. These practical methods not only benefit the institutions but also students as they choose to make full use of this method right from the start when they select courses to the final stage, that of the assessment.

Research has also proven that most students are interested in going through an online assessment rather than a paper-and-pencil one. Moreover, the students are delighted when they get their results and feedback automatically immediately after the test. So, there is still a need to figure out how reliable it would be if we incorporate online methods in teaching and evaluating, according to students' perspectives. Some of the reasons why one should choose online assessments are presented here.

### ***Prompt Result After an Examination Relieves Students' Anxiety***

It has been noticed that students experience stress and anxiety after the examination while waiting for the result. However, with the online examination, this is not the case as the results are immediately distributed, which relieves students' stress and anxiety.

### ***Instant Feedback Supports the Formative Assessment Method***

Feedback is more effective for a student or for an individual when it is given immediately after their task is complete. This not only helps the student to analyze their performance level but also helps them to take better steps to the optimization of the result. The student can strategize their study plan and put more effort into a particular topic. Also, an individual is able to know beforehand which topic they should be more focused on, as well. And this is the so-called principle of the formative assessment.

### ***Conducting an Examination Anytime Anywhere is Beneficial to the Students***

Scheduling an examination is important. Nowadays, no matter where students are, the time and the place are not barriers since conducting or participating in an online exam has eliminated all these restrictions. Students can take an examination either from students' phones or students' tablets.

### ***Fun and Interactive***

Students find it attractive when there is multimedia incorporated, such as videos or recordings, in the examination as they highly engage students in both learning and assessment. Visual and auditory learners are more focused on content that supports multimedia than content that is presented in plain text and long sentences.

### ***Taking Exams in A Comfortable Environment is the Key***

The classroom is not always designed to facilitate learning in a comfortable way, therefore taking exams in a classroom is not the best option oftentimes. There may be great obstacles to be met during an examination process, such as hard chairs, harsh light, and students being sited too close to one another. The noisy environment of the classroom takes the focus away, distracting students who are never able to concentrate on their task as their creativity and their flow are often interrupted.

### ***Beneficial to Students with Special Needs***

People with special needs can also experience the benefit of taking tests and being assessed online. Useful methods have been developed; for example, students can simply touch the screen for the answer instead of writing it. Speech-to-text is also another novel option and a great solution to people facing difficulties in essay writing.

### ***Ways to Assess Student Learning Online***

The most common assessment methods to support student learning are:

#### ***Online Quizzes***

Quizzes are a traditional assessment tool. Plus, when paired with technology, they are an excellent way to engage student learning. Quiz questions can take a number of forms, such as multiple-choice, fill-in-the-blanks, and hotspots. Online quizzes are ideal for measuring learning results across a wide audience. Since each student takes the same test, students can compare and contrast results across different classes, schools, or communities.

#### ***Open-ended/essay Questions***

Open-ended or essay-type questions are one of the most popular qualitative assessment methods. They prompt learners to explore their thoughts, feelings, and opinions while testing their overall comprehension of a topic. This type of question encourages critical thinking and is best suited for evaluating higher-level learning. Essay questions require a longer time for students to think, organize, and compose their answers.

### ***Drag-and-drop Activities***

Drag-and-drops are a type of assessment that shows a learner's ability to link information and apply knowledge to solve a practical problem. Students can incorporate both images and text in a drag-and-drop activity, giving it a real-world feel that is both challenging and engaging. It's essential to use this assessment type when students want learners to be able to apply knowledge in a real-life situation.

### ***Online Interviews***

Students can incorporate a video conference within online teaching to give learning a more personal touch. During brief online interviews, students can demonstrate their proficiency in language, music, nursing, and other courses, for example, where mastery of specific skills is an important requirement. Interviews can also include a mentoring component enabling students to get immediate feedback from instructors and help them feel more responsible about their studies.

### ***Dialogue Simulations***

A dialogue simulation is a way to train learners for real-life conversations with customers, colleagues, and others. When creating a conversation activity based on a situation that a student may face on the job, let them know what to expect and provide a safe place to practice their reactions and responses

### ***Online Polls***

Polls allow students to capture feedback directly from students r audience about their learning experience. They can be used to measure anything from learning satisfaction (Kirkpatrick Level One feedback) to why a student made a particular choice during a lesson. Online surveys are highly engaging for learners because they allow them to share their opinions, make themselves heard, and are quick to complete.

### ***Game-type Activities***

Game-type activities turn a series of test questions into a game. For example, a trivia game might ask learners to answer a certain number of questions within a period of time and award points based on the number of correct answers. Game-based assessments are considered fun, and not "tests", so

they are generally a good indicator of true skills and knowledge.

### ***Peer Evaluation and Review***

Peer evaluation turns the tables to put learners into the instructor's seat and allow students to review and edit each other's work. Such activities give each participant a chance to reflect on their knowledge and then communicate their feedback in a consistent and structured way.

Third-party platforms, such as Turnitin's Feedback Studio, enable students to read, review, and evaluate one or more papers submitted by their classmates using rubrics or prescribed assessment questions. Teachers are able to log in and track individual participation in the activity and monitor comments or peer evaluation feedback.

### ***Forum Posts***

A forum is an online discussion board organized around a topic. Asking students to contribute to a forum post is an excellent way to gauge their understanding, pique their interest, and support their learning. In this activity, students are given a critical thinking question based on a lesson or a reading, and are asked to reflect on both. Their answers are posted to a forum and their peers are given the chance to respond.

### ***Online Assessment Tools for Distance Learning***

Online assessments are a critical part of e-learning and should be undertaken with the same level of care and rigor that students put into creating students r learning content. The highlighting feature is that students don't have to be a programming genius to build them. There are many online assessment tools that allow students to generate engaging tasks for online evaluation. Choose students' way to assess student learning and related software to align students' needs and the results students want to achieve.

### ***Various Digital Tools and Apps to Support Formative Assessment in the Classroom***

Various digital tools and apps teachers can use to support formative assessment in the classroom. Here is an extensive list of digital tools, apps, and platforms that can help students use formative assessment to elicit evidence of learning.

Name of the Digital Tools and Apps	Utility for Teachers and Students
<b>Record Audio and Video</b>	
Animoto	Gives students the ability to make a 30-second video of what they learned in a lesson.
AudioNote	A combination of a voice recorder and notepad, it captures both audio and notes for student collaboration.
Edpuzzle	Helps students use video (students' own, or one from Khan Academy, Students Tube, and more) to track student understanding.
Flipgrid	Assists students in using 15-second to 5-minute videos to respond to prompts. Teachers and peers can provide feedback.
QuickVoice Recorder	Allows students to record classes, discussions, or audio for projects. Sync students' recordings to students' computers easily for use in presentations.
Vocaroo	Creates audio recordings without the need for software. Embed the recording into slideshows, presentations, or websites
WeVideo	Assists students use video creatively to engage students in learning. Teachers and students alike can make videos
<b>Create Quizzes, Polls, and Surveys</b>	
Crowdsignal	Assists students create online polls, quizzes, and questions. Students can use smartphones, tab assists, and computers to provide their answers, and information can be culled for reports.
Edulastic	Allows students to make standards-aligned assessments and get instant feedback.
FreeOnlineSurveys	Helps students create surveys, quizzes, forms, and polls.
Gimkit	Assists students write real-time quizzes. And it was designed by a high school student.
Kahoot!	A game-based classroom response system that assists students create quizzes using internet content
MicroPoll	Helps students create polls, embed them into websites, and analyze responses.
Naiku	Assists students write quizzes students can answer using their mobile devices.
Obsurvey	Designed to make surveys, polls, and questionnaires
Poll Everywhere	Assists students create a feedback poll or ask questions and see results in real time. Allows students to respond in various ways. With open-ended questions, students can capture data and spin up tag clouds to aggregate responses
Poll Maker	Offers unique features, like allowing multiple answers to one question.
ProProfs	Helps students make quizzes, polls, and surveys.
Quia	Assists students create games, quizzes, surveys, and more. Access a database of existing quizzes from other educators.
Quizalize	Helps students create quizzes and homework
Quizizz	Guides students through designing quizzes and Assists students include students in the quiz-writing process.
Quizlet	Assists students make flashcards, tests, quizzes, and study games that are mobile friendly.
Survey Hero	Designed to build questionnaires and surveys.
SurveyMonkey	Helpful for online polls and surveys.
SurveyPlanet	Also helpful for online polls and surveys.
Triventy	Assists students create quizzes students take in real time using individual devices.
Yacapaca	Helps students write and assign quizzes.
Zoho Survey	Allows students to make mobile-friendly surveys and see results in real time.
<b>Brainstorm, mind map, and collaborate</b>	
AnswerGarden	A tool for online brainstorming and collaboration.
Coggle	A mind-mapping tool designed to help students understand student thinking.

Name of the Digital Tools and Apps	Utility for Teachers and Students
Conceptboard	Software that facilitates team collaboration in a visual format, similar to mind mapping but using visual and text inputs.
Dotstorming	A whiteboard app that allows digital sticky notes to be posted and voted on. This tool is best for generating class discussion and brainstorming on different topics and questions.
Educreations Whiteboard	A whiteboard app that Assists students share what they know
iBrainstorm	Assists students collaborate on projects using a stylus or their finger.
Miro	Allows whole-class collaboration in real time.
Padlet	Provides a blank canvas for students to create and design collaborative projects.
ShowMe Interactive Whiteboard	Another whiteboard tool to check understanding.
XMind	Mind-mapping software for use on desktop computers and laptops.
<b>Present, Engage, and Inspire</b>	
BrainPOP	Assists students use prerecorded videos on countless topics to shape students r lesson plan, then use quizzes to see what stuck.
Buncece	Helps students and teachers visualize, communicate, and engage with classroom concepts.
Five Card Flickr	Uses the tag feature from photos in Flickr to foster visual thinking.
PlayPosit	Allows students to add formative assessment features to a video from a library or popular sites, such as Students Tube and Vimeo, to survey what students know about a topic.
RabbleBrowser	Allows a leader to facilitate a collaborative browsing experience.
Random Name/Word Picker	Facilitates random name picking. Students can also add a list of keywords and use the tool to prompt students to guess words by providing definitions.
Socrative	Uses exercises and games to engage students with a topic.
Spark	Assists students add graphics and visuals to exit tickets.
Typeform	Helps students add graphical elements to polls.
<b>Generate Word or Tag Clouds</b>	
EdWordle	Generates word clouds from any entered text to help aggregate responses and facilitate discussion. Word clouds are pictures composed of a cloud of smaller words that form a clue to the topic.
Tagxedo	Allows students to examine student consensus and facilitate dialogues.
Wordables	Helps students elicit evidence of learning or determine background knowledge about a topic.
WordArt	Includes a feature that allows the user to make each word an active link to connect to websites, including Students Tube.
<b>Get Real-time Feedback</b>	
Formative	Assists students assign activities, receive results in real time, and provide immediate feedback.
GoSoapBox	Works with the bring-students r-own-device model and includes an especially intriguing feature: a confusion meter.
IXL	Breaks down options by grade level and content area
Kaizena	Gives students real-time feedback on work they upload. Students can use a highlighter or give verbal feedback. Students can also attach resources.
Mentimeter	Allows students to use mobile phones or tab assists to vote on any question a teacher asks, increasing student engagement.
Pear Deck	Assists students plan and build interactive presentations that students can participate in via their smart device. It also offers unique question types
Plickers	Allows students to collect real-time formative assessment data without the need for student devices

Name of the Digital Tools and Apps	Utility for Teachers and Students
Quick Key	Helps students with accurate marking, instant grading, and immediate feedback
<b>Foster Family Communication</b>	
Remind	Assists students text students and stay in touch with families.
Seesaw	Helps students improve family communication and makes formative assessment easy, while students can use the platform to document their learning.
Voxer	Assists students send recordings so families can hear how their students are doing, students can chat about their work, and students can provide feedback
<b>Strengthen teacher-to-student or student-to-student communication</b>	
Bibliasium	Assists students view books students have read, create reading challenges, and track progress. Students can also review and recommend books to their peers.
Classkick	Helps students post assignments for students, and both students and students r students' peers can provide feedback. Students can also monitor their progress and work.
ForAllRubrics	Assists students import, create, and score rubrics on students tablet or smartphone. Collect data offline, compute scores automatically, and print or save the rubrics as a PDF or spreadsheet.
Lino	A virtual cork board of sticky notes, it Assists students ask questions or make comments on their learning.
Online Stopwatch	Provides dozens of themed digital classroom timers to use during small- and whole-group discussions.
Peergrade	Helps students create assignments and upload rubrics. Students can also anonymously assign peer review work. Students can upload and review work using the corresponding rubric.
Spiral	Gives students access to formative assessment feedback.
Verso	Assists students set up learning using a URL. Space is provided for directions. Students can add their assignment, post comments, and respond to comments. Students can group responses and check engagement levels.
VoiceThread	Allows students to create and share conversations on documents, diagrams, videos, pictures, and more
<b>Keep the Conversation Going with Live Chats</b>	
Backchannel Chat	A teacher-moderated version of Twitter.
Chatzy	Supports live, online chats in a private setting

## Conclusions

With tremendous changes in the educational sector, the use of online assessment has become more popular and widely adopted. But in the end, it totally depends on students to decide what kind of assessment students' want to opt for; be it an online or a paper-and-pencil one. The educationally advanced countries had embraced these techniques earlier. So, they faced less difficulty in imparting education online in COVID 19 pandemic as compared to us where lack of resources, infrastructure, training and acceptability had hindered this form of education for a long time. It's the right time to move in the right direction by adapting technology enhanced learning and assessment for our educational system to be at world level.

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# The Value of Education Reflects in Behaviour

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**Vinai Kumar Saxena, Hon'ble Lieutenant Governor of Delhi and Chancellor, Delhi Pharmaceutical Sciences and Research University, New Delhi delivered the Chancellor's Address at the 5<sup>th</sup> Convocation Ceremony of Delhi Pharmaceutical Sciences and Research University, New Delhi on December 22, 2022. He said, "Don't flatter yourself with boundaries of circumstances and never let the spirit of inquisitiveness and thrust for knowledge die within yourself. Set a target for yourself and do all possible to achieve them. There will be many challenges that you will face but with a strong base of your education and upbringing and above all with ingenuity you will be able to overcome them. You may plan to go for a profession in research or set your enterprises but in whatever you choose remember to give back to the society and help those who are marginalised less fortunate." Excerpts**

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At the outset I would like to congratulate all those students who are graduating today and getting their degrees from the first Pharma university of the India. I would also like to record my special appreciation for those who have distinguished themselves and receiving the award today. It is the day of not only achievements but also aspirations. A degree is not just the receipt of the education you acquired during 2-3 years of time but a document that certifies the hard work putting by you to acquire knowledge, skills and wisdom. It is a decisive milestone of the path ahead where you will be contributing to self, family, society and the nation. You graduate today with the power of this degree and with your aspirations. I would also like to extend my congratulations to the parent and faculty present here who have shaped the young minds that they are graduating today.

## **Pharmaceutical Sector Scenario After COVID-19 Pandemic Era**

Dear students this is the first year after pandemic when a normal in person convocation is being held in this university, would like to applause all those who worked hard, innovated and evolved to achieve this important milestone despite of all pervasive dangers of COVID pandemic and concurrent theist of dengue and monkeypox. Friends! COVID has turned pharmacy and allied health profession as a growth engine of the country especially in the health sector. Pharmaceuticals sciences are no longer just manufacturing or feeding of medicines but all-encompassing discipline that includes bio chemistry and bio technology. It has evolved as a discipline that can provide biological products and gene therapy-based products for the treatment of diseases. It is the domain that contributes to the development of newer

and novel molecular and genomics-based disease and diagnostics. Personalised medicines and precision medicine is yet another area that has emerged in pharmacy.

## **DPSRU that holds the distinction of being the first pharmaceutical sciences university in the country**

In March 2002, the Hon'ble Prime Minister while delivering the convocation address at Rashtriya Raksha University in Gandhinagar mentioned about the first pharmacy college of the country in Ahmedabad. This college brought the Indian pharmaceutical industry on the world map and India consistently remains the second or third position on the map in terms of medicines or volume. I would like to underline here the DPSRU that holds the distinction of being the first pharmaceuticals sciences university in the country has a special responsibility of excelling in its designated mandate. It should not spread itself thin by getting into activities and courses that are being taught and administered by other specialised institutions.

## **Innovation, Ingenuity and Invention**

Any attempt at dilution of your core competency in a big equipped to maleate what might act fashionable or deviating from your mandate or external pressures will only take you away from goal of excellence in your designated mandate. It is my considered opinion that in a field as important and relevant as pharmaceutical sciences your endeavour should be to extremely focus on fundamental research and quality education. To my mind innovation, ingenuity and invention should be your guiding charisma. The onus of this I must say lies on the management, faculty and administration of the university. During

COVID-19 pandemic two significant facts related to pharma sector emerged. First older belief that new vaccines take years to develop got nullified with unprecedented advancement in technologies. India not only successfully developed 4 vaccines but also successfully vaccinated over 2 billion people. Second, the traditional system of medicine especially the Ayurveda and Yoga emerged as major preventive and curative strategies in combating COVID 19. This lead WHO to recognize the system and choose India to be the global centre of traditional medicine. While i appreciate the linkages that DPSRU has with the industry I exhort you to further strengthen such collaboration for development of innovative products. I am pleased to know that DPSRU is striving to make a significant impact in the healthcare sector by training students to utilise application of advance technology. Invention that has generated in laboratories must be transmitted into the field to become agents of transformation. In this direction DPSRU has to come up with centre for precision medicines and pharmacy and is also to come up with centre of advance foundation development. These developments should be channelised to position Indian pharmacy industry among the top in the world.

### **Education towards Leadership**

Dear students I am aware that you made numerous sacrifices to obtain your degrees. However, I think it is crucial to acknowledge not only your efforts on this occasion but also the efforts of others who have helped you in your journey. Opportunity of higher education rarely come without it cost to the family of the students. The cost could be monetary. It could entail sacrifices in terms of time or involve the accumulation of the task that demand of a linear to concentrate on his or her studies. I wish to record my appreciation for all the parent present here today for having help your wards maneuver through these challenges. Similarly, the Vice Chancellor, Dean and faculty members deserve credit for the quality of education and training provided to the students. I would like to complement the faculty members who have assisted and guided these students throughout the academic year. This university is incredibly fortunate to have 8 faculty members including the Vice Chancellor among the top two percent of the world scientist in a list released by the Stanford university. Dear students as you pass out of portals of your Alma

mater, I urged you to become leaders who pledged to lead all from ignorance to truth, darkness to light and disease to health.

### **Education to Serve Society**

Don't flatter yourself with boundaries of circumstances and never let the spirit of inquisitiveness and thirst for knowledge die within yourself. Set target for yourself and do all possible to achieve them. There will be many challenges that you will face but with strong base of your education and upbringing and above all with ingenuity you will be able to overcome. You may plan to go for a profession into research or set your enterprises but in whatever you choose remember to give back to the society and help those who are marginalised less fortunate.

### **Conclusion**

It is the day of not only achievements but also aspirations. This degree is a decisive milestone of the path ahead where you will be contributing to self, family, society and the nation. You graduate today with the power of this degree and with your aspirations.

Invention that has generated in laboratories must be transmitted into the field to become agents of transformation. In this direction DPSRU has to come up with centre for precision medicines and pharmacy and is also to come up with centre of advance foundation development. These developments should be channelized to position Indian pharmacy industry among the top in the world.

Dear students! wherever life takes you don't forget to carry the honour of this university in your mind and magic of this community in your heart. I hope that you will stay connected with university and would contribute to its growth and development by building a strong alumni network.

I wish you all the very best in your future and I am also wishing you a very happy new year in advance.

And in last, I would like to underline,

“डिग्रियां तो पढाई के खर्च की रसीदें होती हैं,  
शिक्षा वही है जो आपका व्यवहार दर्शाता है” ।

Thank you

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## CAMPUS NEWS

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### **National Seminar on Opportunities and Challenges of New Education Policy—2020**

A two-day ICSSR sponsored National Seminar on ‘Opportunities and Challenges of New Education Policy—2020’ was organized by the Kanoria B.Ed. College, Mukundgarh, Jhunjhunu, Rajasthan on October 28-29, 2023. The event was an attempt to share and discuss the challenging issues, applicability, and implementation of NEP-2020, effectively in educational institutions across India. The seminar was attended by Principals, teacher educators, research scholars and prospective teachers from various states of the country. Convenor, Dr. (Ms) Manoj Jhahria, Principal of the host institution welcomed the gathering and gave a brief introduction of the theme of the event and talked about the rationale behind organizing the event on NEP—2020.

The seminar was inaugurated by the Chief Guest, Prof. Anil Kumar Rai, Vice Chancellor of Pandit Deendayal Upadhyaya (PDU) Shekhawati University, Sikar, Rajasthan. In his inaugural speech, he emphasized enhancing the skills, competencies, and expertise of all stakeholders of the country on the practical aspects of NEP— 2020. He stressed the need for an outcome-based and student-centric Indian education system. He also identified several issues that are currently plaguing our education system such as lack of teachers, inadequate funding, lack of technological equipment, poor creative ideas and other resources, etc. He stressed the need for teamwork and effective implementation of NEP—2020. He said that all subjects aren’t equal but interdisciplinary and trans-disciplinary research should be encouraged to bridge them together.

Prof. J D Singh, GV PG College of Education, Sangaria, Rajasthan delivered the Keynote Address. Delivering his address, Dr Singh threw light on the main features of the National Education Policy—2020 and its implementation. He discussed AI chatbots like ChatGPT, Bing and Bard that make learning personal and resources easier to access. The challenges emanate from modern technology, which has the potential to become an instrument of mass education. Challenges also emerge from globalization and the competitive nature of modern

societies. He highlighted the goal of education as the development of values, character, and ethics keeping in view the NEP—2020.

Mr. Ramesh Chaudhary, Deputy Commandant, BSF and Dr Sanjeev Jhahria, Research Director, PDU Shekhawati University, Sikar were the special guests of the inaugural session of the seminar. Dr D P Singh, General Secretary, FCRS, New Delhi and Prof. M Pareek, former Dean and Head, Department of Education, University of Rajasthan, Jaipur were the resource persons of the event.

Mr. Ramesh Chaudhary said that a sound education sector plays an important role in the economic growth and development of a nation. The younger generation of educators and teachers should emerge with accountability, better access, a clear vision, and strategic planning for the implementation of NEP—2020 and show the world the strength of their scientific and reflective thinking. Dr Sanjeev Jhahria emphasized the native language as the medium of interaction, pedagogy, flexible and experiential learning, critical and creative thinking, and assessment reforms and provisions for increased accessibility to quality education.

Dr D P Singh discussed how the framework of the National Education Policy—2020 is rooted in the Indian philosophical, social, and political thought tradition and focuses on multilingualism, an indigenous system of education and discussion-based pedagogy. Prof. M Pareek stated that there is a great need to reconstruct our educational system keeping in view the modern technologies to bring more quality in education. The main theme and sub-themes were deliberated in four sessions. Each session was chaired by experts who have done considerable work in the field of higher education.

Dr J D Singh also chaired the technical session and asked to adopt the New Education Policy in schools and higher education systems for quality enhancement. Dr Ashok Godara, Principal and former Dean, Faculty of Education, PDUS University, Sikar; Dr Rita Sharma, Principal, Shri Agrasen PG College of Education, Jamdoli, Jaipur and Dr Hawa Singh, Govt. Science College, Sikar were the guest speakers of this session. Dr Sandeep Mitharwal presented the report of the session in brief.

Dr D P Singh chaired the next session. The session highlighted the initiatives addressing online education, equitable tech access, and blended learning. Dr Ashok Mahala, Govt. Arts College, Sikar; Dr Bhuvesh Mahala and Dr Jagdish Karwasra were the guest speakers of this session. Dr Mahendra Singh presented the report of this session briefly.

Dr Rajendra Jhahria Singh, Principal, Bharti Girls Teachers Training College, Sikar chaired the next session and said that despite the growth of universities and colleges in India, the research and development scenario is still not encouraged enough and there is also a lack of patent culture seen in the country. Multidisciplinary education and tech integration were stressed in this session. Dr Beenu Shekhawat, Dr Vartika Singh and Dr Manoj Kulhar were the guest speakers of this session. The report of the session was presented by Dr Rakesh Kumar.

Dr Madhu Arya, Principal, Sabal Teachers Training College, Sikar Chaired another session. The session highlighted AI's educational paradigms, global growth, personalized learning, automation, and skill development for future employability. The session encapsulated NEPaligned holistic tech-driven education. Dr Anita Jhahria, Govt. College, Gudha, Dr Virendra Singh and Dr Ravi Bijarnia were the guest speakers of the session. Dr Dinesh Singh presented the report of this session briefly.

Dr. Surendra Singh, Govt. College, Jhunjhunu presided over the Valedictory Session and he spoke to adopt the New Education Policy in school and higher education system for quality enhancement. Technology Enhanced Learning with tools like computer-assisted learning, mobile apps, and PARAKH for holistic student assessment were introduced by the Chairperson. During the valedictory session, Dr. B D Sharma, Principal of Kanoria Degree College delivered the welcome address and introduced the guests of the session. Dr Manoj Kulhar, Principal, Govt. College, Malsisar; Dr Anita Jhahria, Principal, Govt. College, Gudha and Dr Rajendra Jhahria, Principal, Bharti Girls Teachers Training College, Sikar were the guests of the Valedictory Session. All guests expressed their views about the successful implementation of the NEP—2020.

A few participants expressed their experiences with the seminar. Participants provided their feedback and appreciated the organizers for identifying suitable resource persons. Mr. Rakesh Kumar co-convended the Seminar and proposed the Vote of Thanks to all

the guests, speakers, participants, session chairs and organizing committee for making the event more successful.

### **National Seminar on Elimination of Violence against Women**

A two-day National Seminar on 'Elimination of Violence against Women: Issues and Challenges' is being organized by the Department of Population Studies, Annamalai University, Tamil Nadu from January 04-05, 2024.

Violence against women in its various forms is a violation of human rights, the very nature of which deprives women of their ability to enjoy fundamental freedoms. It is a serious obstacle to equality between women and men and perpetuates inequality. Violence against women intersects with multiple forms of discrimination. Violence against women remains hidden in the culture of silence. Violence against women has consequences for women's health and well-being. Besides, it carries a heavy human and economic cost, hinders development. There is a need to break the silence and ensure that violence against women is not just a woman's issue but primarily a political, social, economic and cultural issue that concerns men as well. The topics of the Event are:

- Global Scenario of Violence against Women.
- International Efforts to Eliminate Violence against Women.
- Violence against Women and Children.
- Early, Child and Forced Marriage.
- Human Trafficking and Forced Prostitution.
- Intimate Partner Violence.
- Sexual Harassment and Abuse at the Workplace.
- Violence against Women and Human Rights.
- Street Harassment and Acid Attacks.
- Cyber Crimes.
- Violence against Women and Law.
- Image of Women in the Media.
- Sexual Abuse and Rape.
- Eve-teasing and Molestation.
- Any Other Related Topics.

For further details, contact Organising Secretary, Dr. K Ajeesh Kumar, Assistant Professor, Department of Population Studies, Annamalai University, Chidambaram, Tamil Nadu-608002, Mobile No: 099527 98759, E-mail: [violenceagainstwomen2024@gmail.com](mailto:violenceagainstwomen2024@gmail.com). For updates, log on to: [www.annamalaiuniversity.ac.in/conf\\_upcoming.php](http://www.annamalaiuniversity.ac.in/conf_upcoming.php)

## **International Conference on Intelligent Data Communication Technologies and Internet of Things**

A three-day International Conference on 'Intelligent Data Communication Technologies and Internet of Things' is being organized by the REVA University, Bengaluru from January 04-06, 2024. The event may provide a forum for sharing knowledge and results in all fields of Data Communication and IoT. It provides quality key experts who provide an opportunity to bring up innovative ideas. The Topics of the Event are:

### **Data Engineering**

- Data Mining and Knowledge Discovery.
- Data Visualization and Interactive Data Exploration.
- Artificial Intelligence and Data Analysis.
- Data Models, Semantics, Query languages.
- Data Integration and Interoperability.
- Search and Information Extraction.
- Data Privacy and Security.
- Multimodal Data Analysis.
- Data Classification and Regression.
- Deep Learning for Big Data Analysis and Mining.
- Predictive Modelling and Analytics.
- Stream Data Processing.
- Big data Systems Modelling, Analysis, and Simulation.

- Data-driven Feature Learning and Pattern Recognition.
- Advanced Data Mining and Machine Learning Techniques.
- Workflows, Scientific Data Management.

### **Internet of Things**

- Big data and IoT Data Analytics.
- Machine-to-Machine (M2M) Networks.
- Artificial Intelligence for IoT.
- Distributed Machine Learning for IoT.
- Industrial IoT and Cyber Physical Systems.
- Semantic Computing Technologies and IoT.
- Quality of Data/Service/Experience.
- Intelligent IoT Networks and Communications.
- Control and Decision Making for Smart IoT.
- Mobile Cloud Computing (MCC) and IoT.
- Heterogeneous Networks and the Web of Things.
- Software Defined Network (SDN) and IoT.
- Blockchain and Emerging Technologies for IoT.
- Smart Cities and Internet of Vehicles.
- Social Networks and Multimedia Computing.
- Security and Privacy for Intelligent IoT Models.

For further details, contact Dr. H Anwar Basha, Assistant Professor, School of Computer Science and Engineering, REVA University, Bengaluru-560064, Mobile No: +91-9940789252 E-mail: [iciciconfhelpdesk@gmail.com](mailto:iciciconfhelpdesk@gmail.com). For updates, log on to: [www.reva.edu.in/events/](http://www.reva.edu.in/events/)

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## **AIU News**

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### **Faculty Development Programme on Bridging Boundaries**

A five-day Online Faculty Development Programme on 'Bridging Boundaries: Exploring Multidisciplinary Research' was jointly organized by the Association of Indian Universities (AIU) – Academic and Administrative Development Centre (AADC), Shri Vaishnav Vidyapeeth Vishwavidyalaya (SVVV), Indore from October 16-20, 2023. Around thirty-eight participants across India were registered for the event. The Inaugural Session commenced with the blessings of Maa Saraswati followed by the welcome of the guests. The session began with the Welcome Address by Dr. K N Guruprasad, Director, Shri Vaishnav Institute of Science, Dean, Faculty of Science (including Forensic Science), Dean, Faculty

of Agriculture, SVVV Indore. Dr. Guruprasad addressed participants by saying that multidisciplinary research is a convergence of ideas, methodologies, and expertise from various disciplines, and it encourages collaboration and exchange of knowledge among researchers from diverse backgrounds. He highlighted the importance of multidisciplinary research in finding innovative and holistic solutions to complex issues.

Nodal Officer, Dr. Anand Rajavat, Dean, Academic, SVVV briefed about the programme and its relevance. He gave a brief outline of the programme and requested all the participants to enrich their knowledge by active participation. He said that the objective of the event is to elevate the expertise, capabilities, and impact of research within an educational institution. He also mentioned the need for collaboration and

partnerships between institutions to strengthen research and academic excellence.

The guest on the occasion, Prof. Ashok Aima, Former Vice Chancellor, Central University of Jammu, Jammu and Distinguished Chair Professor, School of Management (MIET-Jammu), delivered the Presidential Address. Prof. Aima discussed the challenges and opportunities in multidisciplinary research and the need for collaboration and integration of different disciplines. He highlighted the importance of aligning education with national priorities and the need for research to be applicative and impactful. The inaugural session concluded with the Vote of Thanks by Dr. Pragya Jaroliya, Professor and Coordinator, SVSM, SVVV, Indore.

Dr. K N Guruprasad, Director, Shri Vaishnav Institute of Science, Dean, Faculty of Science (including Forensic Science) Dean, Faculty of Agriculture, SVVV Indore delivered his talk on the topic 'Introduction to Trans-disciplinary Research'. He focused on focus on the examples of ozone depletion and global warming to highlight the need for interdisciplinary approaches in addressing these issues.

Resource Person, Dr. Santosh Rangnerkar, Professor, Department of Management Studies, IIT Roorkee discussed the importance of incorporating theory into case study analysis and provided examples of research papers that used case studies to analyze various topics. He highlighted the advantages of case studies, such as providing solutions to research problems. He delved into the process of identifying resources for case study analysis. He emphasized the need to connect the case study with a particular theoretical concept and discussed the importance of analyzing competitors in the industry.

The session on 'Research Design' was conducted by Dr. Vipin Choudhary, Professor and Head, Department of Marketing Prestige, Institute of Management and Research, Indore. He outlined the procedures required to gather information to address a specific research problem and covered the basics of research design, different research types, qualitative research methods, observational research, and strategies to minimize bias in research.

The session on 'Sampling Techniques' was handled by Dr. Sher Singh Bhakar, Group Director, Trinity Group of Institutions Prestige Education Foundation. Dr. Singh explained the concepts of

population distribution, sample distribution, and sampling distribution. He also discussed the formula for computing sample size and the factors to consider when determining sample size.

The next session was on 'Measurement and Scaling' handled by Dr. Vipin Choudhary Professor and Head, Department of Marketing, Prestige Institute of Management and Research, Indore. He explained that measurement involves assigning numbers or symbols to characteristics of an object, while scaling involves creating a continuum range for measured objects. He cited examples of measurement and scaling in everyday life such as measuring time and using scales to measure various aspects.

Dr. Mala Shrivastava, Director, SVSM, SVVV, Indore delivered a talk on the topic 'Review of Literature'. The resource person provided an in-depth and comprehensive overview emphasizing the importance of Systematic Literature Reviews (SLRs) in the research process. Dr. Sher Singh Bhakar, Group Director, Trinity Group of Institutions Prestige Education Foundation addressed the session on 'Writing for Leading Journals' and provided insights into the crucial process of selecting the right journal for research publication. The speaker emphasized that selecting the right journal involves a balance between impact factor, publication time, and the match between the journal's scope and your research. This decision plays a vital role in the dissemination and recognition of your work.

The session conducted by Dr. Mala Shrivastava revolved around experimental research and the methods used for data collection and analysis. She covered topics related to different research methods and designs, emphasizing the trade-offs between internal and external validity in experiments, as well as the application of qualitative research techniques for understanding people's experiences and opinions.

The programme ended with the Valedictory Session. The report of the event was presented by Coordinator, Dr. Navajyothi Subedar. Dr. K N Guruprasad delivered the concluding remarks. Valuable insights and opinions about the event were shared by the participants during the feedback session. The Vote of Thanks was proposed by the Coordinator, Dr. Pragya Jaroliya, Professor and the event ended with the National Anthem. □

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# THESES OF THE MONTH

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## SOCIAL SCIENCES

A List of doctoral theses accepted by Indian Universities  
(Notifications received in AIU during the month of Oct-Nov, 2023)

### Business Administration

1. Lovika. **Designing a framework for relating leadership style with decision making and performance: An empirical study on family business of Punjab, India.** (Dr. S C Bose and Dr. Ravi Kiran), School of Humanities and Social Sciences, Thapar Institute of Engineering and Technology, Patiala.

### Commerce

1. Agarwal, Vipul Kumar. **A study of consumer behaviour: With special ref. to mobile phone consumer of Hapur District.** (Dr. Jatin Yadav), Department of Commerce, Bhagwant University, Ajmer.
2. Chauhan, Priya Jitendrabhai. **An analytical study of pharmaceutical companies by using value added statement and economic value added.** (Dr. Falguni C Shastri), Department of Commerce, Saurashtra University, Rajkot.
3. Manasa, C T. **A study on green initiative practice of select IT industries in Bengaluru.** (Dr. Kundan Basavaraj), Department of Commerce, Kuvempu University, Shankaraghatta.
4. Panchasara, Reena Kalubhai. **A comparative study of financial performance evaluation of selected non-life insurance companies of India.** (Dr. Falguni C Shastri), Department of Commerce, Saurashtra University, Rajkot.
5. Pawar, Manisha Dnyanoba. **Impact of cashless transaction system on consumer's of urban co-operative banking in Nanded District.** (Dr. B S Wankhede), Faculty of Commerce and Management, Swami Ramanand Teerth Marathwada University, Nanded.
6. Raja Narendra, Tumati Raja. **Attitudes and intentions of undergraduate students towards entrepreneurship as a career option in Oman.** (Prof. NVR Jyoti Kumar), Department of Commerce, Mizoram University, Aizawl.
7. Shete, Nagesh Panchakashari. **A study of financial discrimination in urban and rural people regarding poverty and growth in Marathwada Region.** (Dr. Chavan Ashok), Faculty of Commerce and Management, Swami Ramanand Teerth Marathwada University, Nanded.

8. Vaikos, Prajakta Digambar. **Total quality management initiative in supermarket: With special emphasis on customer relationship management in Maharashtra.** (Dr. Roshankumar M Bhigania and Dr. Nishikant Warbhuvan), Faculty of Commerce and Management, Swami Ramanand Teerth Marathwada University, Nanded.

### Economics

1. Amente, Gemechu Getahun. **The nexus between social capital and rural households welfare: A study in Eastern Wollega Zone, Ethiopia.** (Dr. Nila Chotai), Department of Economics, Jain University, Bangalore.
2. Chauhan, Hetalben Hirjibhai. **A study of infrastructure in Saurashtra Region since 2010 reference to Rajkot District.** (Dr. C K Mehta), Department of Economics, Saurashtra University, Rajkot.
3. Lalrinkima. **Economic analysis of public healthcare system in Mizoram.** (Prof. Lalhriatpuii), Department of Economics, Mizoram University, Aizawl.

### Education

1. Avasthi, Deepak Kumar. **Gandhi ke buniyadi shiksha evam atamnirbhar Bharat: Ek adhyayan.** (Dr. Ranjita Baid), Department of Education, IASE Deemed University, Sardarshahr.
2. Aziz, Eram. **Teachers perception in relation to constructivism oriented TPACK framework.** (Prof. Mohd Muzahir Ali), Department of Education, Al-Falah University, Faridabad.
3. Bhavana. **Mahavidyalayi istar par yog shiksha ka kishore vidhyarthiyaon par prabhav va abhivriti ka adhyayan: Churu Jile ke vishesh sandarbh mein.** (Dr. Praveen Sharma), Department of Education, IASE Deemed University, Sardarshahr.
4. Dubey, Shashi. **Madhyamik istar ke vidyarthiyaon ke tanav ka unki shaikshnik uplabdhi par prabhav ka adhyayan.** (Dr. R K S Arora), Department of Education, Bhagwant University, Ajmer.
5. Goyal, Preeti. **A study of effect of values and adjustment on scholastic achievement of students at secondary level.** (Dr. Kalinidi Lal Chandani), Department of Education, Bhagwant University, Ajmer.

6. Joshi, Manali. **Comparative study of effectiveness of cooperative learning strategies in synchronous and asynchronous mode of online learning.** (Dr. Jayashree Shinde), Department of Educational Technology, S.N.D.T. Women's University, Mumbai.
  7. Kavita Rani. **Career maturity among senior secondary school students in relation to their emotional intelligence, academic achievement and self - efficacy.** (Dr. Amisha Singh), Department of Education, Kurukshetra University, Kurukshetra.
  8. Kshirsagar, Ujjwala Shashikant. **Balkanchya mofat va saktichya shikshanvishyak kayadyantargat pravesht ghetlaelya vidyarthyaichi shaikshanik sadayisthitivatyanchya shaikshanik samasyanchya abhyas.** (Dr. Gautam Londhe), Department of Education, S.N.D.T. Women's University, Mumbai.
  9. Lal, Anubhav Samuel. **A research study on correction regarding self-concept and behavioral issue of adolescents.** (Dr. Neeru Verma and Dr. S P Tripathi), Department of Education, Bhagwant University, Ajmer.
  10. Lalrinsangi, Rosy. **Perceptions of college teachers and students on the semester system in undergraduate college of Mizoram.** (Prof.H Malsawmi and Dr. Lalmuanzuali), Department of Education, Mizoram University, Aizawl.
  11. Nayi, Dineshkumar Pasabhai. **A study of impact of Pragna project on writing and calculating ability of the students of standard 2nd.** (Dr. Nilesh B Gajjar), Department of Education, Bhagwant University, Ajmer.
  12. Puppala, Ramulu. **Problem solving ability in mathematics of secondary students in relation to their attitude towards mathematics mental health and mathematics anxiety in Adilabad District: A study.** (Dr. D M Mugale), Department of Education, Swami Ramanand Teerth Marathwada University, Nanded.
  13. Raval, BharatKumar Prahaladbhai. **An effectiveness of Astanga yoga programme on the achievement of the students studying in standard 9th.** (Dr. Nilesh B Gajjar), Department of Education, Bhagwant University, Ajmer.
  14. Sharma, Prachi. **Prathmik shiksha par samajik paryavaran shikshak aur chatroan kee santushti aur chatre aatam sankalpana-ke prabhav ka ek adhyayan.** (Dr. R K S Arora), Department of Education, Bhagwant University, Ajmer.
  15. Sharma, Satya Prabha. **Shikshan kee kahani Vidhya ka vidhyarthiyoan ke jeevan mulyoan par prabhav ka adhyayan.** (Dr. Ranjita Baid), Department of Education, IASE Deemed University, Sardarshahr.
  16. Tabassum, Seema D. **Effectiveness of Multimodel Mathematics Teaching Strategy (MMTS) on academic achievement, interest and attitude towards mathematics among secondary school students.** (Prof. S S Patil), Department of Education, Kuvempu University, Shankaraghatta.
- Journalism & Mass Communication**
1. Dholakia, Jeet Deepakbhai. **Study on the status and role of media education in Gujarat: In the context of government and private university courses.** (Dr. Sonal Pandya), Department of Mass Communication and Journalism, Gujarat University, Ahmedabad.
  2. Dhillon, Navdeep. **Effect of communication style and personality on communication effectiveness: A comparative study of faculty of technical and non technical institutions.** (Dr. Gurvinder Kaur), School of Humanities and Social Sciences, Thapar Institute of Engineering and Technology, Patiala.
- Law**
1. Chemmalar, S. **Compassionate appointments in Indian public sectors: Case study on the State of Tamil Nadu and Union Territory of Puducherry.** (Dr. Sumana Vedanth and Dr. S S Swaminathan), Department of Law, SRM University, Kattankulathur, Chennai.
  2. Fatima, Begun. **A critical study on the role of judiciary in enforcement of State responsibility.** (Dr. Sanjaya Choudhury and Dr. Binu N), Department of Law, Bhagwant University, Ajmer.
  3. Gurjer, Ramdev. **Rajasthan Kashatkari Adhiniyam tatha bhumi sambandhi aney vidhiyoan ke tehat khatedari adhikaroan ka vishleshnatamak adhyayan.** (Dr. Dushyant Kumar), Department of Law, Bhagwant University, Ajmer.
  4. Keerthi, T. **Intellectual property law in India: A critical analysis.** (Dr. Sanjaya Choudhury and Dr. Binu N), Department of Law, Bhagwant University, Ajmer.
- Library & Information Science**
1. Deka, Manashjyoti. **Sentiment analysis of Open Educational Resources (OER) videos on You Tube: A study.** (Dr. Amit Kumar), Department of Library and Information Science, Mizoram University, Aizawl.
  2. Kamble, Balaji Abhimanyu. **Content analysis of UGC-CARE list of journals in the subject of Library and Information Science.** (Dr. Shivaji N Sontakke), Department of Library and Information Science, Swami Ramanand Teerth Marathwada University, Nanded.
  3. Kapoor, Deepak Kumar. **Design and development of an institutional repository on educational research**



**and training with reference to NIE (NCERT), New Delhi: A conceptual model.** (Prof. Pravakar Rath), Department of Library and Information Science, Mizoram University, Aizawl.

4. Pathak, Tribeni. **Web presence of central university libraries in India: Content and design trend analysis.** (Prof. Manoj Kumar Verma), Department of Library and Information Science, Mizoram University, Aizawl.

#### Management

1. Abraham, Mathew K. **A study on responsible, risk integrated adoption of smart grid technology by residential consumers- Indian context.** (Dr. George Easaw), Department of Management, Alliance University, Bengaluru.
2. Dharani, K. **Determinants on the usage of mobile shopping applications based on consumer decision making styles.** (Dr. P S Rajeswari), Department of Management Studies, SRM University, Kattankulathur, Chennai.
3. Gaikar, Pravin Sukhadeo. **Analytical study of pomegranate marketing in Maharashtra.** (Dr. Jatin Yadav), Department of Management, Bhagwant University, Ajmer.
4. Indumathi, R. **Examining antecedents and consequents of electric car adoption: The impact on environment sustainability.** (Dr. George Easaw), Department of Management, Alliance University, Bengaluru.
5. Lalmuanpuii, Rosie. **Economic empowerment of women through entrepreneurship: A case study of Aizawl, Mizoram.** (Prof. Elangbam Nixon Singh and Dr. Lalropuii), Department of Management, Mizoram University, Aizawl.
6. Muni Kumar, P Lokesh. **A study on consumer behavior towards dairy and softdrink beverages with special reference to Chittoor District.** (Dr. M Vijaya Bhaskar Reddy and Dr. T Narayana Reddy), Department of Management, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu.
7. Murarka, Pallavi. **Study of MSD among pharmaceutical packing workers: Redesigning of workstation.** (Dr. Manjit Kaur Chauhan), Department of Family Resource Management, S.N.D.T. Women's University, Mumbai.
8. Nag, Debarati. **Psychological capacities influence on work engagement and thriving at work: A study on employees in select services organizations.** (Dr. Harold Andrew Patrick), Department of Management, Jain University, Bangalore.
9. Nandhini, S. **Analysis of employee retention through happiness quotient in luxury hotels.** (Dr.

K. Santhanalakshmi), Department of Management Studies, SRM University, Kattankulathur, Chennai.

10. Preeti Kumari. **A study on impact of information technology in business decisions: With reference to selected service sector organizations.** (Dr. P R Dadhich), Department of Management, Bhagwant University, Ajmer.
11. Rajan, S Rathinavel. **A study on employee engagement of middle and junior level employees with special reference to automotive and automotive component manufacturing industries in and around Chennai.** (Dr. N Santhosh Kumar), Department of Management, SRM University, Kattankulathur, Chennai.
12. Rajini, K S. **Skilling the migrant workers for enhanced employability: Need and importance of skill development initiatives.** (Dr. H R Venkatesha), Department of Management, Jain University, Bangalore.
13. Sharma, Gunjan. **Talent management practices and its impact on employee retention.** (Dr. Sulochna Syal), School of Management, Bahra University, Solan.
14. Tolulope, Oke Timothy. **Determinants of online purchasing behaviour: An empirical study of consumer goods in Nigeria.** (Dr. T Ramachandran), Department of Management Studies, SRM University, Kattankulathur, Chennai.
15. Vaishnavi, V. **Impact of MC Gregory's relational theory factors on the psychological contract fulfillment of police officials.** (Dr. K Santhanalakshmi), Department of Management Studies, SRM University, Kattankulathur, Chennai.

#### Physical Education & Sports

1. Sakthivel, S. **Isolated and combined effect of wobble board and SAQ training on selected bio motor variables and playing ability among university men volleyball players.** (Dr. K Vaithianathan), Department of Physical Education, Yoga and Sports Sciences, SRM University, Kattankulathur, Chennai.
2. Yoga Lakshmi, P. **Isolated and combined effect of super brain yoga and yogic practices on selected physiological, psychological and biological variables of college students.** (Dr. K Vaithianathan), Department of Yoga, SRM University, Kattankulathur, Chennai.

#### Political Science

1. Biddu, Temesgen Mendo. **Ethnic diversity and Federalism in Ethiopia: A study of development from 1995-2018.** (Dr. Sonam Mansukhani), Department of Political Science, Jain University, Bangalore.

2. Govindiya, Mahipatbhai Gobarbhai. **Indo-Nepal relations: In reference to Indian foreign policy.** (Dr. Kirpalsinh K Parmar), Department of Political Science, Saurashtra University, Rajkot.
3. Hegde, Bhaskar. **Negotiating morality and public ethics: A case study of corruption in BBMP.** (Dr. Sandeep Shastri), Department of Public Policy & Governance, Jain University, Bangalore.
4. Mengistu, Worku Sendek. **Human resource management and employee motivation in Federal ministries of Ethiopia.** (Dr. Anita Walia), Department of Public Policy & Governance, Jain University, Bangalore.
5. Nissar, Rukhsiya. **Empowerment of the Muslim women with special reference to the Central Kashmir's District Budgam.** (Dr. Vishnu Kumar), Department of Political Science, Bhagwant University, Ajmer.
6. Rashid, Gawhar. **India Bangladesh relations issues and recent developments with special reference from 1999 to 2019.** (Dr. Vishnu Kumar), Department of Political Science, Bhagwant University, Ajmer.

7. Soni, Nilima. **Women's political empowerment in pre and post-independence period of India.** (Dr. Sunita Sinha), Department of Political Science, Bhagwant University, Ajmer.

#### Psychology

1. Anitha, B. **Adolescent Cancer: An explorative study of personal experience.** (Dr Sherin Antony), Department of Psychology, Jain University, Bangalore.
2. Sailo, Lalthantluangi. **Well-being of the elderly Mizos as a function of social participation, family relations and stress.** (Prof. H K Laldinpui Fente), Department of Psychology, Mizoram University, Aizawl.

#### Social Work

1. Murugan, C. **Prevalence of presumptive pulmonary tuberculosis among residents of homeless shelters in Chennai Corporation.** (Dr. M Logaraj and Dr. B S Ramakrishna), Department of Social Work, SRM University, Kattankulathur, Chennai.

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### NATIONAL INSTITUTE OF TECHNOLOGY, ARUNACHAL PRADESH

(An Institute of National Importance, Under Ministry of Education, Govt. of India)

**Admission to Ph. D Programme Jan-June, 2024**

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Sd/- Dean (Academic)

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Padmashri Dr. G. G. Jadhav Mahavidyalaya,  
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(Affiliated to Shivaji University, Kolhapur)  
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SR. NO.	CADRE	SUBJECT	Total No. of Posts	CATEGORY
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02.	PROFESSOR	Management	01	01-OPEN
03.	ASSOCIATE PROFESSOR	Management	02	02-OPEN
04.	ASSISTANT PROFESSOR	Finance	03	03-OPEN
		Human Resource	03	03-OPEN
		Operation Research	03	03-OPEN
		Marketing	03	03-OPEN
		Information Technology	03	03-OPEN

● The above posts are open to all, however candidates from any category can apply for the post.  
● Reservation for women as per University Circular No. BCC/16/74/1998 dated 10th March, 1998, 4% reservation shall be for the persons with disability as per University Circular No. Special Cell/ICC/2019-20/05 dated 05 July, 2019. ● Candidates having knowledge of Marathi will be preferred. ● The Educational qualifications, Experience & pay scale for the posts of Director, Professor, Associate Professor, Assistant Professor are as prescribed by the COA & University of Mumbai, AICTE & DTE from time to time. ● Please refer the University Circular No. महामातृ / विश्वविद्यालय / तंत्रिका/११/२०२०-२०२१ दिनांक ११ जानेवारी २०२१ for qualifications and experience at the time of interview. ● Applicants who are already employed must send their applications through proper channel. ● Applicants are required to account for breaks, if any in their academic career. ● The details of the qualifications pay-scale & allowance will be supplied on request from applicants. ● Applications with full details should reach to the Chairman, Mahatma Education Society's Pillai HOCL Educational Campus, Rasayani, Tal.- Khalapur, Dist.-Raigad - 410207, within 15 days from the date of publication if this advertisement.  
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01.	PRINCIPAL	-	01	01-OPEN
02.	PROFESSOR	Architecture	03	03-OPEN
03.	ASSOCIATE PROFESSOR	Architecture	06	06-OPEN
04.	ASSISTANT PROFESSOR	Architecture	08	08-OPEN
05.	ASSISTANT PROFESSOR	Fine Art	02	02-OPEN
06.	ASSISTANT PROFESSOR	Humanities	02	02-OPEN
07.	ASSISTANT PROFESSOR	Civil Engineering	02	02-OPEN
08.	LIBRARIAN	-	01	01-OPEN

● The above posts are open to all, however candidates from any category can apply for the post.  
● Reservation for women will be as per University Circular No. BCC/16/74/1998 dated 10th March, 1998. 4% reservation shall be for the person with disability as per Circular No. Special Cell/ICC/2019-20/05 dated 05 July, 2019. ● Candidates having knowledge of Marathi will be preferred. ● The Educational Qualifications, Experience and pay scale for the posts of Principal, Professor, Associate Professor, Assistant Professor and Librarian are as prescribed by the COA & University of Mumbai, AICTE & DTE from time to time. ● Please refer the University Circular No. AAMS(UG)/178 OF 2021-22 dated 25th February, 2022 for qualifications and experience at the time of interview. ● Applicants who are already employed must send their applications through proper channel. ● Applicants are required to account for breaks, if any in their academic career. ● Applications with full details should reach to the Chairman, Mahatma Education Society's PILLAI COLLEGE OF ARCHITECTURE, Dr. K. M. Vasudevan Pillai Campus, Sector-16, New Panvel - 410206, within 15 days from the date of publication if this advertisement. Sd/-  
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**MINORITY INSTITUTE (Unaided)**  
Applications are invited for the following posts from the Academic Year 2023-2024.

SR. NO.	CADRE	SUBJECT	Total No. of Posts	CATEGORY
01.	PROFESSOR	Architecture	03	03-OPEN
02.	ASSOCIATE PROFESSOR	Architecture	08	08-OPEN
03.	ASSISTANT PROFESSOR	Civil Engineering	02	02-OPEN
04.	ASSISTANT PROFESSOR	Humanities	02	02-OPEN
05.	ASSISTANT PROFESSOR	Fine Art	02	02-OPEN
06.	ASSISTANT PROFESSOR	Architecture	14	14-OPEN
07.	LIBRARIAN	-	01	01-OPEN

● The above posts are open to all, however candidates from any category can apply for the post. ● Reservation for women will be as per University Circular No. BCC/16/74/1998 dated 10th March, 1998. 4% reservation shall be for the person with disability as per Circular No. Special Cell/ICC/2019-20/05 dated 05 July, 2019. ● Candidates having knowledge of Marathi will be preferred. ● The Educational Qualifications, Experience and pay scale for the posts of Professor, Associate Professor, Assistant Professor are as prescribed by the COA & University of Mumbai, AICTE & DTE from time to time. ● Please refer the University Circular No. AAMS(UG)/178 OF 2021-22 dated 25th February, 2022 for qualifications and experience at the time of interview. ● Applicants who are already employed must send their applications through proper channel. ● Applicants are required to account for breaks, if any in their academic career. ● Applications with full details should reach to the Chairman, Mahatma Education Society's PILLAI HOC COLLEGE OF ARCHITECTURE, Pillai HOCL Educational Campus, Rasayani, Tal.-Khalapur, Dist.-Raigad - 410207, within 15 days from the date of publication if this advertisement. Sd/-  
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Candidates having knowledge of Marathi will be preferred.

**“Qualification, Pay Scales and other requirement are as prescribed by the UGC Notification dated 18<sup>th</sup> July 2018, Government of Maharashtra Resolution No. Misc-TAAS(CT)/ICD/2018-19/1241, dated 26<sup>th</sup> March, 2019 and revised from time to time”. The Government resolution & circular are available on the website: [mu.ac.in](http://mu.ac.in).**

Applicants who are already employed must send their application through proper channel.

Applicants are required to account for breaks, if any in their academic career.

Application with full details should reach the **SECRETARY, Vidyalankar Dnyanpeeth Trust's Vidyalankar School of Information Technology, Vidyalankar Educational Complex, Vidyalankar College Marg, Wadala (E), Mumbai-400037 within 15 days** from the date of publication of this advertisement. **This is University approved advertisement.**

Sd/-  
Secretary



**Inter University Centre for Teacher Education (IUCTE),**

**Banaras Hindu University, Varanasi**

Tel. : (0542) 2368823, Email: [recruitment@iucte.ac.in](mailto:recruitment@iucte.ac.in),

Website: <https://www.iucte.ac.in>

Advertisement No. 01/2023 -2024, Non-Vacation Academic Post(s)

**IMPORTANT DATES:** Last Date for Online submission of Application form along with Application Fee payment & Application Forms PDF download: **08.01.2024.**

Last date for submission of hard copy of downloaded application form along with all the enclosures: **16.01.2024 up to 05:00 PM.**

A non-refundable Application Fee of Rs. 1000/- through online from the candidates of UR, EWS and OBC categories under shall be charged. No application fees shall be charged from the candidates of SC, ST, PwDs categories and Women candidates. The application fee is to be paid through the payment gateway by online Internet Banking/Debit Card/Credit Card/UPI etc.

Name of Post	Post Code	Academic Level	Pay Matrix
Professor	1001 to 1003	Academic Pay Level-14	Rs. (1,44,200-2,18,200)
Associate Professor	2001 to 2006	Academic Pay Level-13A	Rs. (1,31,400-2,17,100)
Assistant Professor	3001 to 3002	Academic Pay Level-10	Rs. 57,700-1,82,400
Post Code	Name of the Post with Specialization		No. of the Posts
1001	Professor (Computer/ICT in Education)		01 UR
1002	Professor (Education/Higher Education Policy/ Vocational Education)		01 UR
1003	Professor (Open to All Subjects)		01 UR
2001	Associate Professor (Pedagogy of Language)		01 UR
2002	Associate Professor (Computer Applications/ ICT/ Educational Technology)		01 UR
2003	Associate Professor (Education)		01 UR
2004	Associate Professor (Pedagogy of Sciences)		01 OBC
2005	Associate Professor (Management)		01 UR
2006	Associate Professor (Pedagogy of Mathematics)		01 UR
3001	Assistant Professor (Commerce/ Management)		01 UR
3002	Assistant Professor (Pedagogy of Humanities/ Social Sciences)		01 SC

For details please visit IUCTE, BHU website.

**Dr. J. J. Magdum Trust's,  
Dr. J. J. MAGDUM COLLEGE OF ENGINEERING  
Shirol-wadi Road, (Agarbhag), JAYSINGPUR – 416 101 (Dist- Kolhapur)  
(AFFILIATED TO SHIVAJI UNIVERSITY, KOLHAPUR)**

**WANTED**

Applications are invited from eligible candidates for the following post:

Sr. No.	Designation & Subject	Total Vacant Post	Open Post
01	PRINCIPAL	01	01

**NOTE:**

- Educational Qualifications, Pay Scales and Service Conditions are as prescribed by the Apex body, Govt. of Maharashtra and Shivaji University, Kolhapur from time to time.
- Appointment to the post of Principal will be for a period of 5 years from the date of appointment or up to the attainment of the age of superannuation of the candidate, whichever is earlier.
- Reservation of SC/ST Categories is interchangeable as per Govt. GR dated 05.12.1994.
- Relaxation of 5 % will be provided from 55% to 50% of the marks at the Master's Degree level for SC/ST category.
- Reserved category candidates are advised to send a copy of their application to the Deputy Registrar, Special Cell, Shivaji University, Kolhapur – 416004.
- Reserved category candidates outside the State of Maharashtra will be treated as Open Category Candidates.
- Reservation of female/disabled persons will be decided by appointing authorities.
- Reserved category candidates shall produce the Caste Validity Certificate as per the directives issued by the State Government vide Circular No.BCC-2011/Pra. Kra 1064/2011/16-B dated-12-12-2011.
- Please note that the recruitment procedure initiated by this advertisement subject to decision by Hon. Bombay High-Court, Aurangabad Bench on Writ Petition No. 12051/2015.
- Applicants who are already in service they should apply through proper channel.
- Incomplete application will not be entertained.
- Apply giving full particulars **within 15 days** from the date of publications of this advertisement to the undersigned.

**JAYSINGPUR**  
Dated-07<sup>th</sup> December, 2023

**(Dr. VIJAY J.MAGDUM)**  
**CHAIRMAN**

**Shree Om Namah Pratishthan's  
RAMJI PAWAR B.ED. COLLEGE  
Tadmugli, Tq. Nilanga, Dist. Latur**

**WANTED**

Applications are invited for the post of Principal & Perspective in Education , Pedagogy Subjects, Health & Physical Education and Performing Arts to be filled in Ramji Pawar B.Ed. College, Tadmugli, Tq. Nilanga, Dist Latur (B.Ed. Permanent Non Granted), run by Shree Om Namah Pratishthan's, Tadmugli Tq. Nilanga, Dist. Latur (Maharashtra). Eligible Candidates should submit their application along with all necessary documents **within fifteen days** from the date of the Advertisement by registered post only. The reserved category candidates are to send copy of application to the Assistant Registrar, Special Cell, S.R.T.M. University, Nanded -431606.

Sr. No.	Name of Post	Position	Qualification	No. of Posts	Reservation
1	Principal	----	M.A.M.Ed./M.Sc. M.Ed./ Ph.D. (Education) & 10 Years Teaching Experience	01	Unreserved
1	Assistant Professor	Perspective in Education	M.A.M.Ed./M.Sc. M.Ed./ NET/SET/PH.D. (Education)	02	Open – 03
2	Assistant Professor	Pedagogy Subject (Math., Science, Social Science, Language)	M.A.M.Ed./M.Sc. M.Ed./ NET/SET/PH.D. (Education)	04	SC – 01
3	Assistant Professor	Health & Physical Education	M.A/M.Sc./M.P.Ed. NET/SET/PH.D.	01	ST – 01
4	Assistant Professor	Performing Arts (Music/Dance/Theatre) Fine Art	M.A Fine Art, M.A.Music. NET/SET/PH.D.	01	VIA – 01
					OBC – 01
					EWS – 01

**Qualification:** As per UGC & NCTE (2014 Rule)

**Assistant Professor:**

- Good academic record are 55% marks at P.G. Degree level and SET/NET/Ph.D. Degree pass as per UGC Regulations 2009.

**Scale and Allowance :** As per the Norms of UGC, State Government & SRTM University, Nanded.

**Note :**

- Prescribed Application form is available on University Website: ([www.srtmun.ac](http://www.srtmun.ac))
- No T.A/D.A will be paid to attend the interview.
- Eligible candidates those who are already in services should submit their application through proper channel.
- 3% Reservation for handicapped and 30% for women candidates.
- All attested Xerox Copies of certificates and other relevant document should be attached to the application form.

**Address for Correspondence:**

Shree Om Namah Pratishthan's  
Ramji Pawar B.Ed. College Tadmugli  
Tq. Nilanga Dist. Latur.(Maharashtra)  
Pin- 413522 Mob - 9822017184, 9223345821.

Sd/-  
Secretary  
Shree Om Namah Pratishthan's Tadmugli



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- ❖ **FACULTY OF MANAGEMENT:** Marketing | Finance | OB&HR | Decision Science | Systems & Operations, Management | Business Analytics | General Management | Logistics & Supply Chain Management | Entrepreneurship & New Venture Creation
- ❖ **FACULTY OF ENGINEERING:** Information Science | Computer Science | Aerospace | Civil | Mechanical | Electrical & Electronics | Electronics & Communication | Food Technology | Computer Science & IT | Animation and Virtual Reality | Data Analytics & Mathematical Science
- ❖ **FACULTY OF CREATIVITY & DESIGN**
- ❖ **FACULTY OF SCIENCES:** Biochemistry | Zoology | Botany | Physics | Chemistry | Nanotechnology | Forensic Science | Mathematics | Statistics | Psychology | CSIT | Biotechnology | Microbiology  
*Specializations under Biotechnology & Microbiology*  
Natural compounds for Cancer therapy | Nano biotechnology & tumor modeling | Bioremediation of industrial effluents, soil and water | Plant pathology | Oxidative stress biology | Antimicrobial resistance, AMR genes | Stem cell biology and regenerative medicine | Plant biotechnology | Algal bioactive compounds, antioxidants | Agricultural microbiology, environmental microbiology | Industrial enzymes | Diabetes research
- ❖ **FACULTY OF HUMANITIES & SOCIAL SCIENCES:** Public Policy & Governance | Journalism & Mass Communication | Design & Visual Art | English | Economics | Sociology | Kannada | Hindi | Sanskrit  
*Performing Arts & Cultural Studies | Music | Dance | Jain Studies | Buddhist Studies*
- ❖ **SCHOOL OF ALLIED HEALTHCARE AND SCIENCES (SAHS)**  
Specializations under Nutrition and Dietetics: Macronutrient and micronutrient requirements | Clinical nutrition | Nutritional epidemiology - Nutrition interventions & Nutrigenomics | Food science and technology Public health nutrition Core allied health | Clinical research and drug discovery | Enzymes and its applications in health care | Pharmacology and Novel Therapeutic targets | Nanotechnology and Cancer therapeutics | Medical Microbiology, Cancer Biology & Bioinformatics.
- ❖ **INNOVATION AND ENTREPRENEURSHIP**

For details on selection process, Eligibility, Fill online application forms, visit [www.jainuniversity.ac.in](http://www.jainuniversity.ac.in). Contact no: 080-43430400

**LAST DATE TO APPLY: 25.12.2023**

- Director, CRTA

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SHIKSHAN PRASARAK MANDAL Regulated

**KANKAVLI COLLEGE, KANKAVLI****Vidya Nagar, College Road, Kankavli, Dist. Sindhudurg - 416602**

APPLICATIONS ARE INVITED FOR THE FOLLOWING POSTS

FROM THE ACADEMIC YEAR 2023-24

**AIDED**

Sr. No.	Cadre	Subjects	No. of Posts	Total No. of Posts	Post Reserved for
1.	Assistant Professor	Physics	01	10	01-SC, 01-ST, 01-NT (C), 01-NT (D), 03-OBC 02-EWS, 01-OPEN
2.	Assistant Professor	Mathematics	02		
3.	Assistant Professor	Chemistry	02		
4.	Assistant Professor	Marathi	01		
5.	Assistant Professor	Accountancy	01		
6.	Assistant Professor	Microbiology	03		

**The advertisement is approved subject to the final decision in the Writ Petition No.12051/2015.**

The posts for the reserved category candidates will be filled in by the same category candidates (Domicile of State of Maharashtra) belonging to that particular category only.

Reservation for women will be as per **University Circular No. BCC/16/74/1998 dated 10<sup>th</sup> March, 1998**. **4% reservation shall be for the persons with disability as per University Circular No. Special Cell/ICC/2019-20/05 dated 05<sup>th</sup> July, 2019**. Candidates having knowledge of Marathi will be preferred.

**“Qualification, Pay Scales and other requirement are as prescribed by the UGC Notification dated 18<sup>th</sup> July, 2018, Government of Maharashtra Resolution No.Misc-2018/C.R.56/18/UNI-1, dated 8<sup>th</sup> March, 2019 and University Circular No. TAAS/(CT)/ICD/2018-19/1241, dated 26<sup>th</sup> March 2019 and revised from time to time.” The Government Resolution & Circular are available on the website [www.mu.ac.in](http://www.mu.ac.in)**

Applicants who are already employed must send their application through proper channel.

Applicants are required to account for breaks, if any in their academic career.

Candidates belonging to reserved categories should send two Xerox copies of their application along with the attested copy of the Caste Certificate to the Deputy Registrar, Special Cell, University of Mumbai, Mumbai - 400 032.

Application with full details should reach the **CHAIRMAN, Shikshan Prasarak Mandal, Vidya Nagar, College Road, Kankavli, Dist. – Sindhudurg - 416602** within 15 days from the date of publication of this advertisement. **This is University approved advertisement.**

Sd/-  
**CHAIRMAN**

Shikshan Prasarak Mandal, Kankavli,  
Prof. Dr. Mrs. Rajashri S. Salunkhe (M.Sc.,Ph.D)