



Enriching teacher education institutions for promoting sustainable development: A case study

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Abstract

The importance, desirability and intent for integration of Education for Sustainable Development (ESD) have been emphasized in the National Education Policy, NEP 2020. The updating of knowledge, understanding and imparting constructive disposition to teachers and teacher educators is urgently needed so as to enable and ensure their positive contribution towards education for sustainable development at all levels. The education has been recognized as the most powerful tool to accrue the desired changes in the society. The teachers and teachers' preparation institutions are at the heart of building knowledge society enlightened for advancing the vision and to move forward towards achieving sustainable development. The teacher education institutions (TEIs) are providing academic and other resource support at grass root level to promote education at all levels through formal and informal modes. These institutions could play significant role with positive impact to address ESD related concerns and issues in their operating regions. However, these institutions will need to be enriched in terms of physical facilities, adequate preparation of faculty/teacher educators and creation of appropriate linkages with other concerned institutions for continuity and appropriate engagements.. In this context, it is appropriate to enrich Teacher Education Institutions (TEIs) for promoting Sustainable Development Goals (SDGs) as articulated by the UNESCO. The relevant support and intervention shall bring the SDGs in the consciousness of teacher educators, teachers and the learners at early stages of school education which shall enable learners to facilitate learning about, learning through and learning for the achievement of the SDGs. The enrichment of the teaching and activities shall enable teaching professionals and the learners to contribute and create critical mass to ensure creation and sustenance of lasting transformation. While the efforts for realizing different SDGs shall be continuing, the TEIs could provide institutional mechanism as driver of transformation to support ESD goals with local, national actions with global vision.

Keywords: sustainable development (sd); sustainable development goals (sdgs); teacher educator; education for sustainable development (esd); teacher education institutions (teis); diet; sustainable development goal, sdgnational education policy, nep, 2020

Introduction

“*Vasudhaiva Kutumbakam*” is an ancient phrase expressed in Sanskrit, meaning “the world is one family” that signifies our concept of world the thinking and approach of India towards life and our mutual dependence in their global manifestation. The facilities and problems that are emanating with the advent of science, technology and industrialization are bringing the world rapidly closer with efficient and effective networking. The inclusive development with appreciation of future dimension or the sustainability has been receiving worldwide attention and actions by different national and international agencies and organizations. In the year 2000, the UN General Assembly adopted eight Millennium Development Goals (MDGs) to address development challenges on global scale. The MDGs which were to be achieved by 2015 consisted of eradication of extreme poverty and hunger; achieving universal primary education; promoting gender equality and empowering women; reducing child mortality; improving maternal health, combating HIV/AIDS, malaria, and other diseases; ensuring environmental sustainability and developing a global partnership for development. However, the efforts for achieving MDGs assigned higher priority to poverty eradication, and gave little attention to environmental and sustainability concerns with considerable scope to solve problems of and due to development. In 2002, the ‘World Summit on Sustainable Development’ held in

Johannesburg, South Africa agreed that sustainable development is essential for people, planet and prosperity. In continuation, the ‘UN Decade on Education for Sustainable Development’ was observed during 2005-2014. In addition, ‘UNESCO Global Action Programme on Education for Sustainable Development’ to support the global endeavour “to initiate and intensify activities at all levels and in all areas of education to accelerate the process towards sustainable development” (UNESCO Roadmap for Implementing the Global Action Programme on Education for Sustainable Development, 2014), is being implemented till 2019, expected to be continued for a further period of five years. While the goal driven mechanism for MDGs is continuing, the United Nations Agenda 2030, containing 17 Sustainable Development Goals (SDGs), has been unanimously adopted by the 193 member states on 25th September 2015, with 169 defined targets.

The SDGs are a vision for global development and transformation with sustainability. Quality education is the foundation of sustainable development, and therefore, of the Sustainable Development Goals. As a policy intervention, education does the multifaceted task of enabling self-reliance, boosting economic growth by enhancing skills, and improving people's lives by opening up opportunities for better livelihoods. Thus, the fourth SDG states to “*Ensure Inclusive and Equitable*

Quality Education and Promote Lifelong Learning Opportunities for All". The Sustainable Development targets for 2030 for this goal call for ensuring the completion of primary and secondary education by all boys and girls, and equal access to opportunities for access to quality technical and vocational education for everyone. Policy interventions will require improving access and improving quality, as well addressing relevant obstacles, which include gender inequalities, food insecurity, and armed conflict etc.

The SDG 4 for Quality Education has seven main targets. Education should not only be sustainable, but also be in support of development with sustainability. The target 4.7 expresses commitment that "by 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, which among others, include education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development."

Education for sustainable development (ESD) means integrating the "future" as a specific dimension of our learning and teaching. The mechanisms to build a sustainable future must play a central role in education processes by defining competencies as active engagement for knowledge and values. It needs to be appreciated that competencies are not only to be communicated, but are to be assimilated and developed by individuals or groups. The critical competencies for SD include Critical thinking competency; Systems thinking competency; Anticipatory competency; Normative competency; Integrated problem-solving competency; Strategic competency; Collaboration competency and Self-awareness competency (UNESCO (2017) ^[3]).

Moreover, other SDGs, like Good Health and Well-being, Gender Equality, Clean Water and Sanitation, Reduced Inequalities, and Peace, Justice and Strong Institutions, can also be considered while looking at the aspect of quality education. These goals include ensuring healthy lives and promote well-being for all at all ages, achieving gender equality and empowering all women and girls, ensuring availability and sustainable management of water and sanitation for all, reducing inequalities related to income, age, gender, disability, race, ethnicity, origin, religion or economic status, promoting peaceful and inclusive societies for sustainable development, as well as providing access to justice for all and build effective, accountable and inclusive institutions at all levels.

The studies and reports of different UN agencies and Organizations engaged with the MDGs and the SDGs indicate that India has adopted the MDGs and the SDGs, and is engaged in the efforts towards achieving these goals. Therefore, it is important to incorporate appropriate inputs in the teachers training programmes in the form of curriculum, textbooks, teaching-learning material, curricular and co-curricular activities and fieldwork and professional practice to consciously equip our teachers and teacher educators for advancing education for sustainable development.

Ways to Enrich TEIs for Promoting Sustainable Development: A Case Study of the District Institutes of Education and Training, DIET, Sehore, MP)

The District Institutes of Education and Training (DIETs) were established in India as resource centers for providing guidance to

educational institutions and schools in each district, along with having activities and programmes aimed at preparing teachers to support expansion of education in the country. In pursuance of NPE, 1986 and POA, about 607 DIETs have been created in different States and UTs as academic resource support institutions at district level for the success of various strategies and programme being undertaken in the areas of elementary and adult education through formal and informal modes. They work as a platform for research and developmental work in the domain of education. They organize programmes to train teachers towards innovation and action research in actual field conditions. The DIETs are engaged in providing academic and other resource support at grass root level to promote elementary education through formal and non-formal modes. The relevant support and intervention in TEIs (DIETs) shall bring the SDGs in the consciousness of learners and the teachers at early stages of school education and shall enable learners to facilitate learning about, learning through and learning for the achievement of the SDGs. The enrichment of the teaching and activities shall enable teaching professionals and the learners to contribute and create critical mass to ensure lasting transformation. While the efforts for realizing different SDGs shall be continuing, the DIETs could provide institutional mechanism as driver of transformation to support ESD goal with global vision with actions at district level.

Methodology

The work was executed in a participatory manner in an environment of confidence, trust and objectivity with focus on enhancing the capability of DIET, selected for the work. The DIET Sehore has been selected for appropriate academic resource support under the project "Enriching TEIs for Promoting Sustainable Development". The functionaries e.g. faculty members and other individuals concerned with the functioning of DIET have been encouraged to share information through meetings, discussion, interviews, observations and structured questionnaire. The case study method was adopted in which strengths; weaknesses, opportunities, and threats (SWOT) analysis has been done to identify the major concerns in the institution with regard to education for sustainable development. The following steps have been initiated to identify the strengths, weakness, and opportunities for academic interventions in DIET Sehore:

- Following tools/instruments were developed to collect the data and information for S-strengths, W-weaknesses, O-opportunities and the T-threats (SWOT) analysis in respect of DIETs for understanding the status of ESD. These instruments help in identification of the strengths and weakness, and also to identify opportunities and areas of possible threats for academic and other related interventions in the institution:
- Questionnaire
- Focus Group Discussion
- Observation Schedule
- Checklist for students
- Analysis of D. El. Ed. syllabus with regard to ESD/SDGs
- Meeting with State and District functionaries.
- Identified the gaps for improvement
- Development of Action Plan for Implementation

The data was collected through the questionnaire developed for the purpose. It contains 14 sections which include Section-1:

General Information; Section- 2: Organisational Structure of Institution;Section-3: Human Resources; Section- 4: Sources of Funds and Financial Support;Section-5: Physical Resources; Section- 6: Indoor Environment; Section- 7: Energy- Availability &Usage;Section-8: Water; Section- 9: Waste Handling in the Premises;Section-10: Transportation; Section- 11: Curriculum; Section- 12: Networking; Section- 13: Safety and Security and Section- 14: Biodiversity After the collection of data through questionnaire, it was analysed to see the availability of various resources and the utilisation of these resources in the Institution. After analysing the questionnaire focus group discussion was carried out with the faculty members and non-academic staff in the DIET on various aspects and data was verified through observation schedule. The student teachers were also asked to give their views through a checklist. It was then followed by preparation of an action plan in which necessary suggestions and recommendations were given on the potential areas for improvement to make the DIET a sustainable campus. The SWOT analysis served as a foundation for suggesting an action plan.

General Profile of the DIET Sehore, MP

The DIET, Sehore is situated in Alahada Khedi village in Sehore Tehsil of Sehore District in Madhya Pradesh. The DIET was established in 1989 and started functioning in 1990. The State

Council of Educational Research and Training is the controlling authority of DIET, Sehore. The institution offers Diploma in Elementary Education (D.El.Ed.) course which is a recognised professional programme in teacher education. The course is of two years duration which includes academic activities covering theory and practice of teacher education. The DIET has been dedicated to the preparation of teachers for the elementary stage of education i. e. classes I to VIII. There are all seven functional units in the DIET. The campus is spread over 10 acres of land. It has four buildings which includes two academic buildings where all the regular classes and educational activities take place. There are two hostels, one each for girls and boys. Out of the four buildings, three are of double storied.

Strengths and Weaknesses, Threats and Opportunities (SWOT) for the DIET and suggested Action points for ESD

After getting the data, the collected data were triangulated and analysed to find out the uniqueness of the institute. The DIET Sehore has been the academic resource unit in the District. Since its inception, the institute has its strengths and weaknesses and has to overcome the treats and avail opportunities to fulfill the assigned role. These parameters are being given covering different aspects of the institute:

Physical Resources

Table 1

Strengths	<p style="text-align: center;">Presence of following infrastructure facilities:</p> <ul style="list-style-type: none"> ▪ 4 classrooms, 1 lab, 2 multipurpose halls in which art & craft and health & physical education resource centre are included, 1 library, 1 curriculum laboratory, 1 computer lab, 1 principal’s office, 1 staff room, 1 administrative office, 1 store room, open space for parking, ½ acre multipurpose field, Separate and equal number (05) of toilets for male and female student teachers; Separate toilets for male and female staff ▪ For differently-abled: Ramps, and provision of writer for blind people
Weaknesses	<p style="text-align: center;">Absence of following facilities:</p> <ul style="list-style-type: none"> • Canteen, Common rooms for male and female student teachers, toilet facility for PWD persons, only 3 washrooms had hand washing facilities, not a single toilet had dustbin <ul style="list-style-type: none"> • Poor maintenance of infrastructure/physical facilities <ul style="list-style-type: none"> ▪ All the classrooms and labs were not cleaned ▪ Poor Hygine – poorly maintained and un-usable Toilets in Institute ▪ Computer lab needs appropriate inputs as it was found unfunctional
Opportunity	<ul style="list-style-type: none"> ▪ Willingness of existing human resources to improve the existing condition of infrastructure ▪ Willingness and support of the Government agencies at District and State Level for desirable enrichment and improvement in DIET ▪ Support of the National Level Organizations like NCERT to provide support to overcome the deficiencies and improve functioning and the performance. ▪ The opportunity to identify monetary and non-monetary resources like intellectual inputs, administrative and managerial inputs and participation of stake holders etc with the participation of institute, District level functionaries and the NCERT project team. This will also help to arrange identified resources subsequently and to take the efforts further
Threats	<ul style="list-style-type: none"> ▪ Man-power and financial constraints

During the observation, it was found that the existing physical facilities were being inadequately maintained. All the rooms were found be dusty and unkept. Although there were four classrooms in the insituion however, only one classroom was found funtional which also had furniture in it. Rest of classrooms didn’t have any furniture. Funiture and equipments in all labs and rooms were not organised or arranged properly for their intended use. Lab equipments were not attended regularly, lot of dust was found on the working tables. The existing conditions of the rooms and labs were indicating that they were rarely being utilized There was one computer lab in which none of the computers were functional.

Further, it was observed that the room was not well kept and poorly ventilated. It was appearing to be more like a store room, which shows that the room itself may not have remained functional for students.

The institution had a library, however, the facilities and space are not comensurate with expectation to serve the available strength of the students. It was also observed there were no furniture for students to sit and read in the library. In addition, the steel boxes which are used to store books and other reading matierls, had so much dust on it – may be recently procurred to preserve the books and ither material. However, this practice keeps the material out

of sight of the library users. The Library seemed to be a showpiece which was not being utilized by the students. There is need of conscious effort to functionalise it. On being asked about the reason for the poor condition of existing infrastructure, staff of the institution reported that it is due to lack of human and financial resources. However, existing human resources can be used to maintain the infrastructure as it was observed that both students and teachers were willing to cooperate in improving the existing condition. Retrofitting of the infrastructure is required in order to improve and functionalise the existing condition.

Action Suggested

- There are 5 washrooms/toilets in all in the premises. It could be appropriate that out of these at least one toilet may be reserved and modified for being accessible and usable by the persons with disability.
- A wash basin may also be provided outside the washrooms for hand wash. The PWD or PIO may be approached for the purpose. The Physical Education Centre could be upgraded

and minimally partition may be created for this purpose. The space could be furnished with provision of bed, almirah and a few chairs for convenience of all concerned.

- The up keeping of the computers in the IT/computer laboratory is important. The periodic cleaning could be planned. Similarly, the defective facilities could be replaced/repaired and use of licensed software and its periodic updation could be taken up. The antivirus protection needs to be addressed on priority.
- The institution has enough land measuring about half an acre. This may be put to multipurpose use judiciously to develop outdoor games’ courts and demonstration activities related to SD/ESD.
- A suitable place may be allocated for canteen facility and a suitable vendor may be entrusted for operating the canteen with defining a set of norms for operation

Human Resources

Table 2

Strengths	<ul style="list-style-type: none"> ▪ Qualified and skilled teaching staff ▪ 200 student teachers
Weaknesses	<ul style="list-style-type: none"> ▪ Half of the academic posts have been filled against sanctioned posts ▪ No permanent cleaner has been appointed in the institute ▪ No supporting staff is available ▪ No permanent administrative staff is available
Opportunity	<ul style="list-style-type: none"> ▪ The availability of financial and human resources can considerably improve the aesthetics and functioning of the institute with positive impact on performance.
Threats	<ul style="list-style-type: none"> ▪ The mind-set of status quo ▪ Transferable or temporary staff without continuity ▪ Lack of motivation in the role holders in the institute ▪ Lack of planning budgetting of resources with futuristic vision of the needs of the institute

The sanctioned strength of the institute include two basic units of 50 students in each of the 1st and 2nd year, 14 faculty members and 11 other non-teaching staff have. In 1990, when the D.El.Ed. Course was introduced; the students’ intake was 50. In 2014, the students’ intake was raised to 100. The working hours of the institute are from 10:45 AM to 04:55 PM. During discussions, it was revealed that against the 14 sanctioned posts of academic faculty, institution has actual strength of only seven faculty members.

The available strength of seven faculty members includes two senior lecturers; one lecturer; three junior lecturers; and one principal. All of the faculty members hold the qualification as specified in NCTE norms and standards. It was further reported that there is no permanent employee that has been appointed for occupying non-academic staff posts.

Action Suggested

- Essential staff (mainly the subject experts) may be appointed on temporary basis using the available institutional funds or funds provided by state.

- The safai karamcharies may be motivated to clean the premises on regular basis. The assessment of cleaning work needs to be assessed for proper upkeep of inside and outside premises. If appropriate, the cleaning work may be outsourced. Or employees could be taken on deputation and paid from the DIET funds or any other funding mechanism which may include approaching PMs Cleanliness project with proper objectives and plan.
- Student teachers can be involved as resource to support and enhance the existing condition of upkeep of the institution.

Maintenance

- A joint responsibility of trainees, faculty and the non-teaching staff could be entrusted to maintain the physical facilities
- A monitoring team may be constituted with faculty as well as trainees as members with well-defined areas of their activities and support.

Indoor Environment

Table 3

Strengths	<ul style="list-style-type: none"> ▪ Sufficient natural day light in all rooms ▪ There is provision for natural ventilation in most of the rooms ▪ Surrounding of the institution is calm and peaceful
Weaknesses	<ul style="list-style-type: none"> ▪ No provision for making surroundings comfortable with respect to its temperature in summer <ul style="list-style-type: none"> ▪ Dust free chalk are not being used ▪ Window glass is not glare free ▪ Furniture is not ergonomically designed ▪ Maintenance is inadequate
Opportunity	<ul style="list-style-type: none"> ▪ Opportunity for promoting plantation and greenery in the campus ▪ Participation of people in the upkeep and cleanliness of institute ▪ Make the place exemplary to impart learning about serving environment in the local conditions and resources <ul style="list-style-type: none"> ▪ Avail and provide support in promoting social forestry in area
Threats	<ul style="list-style-type: none"> ▪ It is difficult to incorporate/ change building design features ▪ The maintenance of greenery needs services of skilled staff ▪ Support of Social forestry department may be irregular/inadequate

The institution surroundings are calm and peaceful despite that it is located on the main connecting road. However, the road is not currently very busy. Majority of students also expressed the same view about the institution being peaceful. The classrooms were painted in the light color. There were three windows and one door in each of the classrooms. The windows were on the opposite side of the door. The size of the windows and doors were appropriate according to the size of the classrooms and thereby ensuring the adequacy of natural lighting and air ventilation. However, it was observed that the window frames were made of iron without being painted which caused corrosion and also window glasses were not glare free. It was reported by both faculty and students that the rooms get very hot and cold during summer and winter seasons respectively. Curtains were being used during summers to reduce the heat from outside. However, no efforts have been made to reduce the cold during winter season. Further, it was felt that there should be two doors in each of the classrooms to minimize the hustle.

Although it was informed by the staff that classrooms were being cleaned twice in a day. However, during the observation, the classrooms were found to be very dirty. Additional to that there were poor organization of furniture as per the size of the classrooms as there was no space in between the furnitures for teachers to move in the classrooms. Wooden benches were being used for student teachers which was not ergonomically designed. Some of the benches were broken and still functional for student teachers. Each classrooms had three to four LED lights fixed on the roof of the classroom. There were six fans in each of the classrooms which are sufficient as per the size of the classrooms. It is difficult to include passive building design features into the existing building. Further, it was reported by the staff members in the institution that dust-free chalk are being used. However, discrepancy was observed in this regard as lot of chalk dust was found near the blackboard of each of the classrooms.

Action Suggested (Institution environment)

- Plants may be placed all over the campus
- Area near to the boundary wall can be used for planting small trees and flowering shrubs
- The waste water from wash basins and toilets may be diverted through pipes in to these plants.
- Spaces near the hostel and other vacant places may be converted into kitchen garden

Action Suggested (classroom environment)

- Presently, furniture is not ergonomically designed, it should be highlighted enough so that while purchasing furniture in future, it should be one of the major criteria
- Window glasses may be made glare free by pasting butter paper on them
- Dust free chalks may be purchased for use in class. If possible, dust free chalk making activity may be organized for the trainees as a part of their work experience activity.

Maintenance

- The responsibility of maintaining the plants may be distributed among the teacher trainees. They should own the responsibility of watering them. Credits may be awarded for this purpose
- The manure obtained from the compost pits may be used for these plants.
- A joint responsibility should be of trainees, faculty and the non-teaching staff to maintain the furniture, library, etc.
- Strict rules should be made to fulfill all the purpose and all the people in DIET should be made aware of the rules. Such rules may be displayed on the walls of the rooms and verandahs in the form of posters or cartoons

Energy

Table 4

Strengths	<ul style="list-style-type: none"> ▪ Adequate availability of natural lighting ▪ There is provision for natural ventilation; ▪ Surrounding of the institution is very calm and peaceful ▪ LED Lights are being used in the institute
Weaknesses	<ul style="list-style-type: none"> ▪ No regular monitoring and maintenance of existing fittings fixtures ▪ No strategy in place to safely dispose of the used CFLs
Opportunity	<ul style="list-style-type: none"> ▪ Rooftop of existing four buildings can be utilized to install solar panels from where solar energy can be harvested (on-site renewable energy)

	<ul style="list-style-type: none"> ▪ Government solar policies can be utilized on harnessing solar energy ▪ Environmental consciousness may lead to switch over to LEDs in the future ▪ The institute may become exemplary centre /exhibit in the use of solar/wind/other form of renewable energy
Threats	<ul style="list-style-type: none"> ▪ Financial constraints ▪ Linkages with Government agencies to support efforts of Institute ▪ Unsafe disposal of CFLs may prove to be an environmental threat.

The institution gets 24 hours electricity supply. The building design supports use of daylight which ultimately reduces the load on artificial lighting. However, conventional sources of energy are being utilized for meeting the requirement of electricity thereby contributing to greenhouse gas emissions. As mentioned earlier, curtains are being used to prevent heating during summer which is also reducing the load on cooling system. Along with that LED lights are being used for artificial lighting. It was informed by the institution that electricity consumption is the highest during summer season because of the high cooling demand which is being met by fans, refrigeration and water cooler. It was further found that none of the electrical appliances are Bureau of Energy Efficiency (BEE), star rated except LED lights. Also, regular monitoring and maintenance of the appliances is not being done which is very important for ensuring the continuous functionality and efficiency of these appliances. The institution can adopt renewable sources (non-conventional) of energy on-campus. The rooftop of the existing four buildings can be utilized to install solar panels. The Government has made renewable energy policies and support system through which

panels can be installed at much lower cost. These policies can be utilized to harness the solar energy. However, in spite of these subsidies’ installation cost is still high for the institute.

Action Suggested

- Fused CFL bulbs may be given for recycling to E-waste recyclers along with other non- biodegradable wastes
- Electricity auditing with an objective of reducing electric bills
- A number of solar panels may be installed at the roof tops. The solar energy tapped this way can also be used in the academic building, kitchens of the hostel and the canteen

Maintenance

- Proper maintenance of fittings may be ensured with the involvement and motivation of an electrician
- Follow the procedure prescribed by Ministry of New and Renewable Energy and Bureau of Energy Efficiency

Water

Table 5

Strengths	<ul style="list-style-type: none"> ▪ Water needs are being met through tube well and water tanker. <ul style="list-style-type: none"> ▪ Tube well is situated on campus ▪ Water in tankers up to of 20 KL is being bought <ul style="list-style-type: none"> ▪ Usage of drip irrigation is possible
Weaknesses	<ul style="list-style-type: none"> ▪ No supply of water from municipal bodies <ul style="list-style-type: none"> ▪ No waste water is treated ▪ During summer the availability is irregular and quality may be poor
Opportunity	<ul style="list-style-type: none"> ▪ Drip irrigation can be used as part of student teachers learning system ▪ Rainwater harvesting structure can be made which can be directed towards the well to preserve the water ▪ Waste water treatment facilities can be created to treat the waste water generated from various sources; treated water can be used for landscaping / irrigation purposes
Threats	<ul style="list-style-type: none"> ▪ Financial constraints in the installation and servicing of rainwater harvesting system ▪ No supply of water by local municipal bodies in the foreseeable future

The requirement of water was being met through two sources, i.e. water tank (throughout the year) and tube well (during only for 5 months). Water was not being supplied by local Municipal bodies. So that the institute has to buy and store water in the tanks. The teachers and students reported that the water was sufficient for all purposes; be it drinking, washing, flushing, bathing (hostel students), and watering plants. On being asked about the quality of water, principal responded that the quality of water was never checked. However, the institution was using a RO to provide safe drinking water. It was further informed by the principal that student Teachers collectively donated for the RO. When asked about the any water conservation and efficient practices have been adopted by the insittuion, principal responded that drip irrigation is being used for watering the plants. No other practices have been adopted and initiated to ensure water efficiency and conservation.

Action Suggested

- Water management is the need of the hour to overcome problem of water scarcity,
- Water auditing may be done with the objective of identifying the amount of water required and reducing the wastage of water,
- Rainwater harvesting structures can be installed,
- Improvised system of water harvesting may be adopted by connecting the rain water pipes and making the water collect into the tube well,

Maintenance

- Proper maintenance of fittings may be ensured on regular basis,
- Indication or signage may be used for making student teachers and other staff aware about the importance of water conservation and efficiency,

Waste Management and Cleanliness

Table 6

Strengths	<ul style="list-style-type: none"> ▪ Separate toilets for male & female staff and student teachers
Weaknesses	<ul style="list-style-type: none"> ▪ No toilet facility for PWD students ▪ No segregation of waste ▪ One dustbin in the entire building ▪ Paper waste is not being recycled
Opportunity	<ul style="list-style-type: none"> ▪ Paper waste that is being generated can be recycled outside campus ▪ Segregation of compostable waste and its utilization ▪ To evolve a system to cleanliness in the institute
Threats	<ul style="list-style-type: none"> ▪ Accidental leakage/spill of hazardous waste from laboratories during storage ▪ Availability of skill and staff for the purpose

There were 15 toilets in the entire institution, five each for male and female student teachers, four for male staff and one for female staff. None of them was for PWD. It was informed by head of the institution that all toilets were cleaned once in a day and dustbin is kept inside the toilets. It was observed that although toilets attached to principal room was clean. However, student teachers toilets were not being cleaned frequently which was also reported by students. The water closets were not in usable condition and clogged with dust and dirty water. Not a single dustbin was found in any of the classrooms, labs, hostel rooms and toilets. There were only one single each large and small dustbin for the entire building.

There was no soap for handwash. On being asked about the reason for the present condition, teacher replied that there is no permanent cleaner in the institution however, when some kind of event takes place in the institution, one cleaner is hired on the Temporary basis. It was further reported that no segregation of waste was being carried out in the institution. Waste was being disposed off personally by the institution. The waste was dumped in a pit which was situated out of the city in a outer area plant. It was informed by the students and teachers that there were no waste management practices have been adopted in the institution.

Action Suggested

- There should be two types of dustbins– blue for non-biodegradable waste and green for biodegradable waste
- Use of plastics should be discouraged
- One-two compost pits may be dug at suitable corners of the piece of land where all the compostable waste of the DIET is dumped for conversion into useful manure
- All the wastepaper of DIET (newspapers, answer sheets, other used paper sheets) and the waste of blue dustbins may be sold to a kabadiwala or authorized recyclers.
- Craft or creative work can be done out of waste materials (paper mash, Dustbin can be made, etc.) which can be a part of SUPW (Socially Useful Productive Work).

Maintenance

- Posters or signage may be made on three R’s (Reduce, Reuse and Recycle) of waste management,
- Waste in any form may be reduce, reuse and recycle. Above all it must be refuse,
- Projects in the form of electronic format in order to go paper free,

Transportation

Table 7

Strengths	<ul style="list-style-type: none"> ▪ Provision for parking space
Weaknesses	<ul style="list-style-type: none"> ▪ Area in which DIET is located is not well connected to main link road. This may result in an increase in the use of private transport
Opportunity	<ul style="list-style-type: none"> ▪ Sense of safety and security on the active connections to main road
Threats	<ul style="list-style-type: none"> ▪ Crowd and Emissions may rise in future

It was informed by the institution that there is open space for parking which was also supported by the observation. On being asked about whether the institution encourage students’ teachers and staff members to commute through environment friendly transit system (walk/bicycle/public transport/car-pooling/efficient fuel), principal responded that there is no such encouragement have been done yet.

Action Suggested

Rewards may be given in the form of trophies, certificates, etc. for the use of shared transport facilities/carpools

Security and Safety Aspects

Table 8

Strengths	<ul style="list-style-type: none"> ▪ CCTV cameras are installed ▪ ID cards/badges for scholars have been issued
Weaknesses	<ul style="list-style-type: none"> ▪ Entry from ther than the main gate.
Opportunity	<ul style="list-style-type: none"> ▪ Increasing safety and security awareness ▪ The participation of all stake holders in designing the system
Threats	<ul style="list-style-type: none"> ▪ Lack of interest and motivation ▪ Availability of gadgets ▪ Skill of concerned staff in safety and security

District Institute of Educational and Training is situated on the main road of the Sehore, Alahada Khedi, Madhya Pradesh. The institution had four concrete buildings. It was informed about the security measures that institution has in place that there is a security guard (gate keeping), CCTV cameras, and ID cards provided to student teachers. No register has been maintained for the outsiders' entry and regarding disaster management, no evacuation procedures was displayed. It was reported by the student teachers that no training or awareness programs have been done regarding the issues of safety and security and its mitigation which was contrary to what principal informed. Four sand filled iron tub were there which was supposed to use if fire occurs or approach to the building however, this facility was not available in hostel. There was no fire alarm system and fire extinguisher in the institution. On being asked about the reason, teacher replied that fire extinguisher was there in the institution before but it got expire after six months, so after that installation didn't take place

Action Suggested

- Trainees may be oriented in various safety precautions including various disasters.
- Women safety issues should be highlighted
- Various life-threatening diseases should also be included in this training program

Networking

It was informed by the institution that no networking has been done with any kind of institutions; be it schools, governmental bodies, NGOs and business enterprises to address the social, environmental, cultural, economic and political issues.

Action Suggested

- All the organizations should be approached to enrich the existing conditions of DIET

Curriculum

It was reported by the staff members and students that the institution works for six days in the week and the running time was 6 hours 10 minutes on every working day. The Time Table reflected that assembly is conducted between 10:45 am to 11:00 am. The first period starts at 11 am and each period is of 40 minutes duration. The syllabus and time table of D.El.Ed. Reflected that one period of teaching of environmental studies (EVS) was made mandatory. On being asked about the activities which have been conducted by the institution which address social, environmental, economic, cultural, and political concerns, it was informed that only plantation as an activity has been done under environmental component.

In syllabus, sustainable development as an individual concept was not dealt explicitly. The social, environmental and cultural component has been addressed partially. The findings indicated a desperate need for viewing and constructing the curriculum comprehensively with the view of sustainable development.

Action Suggested

- Though we cannot modify the curriculum at present, we can always add various activities that may be easily linked to the curriculum and promote education for sustainable development
- Curriculum is to be connected with each aspect for the institution
- Annual calendar should be made which will depict the activities related to ESD
- Teaching learning strategies: Experiential learning
- Storytelling
- Experiential Learning
- Enquiry learning
- Appropriate assessment
- Future Problem Solving
- Learning outside the classroom
- Community Problem Solving
- Awareness and sensitization programs may be organized on the basis of the collected ideas so that a slow and effective attitudinal change takes place modifying the behaviors of all stakeholders in the positive direction

Conclusion

Mostly the activities that are being conducted in DIETs do not have long-term vision and display lack of consistency, sustenance and connection between the classroom teaching learning and that of ESD in holistic view. The teacher educators lack systematic and holistic awareness and understanding about sustainable development and Education for Sustainable Development. There is need to address ESD as a holistic concept and practice and it should not be treated in isolation from the regular teaching learning. The separation of teaching-learning from the ESD practices will create gaps in understanding of SD and ESD. There is lack of coordination among different stakeholders in relation to SD and ESD which is partly due to the fact that subsequent to implementation of NEP1986 a lot of progress has been made in the principles and practice of SD and ESD which could not find place in our educational practices. The NEP 2020 has accorded importance to ESD which shall provide impetus to the novel approaches activities in this area.

Suggestions

- Promote and sustain awareness and understanding regarding ESD as an integral part of each subjects. While designing the contents the ESD aspect needs to be kept in view. The ESD and should not be dealt in isolation from the existing teaching learning activities.
- Problem-solving based teaching-learning should be emphasized that will lead to capacity building of learners in support of creative thinking.
- The context of learners in their actual setting is crucial for understanding of ESD concept supported by action-based activities, effective monitoring and follow up. This will help to build understanding and skill related to sustainable development including its interface with education.
- Careful planning and implementation ensuring the involvement of all stakeholders i.e. students, teachers, parents, experts and community members is important to ensure sustainability and connectivity of the initiatives and their extension in support of ESD.

- The DIETs with proper environment, knowledge base and demonstration facilities could act as a resource for creating positive disposition in other educational institutions/schools in the area. This vision should be nurtured for strengthening of these teacher education institutions.

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