



**Regional Institute of Education (NCERT)
Bhubaneswar**

Describe at least two institutional best practices (as per NAAC format given on its website)

Best Practices-I : Title: Working with Community (WWC)

Duration: One week

Objectives:

The purpose of WWC programme is i) to acquaint student teachers with factors working within community-knowledge of social realities ii) to develop dignity of labour among student teachers iii) to arouse interest of student teachers in the social and economic reconstruction of the country iv) to make student teachers aware with the educational problems and needs of the society v) to enable student teachers for preparing youth for sustainable development vi) to develop the personality of the student teachers through community service.

Context: RIE Bhubaneswar has been running innovative pre-service teacher education programmes such as B.Sc.B.Ed, B.A.B.Ed, and two year B.Ed having eight and four semesters. All the these programme has both theoretical papers as well as practical papers. Work with Community programme is one of the innovative course for all these teacher education programmes having one week duration. The student teachers are required to spend one week in a community/rural village and organise different activities. These programmes are approved by the Programme Advisory Committee (PAC) of the NCERT.



समन्वयक
Coordinator
आंतरिक गुणवत्ता आश्वासन प्रणाली
Internal Quality Assurance Cell
क्षेत्रीय शिक्षा संस्था, भुवनेश्वर
Regional Institute of Education, Bhubaneswar

Practice: Student teachers in the last semester are placed in identified villages for one week at a stretch. The coordinator and team visit the identified villages to discuss with the community leaders and members about the programme and get their consent for providing all necessary cooperation and security during the programme. Before sending student teachers for community work, Institute orient them about the purpose, modalities, and activities to be organised during the programme. The coordinator and faculty members accompany student teachers and stay in the community camp. The mode of transaction are discussion, rally, competitions/debate, poster and banner display in community setting, survey, interviews, awareness programmes etc. The activities are conducted by the student teachers in the working with community programme.

- Yoga, Physical Exercise and Games and sports
- Sharma Dana in Community in Terms of Cleaning Drive
- Gender Equity/ Environment Pollution/ HIV-AIDs/ Population Education,
- Health and Hygiene of the Community
- Survey of Primary Education and Remedial teaching in school
- Utilization of Community Resources for School Education
- Educational awareness of Community
- Awareness on RTE act 2009
- Rally on Different Social issue
- Cultural Programme based on Social Issue and Problems

During the programme, all the trainees are divided into five groups with one group leader and faculty as Supervisor. Every day programme starts at 6.00 AM at the ground near to the camp, all the trainees and faculty gather for physical activity. The physical activity is held under guidance and supervision of the Coordinator.



समन्वयक
Coordinator
आचार्य गुणवत्ता आश्वासन कोष
Internal Quality Assurance Cell
श्री श्री शिक्षा संस्था, धुबनेश्वर
National Institute of Education, Bhubaneswar

Different physical activity such running, jogging, yoga and pranayama etc. are done up to 7.00 AM. This activity end with roll call by Coordinator.

After a short break, the group start for Cleanness Drive of nearby villages. It continues up to 8.45 AM. The team members participate in cleanness drive of camp site, nearby villages, temples, markets, school campus etc. The trainees and faculty go for Breakfast which last up to 9.30AM. From 10.00 AM to 1.30 PM team members go for village survey and school visits along with faculty. Each group along with a faculty go for a particular village and school every day and conduct one activity under guidance of faculty. After coming from village, team go for lunch from 2-2.30 PM and take rest up to 3.00Pm. Again, all the trainees and faculty gather at ground near camp at 3.00PM for discussion in groups and preparing reports under guidance and supervision of faculty. All the works conducted in village and schools are discussed and repots prepared and presented before the large group for information and comments. It continues up to 5.30 PM. The team members take tea and snacks from 5.30 to 6.00 PM. Every day trainees organize some cultural programme for entertainment on social and cultural issues of rural village that is witnessed by the local villagers. This cultural programme continues up to 8.00 PM . After cultural programme, team goes for dinner from 8.30 to 9.30PM. Again, all the team members including faculty gather in the camp ground for review; what went right and wrong and decide tomorrow action. Besides this, extension lectures delivered by local people/ community artisan organized during the programme.

Evidence of success:

Every programme needs to be evaluated for judging its quality as it helps to bring modification in the programme in future. This programme was also evaluated by taking views of faculty, community members, teachers as well as trainees. A detail questionnaire was distributed among the trainees covering all the aspect of WWC



सुप्रसन्न
Coordinator
आंतरिक गुणवत्ता आश्वासन कोष
Internal Quality Assurance Cell
श्री श्री शिक्षा संस्थान, युवाश्रम
Institute of Education, Bhubaneswar

to know get their feedback. The feedback about the programme are also taken by conducting Focus Group Discussion which revealed that WWC is useful for developing an effective teacher who can work in different setting specially rural areas. The feedback indicates that majority of trainees like WWC as it is helpful for them to know factors in community that influence education, school and classroom practices. It also revealed that positive change in attitude of trainees towards rural community, rural school and rural students. The trainees reported that they can successfully work in rural schools as WWC programme oriented them for this. The Programme coordinator also interacted community members, teachers of local school about WWC programme and its usefulness for them. The community members express that this programme opens their eyes on different social and educational issues and concerns. The awareness programme on RTE Act 2009 informed community members, school teachers as well as students about their rights and duties for successful implementation of this Act. Some of the community members promised that they will send their child to schools both girls and boy. The awareness programme on health and hygiene for students, grown up girls was appreciated by community members and school authority.

Problems encountered and resources required:

The field work with community programme has been highly appreciated by the community members, local leaders, schools as well as trainee teachers. However, the programme is not free from problems during its implementation. Since the programme usually conducted in the rural villages, it becomes difficult to find a suitable accommodation for 100 students and 10 faculty members. All the trainees and faculty members stay in the local schools with minimum facilities. The programme needs more financial support to continue for longer period of times in a particular locality.



ଆହାରକ
Coordinator
ଆହାରକ ଗୁମାସ୍ତା ଆହାରକ ସାଥୀ
Internal Quality Assurance Cell
ଶିକ୍ଷା ବିଭାଗ, ଖୋର୍ଦ୍ଧା, ଓଡ଼ିଶା
National Institute of Education, Bhubaneswar

Best Practices-II

Title of the Project- Learning Resource Centre (LRC)

Context:

Learning resource centre is an integral part of the Institute. It contains resources related to content and pedagogy in different subjects. The LRC consists of the three separate centres such as educational resource centre, botanical garden and theme park. It benefits students by supplementing the learning process. It functions as a place to introduce, reinforce, and expand student learning in different concepts and principles. It also provides access to learning materials or serves as a peer learning centre. The aim of LRC is to provide experiential learning by providing direct experience on different concepts and rules.

Objectives

- To provide support for developing students' learning in terms of higher order cognitive skills.
- To enhance learning supports and improve learning performance through creating a learner-centered learning environment with more learning opportunities.
- To offer the high-quality learning atmosphere to learners, promoting their learning and motivation.
- To develop innovative learning resources relating to different contents and pedagogy for all levels of learners.
- To provide experiential learning opportunities for teachers and teacher educators during pre-service and in-service teacher training.

A. Educational Resource Centre

One part of the learning resource centre is an educational resource centre in which several educational models and equipment relating to teaching of science and social sciences are kept for the use of learners. It is a place where children can get extra help in a variety of subjects where they might be having difficulty. The purpose is



भारतीय
Coordinator
Internal Quality Assurance Cell
भारतीय शिक्षा संस्थान, भुवनेश्वर
Institute of Education, Bhubaneswar

to simplify abstract concepts in a concrete manner and provide realistic experience of scientific phenomena. This is located inside the main building (Room No-125) of the Institute. Many types of models from Physics, Chemistry, Mathematics, Biology and Social Sciences (Geography) have been developed and kept for demonstration. The following resources are available in the educational resource room.

- **Gold leaf electroscope-** a sensitive electroscope type that is used for detecting charges
- **Maxwell's wheel-**an axle-mounted flywheel suspended at both ends by a nylon cord
- **Newton's color disc-** is a well-known physics experiment with a rotating disc with segments in different colors (VIBGYOR) appearing as white (or off-white or gray) when it spins very fast.
- **Newton's cradle-** demonstrates the conservation of momentum and the conservation of energy with swinging spheres.
- **Plasma bulb-**is a clear glass ball filled with a mixture of noble gases with a high-voltage electrode at its center
- **Rotational motion-** motion of an object around a circular path, in a fixed orbit
- **Solar and Lunar Eclipse model-** In a solar eclipse, the moon's shadow falls on the earth as it passes between the moon and the sun. In a lunar eclipse, it is the earth's shadow which darkens the moon.
- **Space time curvature -** influences the motion of massive bodies within it; in turn, as massive bodies move in space-time, the curvature changes and the geometry of space-time is in constant evolution
- **Hydraulic Press-** A hydraulic press is a machine press using a hydraulic cylinder to generate a compressive force.
- **Transmission Line-** is a specialized cable or other structure designed to conduct electromagnetic waves in a contained manner.



समन्वयक
Coordinator
आंतरिक गुणवत्ता आश्वासन कोष
Internal Quality Assurance Cell
राष्ट्रीय शिक्षण संस्थान, गुवाहाटी
National Institute of Education, Guwahati

- **Traffic Light Model**-considers the real-time traffic characteristics of each traffic flow that intends to cross the road intersection of interest, whilst scheduling the time phases of each traffic light.
- **Human Skin**- to show the human body parts and nervous system
- **C-60 model**-used in nanotechnology and electronics
- **Trundle Wheel**-is a tool used to measure distances
- **Karst Topography**- a type of landscape where the dissolving of the bedrock has created sinkholes, sinking streams, caves, springs, and other characteristic features
- **Graphic Model**- a representation of the structural formula of a chemical compound in terms of graph theory
- **Diamond Model** - carbon atoms are arranged tetrahedral. Each carbon atom is attached to four other carbon atoms 1.544×10^{-10} meter away with a C-C-C bond angle of 109.5 degrees
- **Parts of Plants**- to learn about various parts of plants
- **Ornamental Plants**- plants that are grown for display purposes, rather than functional ones.

The Educational Resource Centre exemplifies the motto, 'Ever Forward,' by equipping our students and visitors with the required skill set to achieve their full, true potential. It is an effective delivery model for remedial instruction and building academic skills among students as teachers. Depending on individual needs, students can attend resource centre and experience learning science. Students show growth in visuo-motor perception, arithmetic and scientific thinking.

B. Botanical Garden

Plant species are vital components of biodiversity. They need to be valued and conserved by establishing a botanical garden. Odisha is endowed with a rich wealth of herbal plants. Herbal Garden can contribute knowledge regarding nature,

ଭାରତୀୟ ଯୁଗାନ୍ତ ଶିକ୍ଷା ମନ୍ତ୍ରାଳୟ
 National Coordinator
 Internal Quality Assurance Cell
 ଶିକ୍ଷା ମନ୍ତ୍ରାଳୟ, ଭୁବନେଶ୍ୱର
 National Institute of Education, Bhubaneswar

environment, relevance and quality of education and life skills. Gardening will improve the knowledge about planting, polypods, soil mixtures and nutritional aspects to develop the Home Garden. This garden offers a great opportunity for improving the quality of education and for learning basic life skills. It can serve as a laboratory for teaching, biology, and environmental studies. The main objective is to disseminate the knowledge of herbal medicines and medicinal plants among school and institute students and develop skill-based experience. The main objectives and scopes are:

- To provide resourceful material to conduct skill enhancement courses in the field (botanical garden) for student teachers and in-service teachers.
- To collect, conserve and propagate the available medicinal plants in Bhubaneswar.
- To provide the skill based experience about the field work in medicinal Botany.
- To create a learning environment to carry out the projects in plant propagation, nursery techniques, agro-techniques for cultivation, outdoor science education for both Institute and DM school students as well as in-service teachers and visitors.

In the year 2016-17, inside the R.I.E, Bhubaneswar campus, adjacent to the Institute's main building, the Botanical Garden of Medicinal Plants was developed within an area of about 1.5 acres. Subsequently under the PAC programme funded by the NCERT, it developed into a full-fledged botanical garden in 2019-20. More than 200 types of common, rare and endangered species of medicinal plants have been planted and grown with utmost care and devotion.

The following major plants are available in the garden.

- **Dracena-** Treating malnutrition, fighting illness, effective in air purification




Coordinator
आचार्य गुणवत्ता आश्वासन कोष
Internal Quality Assurance Cell
ଶିକ୍ଷା ବିଭାଗ, ରାଜ୍ୟ
State Institute of Education, Bhubaneswar

- **Rudrakshya-** Uses to treat high blood-pressure, diabetes, chicken pox, chronic cough, asthma, heart diseases and memory loss.
- **Parijata-** uses as tonic for cooling, headache, skin diseases, boil and digestive
- **Sweet Leaf Bush-** Wound healing, inducing Lactation, relief of urinary disorders, anti oxidant, high level of vitamin B & C
- **Oyster-**Anti-cancer, Anti-microbial, Antioxidant & Antibacterial properties.
- **Sarpagandha-**used in the production of sleep-inducing and blood pressure-lowering drugs.
- **Ayyappan-**manage fever, cough and cold naturally.
- **Shatavari/Wild carrot-** Promotes Cardiac Functioning, Enhances Digestion, Treats Wounds And Ulcers, Manages Diabetes, Remedies Respiratory Troubles, Prevents Anxiety and Depression, Aids In Weight Loss
- **Lemon-Grass-**to relieve pain and swelling, reduce fever, improve levels of sugar and cholesterol in the blood, stimulate the uterus and menstrual flow, and have antioxidant properties.
- **Barbados Nut-** Oil obtained from the seeds are used in the treatment of skin diseases and rheumatic pains. It also stimulates hair growth. The root bark is used for sores, dysentery, and jaundice.
- **Plumbago/LeadWort-**to treat warts, broken bones and wounds.
- **Edible Camphor-**improves the digestive secretions
- **Night Jasmine-**to relieve stress and anxiety.
- **Amla-**Improves Immunity. antibacterial & astringent properties which help improve the body's immunity system
- **Basanga/Malobar Nut-** to loosen chest congestion, open the breathing tubes (bronchi), and treat spasms

Coordinator
 Internal Quality Assurance Cell
 National Institute of Education, Bhubaneswar

- **Guduchi**-Memory enhancer · Anti-cancer · Anti-inflammatory · Anti-ageing · Immunity enhancer · Digestion enhancer · Anti-oxidant · Anti-diabetic
- **Mussaenda**- treatment of white leprosy, eye troubles, skin infections, tuberculosis, jaundice, ulcers, wounds, cough and bronchitis.
- **Garden Rauwolfia**-to treat high blood pressure (hypertension)
- **Junipar**- digestion problems including upset stomach, intestinal gas (flatulence), heartburn, bloating, and loss of appetite, as well as gastrointestinal (GI) infections and intestinal worms
- **Cycas**-block acid production and promote healing.
- **Zamia**-thrive in low-light and drought-prone conditions
- **Hing**- for the treatment of various diseases, such as asthma, epilepsy, stomach-ache, flatulence, intestinal parasites, weak digestion and influenza.

This garden is the richest source of the herbals used in the protection of COVID-19 and diabetic prevention. The herbal garden is also used for the in-service teacher education programmes for the effective utilization of commonly used herbs in home gardening. Many outdoor explorations, field visits, skill enhancement programmes are being conducted using botanical gardens as an asset of outdoor laboratories by RIE, BBSR, DMS such as exploration of the herbal plant garden for outdoor science education, herbal garden as a laboratory for skill enhancement, DM school students participate in preparation of nursery seed breeding in the garden and exhibition on herbal plants.

C. Theme Park

Theme park is one of the best practices of our Institute that can facilitate simplifying the abstract science concepts for learners. The word park is associated with the word play. In other words a park is a place where children get to play with a lot of equipment as they breathe the fresh air and relax with nature. Science is a subject that looks very complicated until one understands that it's nothing but us and our

Internal Quality Assurance Cell

 National Institute of Education, Bhubaneswar

surroundings. Theme Park is a cluster of open-air science gadgets for play way learning of science. Theme park that encompasses the equipment that allow the children to play and understand the principle behind their working and also their application in their real life. It is an innovative concept of teaching science in an informal way. The main objective is to engage students in live activity, to ensure the conditions, the purpose of which is to explore the world in the process of entertainment and to sow the seeds of curiosity and interest among students.

Inside the R.I.E, Bhubaneswar campus, adjacent to the DM School building, the Educational Theme Park has been developed within an area of about 4800 sq. meters. Currently 28 theme-based models have been set up in the first phase of development.

The following major models are available in the park.

- **Crystal model- SCC-** each corner of the unit cell is defined by a lattice point at which an atom, ion or molecule can be found in the crystal. Every atom in the corner is shared among 8 adjacent unit cells. the total number of atom = $8 * \frac{1}{8} = 1$ atom
- **The Solar System-** consists of the sun and all other planets and satellites move around it.
- **Pythagoras Theorem-** The area of the square whose side is the hypotenuse is equal to the sum of the areas of the squares on the other two sides.
- **Gear Trainer-** machine component which is used to transmit mechanical power from one shaft to other by successively engaging its teeth.
- **Crystal Model-BCC-** In BCC structure there are 8 identical particles on eight corners of the unit cell and one at the center of the body. the total no. of atom = $8 * \frac{1}{8} + 1 = 2$ atoms.




समन्वयक
Coordinator
आंतरिक गुणवत्ता सुनिश्चिता केंद्र
Internal Quality Assurance Cell
क्षेत्रीय शिक्षा संस्थान, भुवनेश्वर
Regional Institute of Education, Bhubaneswar

- **World Time Globe-** A time zone is a region or area that observes the same standard time. The world is divided longitudinally in to time zones with an hour difference roughly 15 degrees apart.
- **Hydro-Electric Model-**The potential energy of water converted into K.E to rotate the water turbines and these turbines are coupled with the generator's shaft, which alter its mechanical energy to electricity known as hydroelectricity.
- **Angular Momentum-**Rotational equivalent of linear momentum. This model will help to understand the relationship between both.
- **Polygon Family Tree-**Described by finite no. of straight-line segments connected to form a closed polygon chain.
- **Time Demonstrator-** To read the clock
- **Angle Demonstrator-**An angle formed by two rays called the sides of angle, sharing a common end-point called vertex of angle
- **Parts Of Circle-**There are many parts of circle such as radius, diameter, sector, arc, tangent, chord, segment etc.
- **Straight Bar Passing Parabola-** A curve generated by intersecting a right circular cone with a plane

The theme park is creating an exciting environment for students to develop a scientific attitude driven by curiosity. The equipment available in the park look like play items but have a scientific principle underlying. The principles are unraveled by our facilitating teacher and student teachers, in-service teachers, visitors learn science by visiting and manipulating the equipment.

Evidence of Success

The learning resource centre stimulates and manages the flow of knowledge and technology amongst our students, teachers, teacher educators and visitors. It

Coordinator
 Internal Quality Assurance Cell
 National Institute of Education, Bhubaneswar

facilitates the children of DMS (laboratory school of RIE Bhubaneswar) and students of B.Sc.BEd, B.A.BE.d and BED to mingle with science in a playful manner. Every class gets an opportunity to explore the resources in the scheduled time they are allowed to use the equipment and manipulate them as per instructions and carefully record their observations in their notebooks and discuss the equipment for the exchange of knowledge. Each piece of equipment reflects a scientific concept. Signs around the playground tell kids what to look for: gears, levers, pulleys, pendulums, and more. The learning that happens in a science park is far beyond that of regular classroom teaching. Students experience the equipment hands on and keep their minds on to absorb the knowledge. This knowledge is permanent and allows them to understand the connections between topics to others as the hierarchy increases. Many visitors from outside the institute regularly visit the learning resource centres to learn scientific principles and its application in daily life.

Problem encountered and resources required:

The main weakness encountered was the small physical size of the educational resource center. The growing number of students makes it difficult for them to fit in the resource center. Some ICT integrated Models and digital game-based learning could have been introduced in the resource center. Another problem that may appear in this kind of set up is the lack of their access in the internet world. If you take this out of the learning system of the students, this can cause them not to give them the rightful access in realizing the reality of the outside world. Sophisticated materials and resources need to be brought and installed in the resource centres and theme parks so that it can better facilitate learning.



ଅନୁପମ ଗୁରୁ
Coordinator
ଅନୁପମ ଗୁରୁ
Internal Quality Assurance Cell
ଅନୁପମ ଗୁରୁ
National Institute of Education, Bhubaneswar