

Analysis of Inclusive Education of Differentially Abled Students in the Perspective of Right To Education Act in Palakkad District

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Abstract

Inclusive education is perhaps the most discussed and debated area in the contemporary educational scenario. Much effort is also taken for studies and research in the area which enabled clarity with respect to all related aspects. For all such efforts, the experience at grassroot level should be given deserving priority because changes and attitudes are to be evolved and made sustainable at micro level. There is a need for developing positive attitude and genuine awareness regarding the identities of differentially abled children in a school atmosphere. The role of Resource Teachers and parents are also significant to ensure better results as visualised in RTE 2009.

Introduction

Since the evolution of mankind, education has always assumed significance in their lives irrespective of caste, creed, religion, region, gender and even disability. It acquired different forms, modes, streams, and disciplines adding value and much to the delight and comforts of the people all over the world (Rao, 2007). The first 'World Conference on Education for All' held in Jomtien, Thailand (1990), was particularly significant because it acknowledged that large numbers of vulnerable and marginalized groups of learners were excluded from education systems world wide (Sharma, 2012; Rao, 2007; Alur & Bach, 2005).

The Salamanca Conference on Special Needs Education (UNESCO, 2004) considered the implications of the pledge made by the world community in 1990 to include disabled children and other marginalised groups of learners in education. As far as India is concerned, the Programme of Action of the National Policy on Education, 1986 (Govt. of India) says that out of 12 million disabled persons, 2.6 fall in the age group 4-15 years. They constitute approximately 40 per cent of the

population of persons with disabilities in India. As estimated, 40 million of the 115 million children who are enrolled in school have one or the other form of disabilities (Sharma, 2012). The latest EFA Monitoring Report estimates that only 10 percent of disabled children are in school and that one third of the 77 million (6-11 year old) children currently out of school have disability (UNESCO, 2012).

The nineteenth century witnessed the advent of special education and special schools in Europe, America and India. But this does not provide a lasting solution to the educational problems faced by them, as such schools are few in number and more over, they fail to integrate these children in the social mainstream (Alur & Bach, 2005). Special education practices were moved into the mainstream through an approach known as "integration". NCERT (2005) pointed out that all children with special needs should be educated along with other learners in inclusive school, which are cost effective and have sound pedagogical practices (cited in Sharma, 2012). It is, therefore, unanimously agreed

that the principle of inclusive education is the only way to realize the noble goal of 'Education for All'.

Need and Significance of the Study

We know from the global movements for equity rights for people with disabilities, disability itself is often held out as a reasonable ground for not applying human rights equally. No sufficient mechanisms are there to ensure that children with disabilities are fully included in all aspects of the strategy. While the concern and commitment are there, there is no way if integrating their issues and needs. Our system is also not in a position to fully address excluded groups like children with disabilities. So it is necessary to take up the effort of finding effective ways to ensure that people with disabilities can participate in and contribute to society in all spheres of life.

The Right of children to Free and Compulsory Education Act, 2009 (The Gazette of India: Extraordinary Part-1-Section-1) also emphasized the Equal Opportunities, Protection and Full Participation, Disabilities Act of 1996 in the clause (1) of the Section about the provision to be supported to the disabled children. So there is an urgent need for developing and implementing better strategies for effective inclusive education to establish a Macro level set (policy change required to set social, political, and economic context), Micro level set (building collaborative relationship between state, district and community level so that a culture of inclusion can be fostered), and a Micro level set (changing school and classroom practices to better support, accommodation and teaching). So District Institute of Education and Training (DIET), Palakkad took this opportunity to mobilize various observations and to contribute valuable suggestions and interventions in this connection.

Statement of Problem

A Critical Analysis of inclusive education in the perspective of RTE in Palakkad District

Definition of Terms: Critical Analysis, Inclusive Education, and RTE

Objectives of the Study

1. To analyse the status of inclusive education in Palakkad revenue district during the year 2012-2013 in terms of a) adequacy of infrastructure facilities, b) mode of functioning of headmasters, c) experiences of practicing teachers, d) practices of resource teachers, e) problems of students

Methodology

Normative Survey Method is followed

Sample:

The sample consisted of 78 schools including LP, UP, High schools of Palakkad District considering various strata of population such as government, aided, rural, urban, agricultural, linguistic minority, and tribal area. It was also ensured the representation of sample from 12 educational sub districts and tribal area (Agali). The sample also includes 78 head masters, 370 practicing teachers, 388 SEN students, 40 resource teachers, 312 parents and 20 LSG members. The data were collected using stratified sampling technique.

Tools

Tools used for the study are: 1) Questionnaires to collect data regarding infrastructure facilities, 2) mode of functioning of head masters, 3) practicing teachers about their experiences of inclusion, 4) resource teachers about their practices of inclusion, 5) students about their problems in the inclusive set up, 6) Guidelines for Focus Group Discussion with practicing teachers, resource teachers, and parents/students,

and 7) Interview Guidelines to collect data from headmasters, and LSG members.

Procedure

The data were collected from 78 schools, 78 headmasters, 40 resource teachers, 370 practising teachers, 312 parents, 388 students and 20 LSG members of Palakkad district. The theoretical perspectives of inclusive education were collected from the documents of UNESCO, MHRD, and SCERT. The data so collected were analysed using SPSS (10 version), and results interpreted and triangulated qualitatively based on the wider perspectives of inclusive education.

Statistical Techniques

The statistical techniques used for the study were percentage analysis, t-test, and ANOVA (One Way).

Major Findings

1) Adequacy of Infrastructure Facilities:

a) Adequacy in connection with ramp and rail, seating arrangements, drinking water facilities, play ground, teaching learning materials, and library facility were found in more than 50% of schools. b) Adequacy in connection with adapted and attached toilets, audio-visual aids, and counselling room were found only in less than 20% of schools. c) The availability of wheel chairs (12.8%), resource room (10.3%), smart boards (6.4%), pedagogy parks (5.1%), and vocational training centre (1.3%) were found as serious limitations in connection with this. d) There exists significant difference in the adequacy of infrastructure facilities between Government and Aided schools. e) The Government schools possessed better infrastructure facilities than aided schools. f) Multiple comparisons show that the Government LP schools were better in providing infrastructure facilities. The HS level schools face serious problems in connection with this especially in aided high schools.

2) Mode of Functioning of Heads of Schools

a) The mode of functioning of heads were found below 42% in almost all areas considered for the study. b) Only 7.7% of heads are trained to identify SEN students. c) The areas related to monitoring of adaptation and class room activities (17.9%), utilizing the service of resource teachers (30.8%) and conducting programmes for self confidence of pupil (41%). d) The awareness of heads regarding concessions, rights and laws of protection were found below 35%. e) Only 7% of heads aware about PWD Act, and no heads aware about RCI. f) 62.8% and 53.8% of heads aware about services provided by SSA and general education department respectively. g) Awareness of heads regarding the services provided by Local Self Governments was found below 40%. h) Areas ensured for participation of differentially abled children by the heads were assembly (47.4%), subject fairs, field trips, and parliament (15.4%). i) Less than 30% of heads could ensure participation in play, arts, sports, study tour, and day celebrations. j) There were no significant difference between heads of aided and government schools in their mode of functioning. k) The urban and rural heads show significant difference in their mode of functioning. l) The urban school heads were better in their functioning

3) Experiences of Practising Teachers

a) More than 64% of teachers observed that peers assist differentially abled children in a good manner, lack of empowering programmes for dealing differentially abled children and in the process of adaptation. b) Only 32.7% of teachers participating resource teachers in subject council, 39.5% teachers planning adaptive processes with resource teachers, and 31.6% of teachers seek help from local bodies for the benefit of differentially abled children. c) 6.2% of teachers believe that education/training were not suitable

to differentially abled children. d) 28.4% of teachers believe that these children should be educated in special schools. e) There were no significant difference exists between the teachers irrespective of levels, management, and locale.

4) Practises of Resource Teachers

Major difficulties faced by the Resource Teachers were a) Span of work of resource teachers in one school (75%), b) Student placed in different classes (62.5%). c) Lack of cooperation (95%) d) Unawareness of heads and teachers about differentially abled students (90%). e) Lack of provision for sharing problems of differentially abled students in SRG (55%) f) Unawareness about duties, responsibilities and resourcefulness of resource teachers (82.5%). g) Lack of ICT based empowerment programmes (82.5%). h) Lack of availability of computers (80%).

The positive observations were, 1) Ensure programmes for improve assistance of peers for differentially abled students (95%) 2) Ensure participation in art festivals (90%). There exists significant difference in the practises of rural and urban resource teachers. The rural resource teachers perform at better level.

5) Problems of Differentially Abled Students

a) 23.2% of differentially abled students travel 4-16 km for reaching school. b) 47.2% of them face problems in bus journey. c) 59.8% of face lack of availability of drinking water in classrooms. d) 33.5% of them didn't enjoy special arrangements in lab and library. e) Only 8.5% of students feel comfort as teachers enquire family matters. f) 10.6% of them ensured participation in arts and sports. g) 24.5% enjoy participation in group activities. h) Only 9% of them enjoy availability of special teachers. i) 29% of them couldn't participate in medical camp. j) Below 23% of differentially able students ensured Scholarships and Medical certificates. k) But the positive observation that that 56.2% of students enjoy the service of friends for reaching school.

Suggestions

1. Adequacy of Infrastructure Facilities

a) Availability of ramp and rail, seating arrangements, drinking water facilities, play ground, teaching learning materials, attached and adapted toilets, lab and library facilities may be ensured in all schools with the help of SSA, Local Self Governments, MP, MLA, and SSG and SMC/PTA. b) The norms of SSA may be changed to ensure wheel chairs and resource rooms in all schools. c) Proper emphasis may be given to scope of pedagogy parks and vocational training centres in every school with the help of LSG, MLA and MP funds. d) Audio-visual aids, smart boards, electrified classrooms and counselling room also may be desirably equipped using LSG, MLA and MP funds

2. Mode of Functioning of Heads of schools

a) It is desirable to arrange comprehensive multiple category education programmes by SSA and SCERT for all heads (identification, dealing, concessions, laws of protection, rights of differentially abled students). b) Proper monitoring system may be developed by educational officers to ensure effective functioning (monitoring of adaptation and service of resource teachers) of heads of schools. c) The educational officers desirably ensure agenda for differentially abled students in SRG meetings conducted in schools. d) It is advisable to establish a review mechanism to incorporate resource teachers in academic planning and ensure participation of differentially abled students in all activities. e) All heads may be empowered to render available services from various agencies (SSA, LSG, Social Welfare Department, and Health department). f) The sub district level monitoring system (AEO, BPO, DIET faculty and LSG members) may be strengthened to maintain and sustain child friendly atmosphere in schools.

3. Experiences of Practicing Teachers

a) It is desirable to conduct empowering programmes by SSA/SCERT for teachers (dealing different categories of differentially abled children, process of adaptation, and use of TLM, resourcefulness

of resource teachers, and duties and responsibilities of resource teachers). b) The heads of schools may be frequently directed to monitor the activities of teachers in connection with participation of resource teachers in subject council and planning adaptive processes and share best practises in the monthly conferences (BPO, AEO, and DIET) . c) It is advisable to give remedial packages to teachers to relearn their conceptions regarding education/ training of differentially abled students by DIET and SCERT

4. Practises of Resource Teachers

a) It is desirable to ensure continuous service of resource teachers/trained Ayah to every school (IED-DPI, SSA and LSG). b) It is advisable to ensure cooperation of practising teachers to resource teachers for utilising their capacities by the authorities concerned (DPI, AEO, and Programme officer- SSA). c) The heads of schools may be directed to make provisions for resource teachers to share the problems of differentially abled students and parents in SRG meetings (DDE, DEO, DIET, AEO and DPO). The reports may be discussed in educational officers meetings conducted in every month. d) ICT empowerment programmes may be given to resource teachers for equipping them to use computers and adaptive soft ware for various categories of differentially abled students by IT@school, DIET and SSA).

5. Problems of Differentially Abled Students

a) It is advisable to ensure that all differentially abled students are enrolled in their neighbourhood schools to lessen the hazards that they met during travelling (LSG). b) The stakeholders concerned may ensure a child friendly atmosphere in every school to ensure- 1) drinking water facilities, 2) special arrangements in lab and library, 3) participation in all activities (curricular & co-curricular), 4) use of play ground and playing materials, 5) attached

and adapted toilets. 6) participation in group activities, participation in medical camps, and availability of medical certificates (SSA , DPI & LSG). c) A counselling room may be equipped to open heart and feel comfort to differentially abled students (SSA and SMC). d) The service of resource teachers/Ayah is desirable for solving problems of differentially abled students.

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Concept Mapping- An Effective Mode to Impart Content Knowledge for Elementary Student Teachers

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Abstract

Students hold many misconceptions in school science. Research reveals that teachers themselves, at times, are one source of misconceptions among students. A good number of such misconceptions, carried on to the next generation via school, are held by teachers; from their own school days and kept uncorrected even after their teacher education course. Teacher educators observe that student teachers show “inadequate” “insufficient” “marked” deficiency in the content knowledge. Despite this, there is no room in the present elementary teacher education curriculum for enhancing their content knowledge. The only way to impart content knowledge - pedagogic analysis - is a 'ritual' in almost all institutions. Therefore, student teachers must get a chance for brushing up science concepts they ought to teach. Concept mapping is a strategy that can be used to impart content knowledge with sense within a limited span of time.

Teachers, Students and Misconception in School Science

Research in science education indicates that students hold many ideas that are different from those generally accepted by scientists. These different conceptions are called alternative conceptions (Arnaudin & Mintzes 1985) or misconceptions (Cho et al. 1985). Not only students, but also pre-service (Trumper, 1999) and in-service teachers have misconceptions in science. Research on student teachers in Kerala also revealed that they have many misconceptions that can affect their teaching of topics in elementary classes (Gafoor & Shyni, 2009). In such situation, it is no surprise that, students when they reach high school have serious misconceptions in specific science topics (Gafoor & Akhilesh, 2008); with concrete concepts demonstrating

comparatively low rate of misconceptions and abstract concepts showing comparatively high error rate. Hence, it is not exaggeration to argue that teachers themselves are one of the leading sources of misconceptions among students.

The argument that teachers are sources of misconceptions for students may look wrong in this age of constructivist and critical education practice. Teachers, parents and students are in favour of the constructivist curricular practices in Kerala, but they all experience multiple problems in their own way in relation to present school curriculum (Gafoor, Farooque & Jouhar, 2011). According to the student teachers, the present curriculum is leading to lack of basic knowledge and lack of theoretical knowledge. For students, the present curriculum is overloaded; teachers are not active and it

results in making learning silly or fun, makes way for partiality; some subjects become boring and there is more homework, and for others learning has become more of a play. Teachers reveal that classroom practice continues its inclination towards behaviourist practice and the desired shift from behaviourism to constructivism has not taken place (Gafoor & Akhilesh, 2010).

Teacher educators observe that in spite of high marks at +2 stage, teacher students show “inadequate” “insufficient” “marked deficiency” in the content knowledge and show “poor academic performance” (Gafoor & Ragisha, 2012). Teacher educators feel that vast majority of student teachers are the throw-outs of competition for other professional courses like medicine, engineering and administrative services and hence, student teachers consider the training programme as a mere 'passport' to a job in schools. As planning for instruction, quality of classroom transaction, style, and evaluation all depends upon the content level of teachers; student teachers need have a thorough basis in the content knowledge. Only when teachers have thorough knowledge of content, they can be trained in processing the content knowledge for pedagogic purpose.

Pedagogic Analysis for Elementary Student Teachers

While deficiency in content knowledge of future teachers is accepted, teacher education curriculum gives no space for content and hence the programme focus only on methodology part. The curriculum is crowded with written works and teachers don't get enough time to concentrate on improving content knowledge (Gafoor & Ragisha, 2012). As there is no space for content knowledge in the present syllabus, the only way to impart content knowledge is through pedagogic analysis. Many teacher educators admit that they are doing the content

analysis of one or two chapters, obligatory for practice teaching only. The situation is worse where the student teachers just copy down analyzed content from the previous records. This adds to the tendency of some teachers to “dictate” the facts and concepts to their students.

Elementary student teachers are supposed to teach all subjects in the upper primary classes, irrespective of their subject combinations at +2 level. But teaching student teachers on all the contents up to 10 or plus two level is not possible, as the TTC (Trained Teachers Certificate Course) curriculum is already congested with lack of time and overload of written works. So a new strategy or method that can do the brushing up of the basic concepts within a limited time becomes the need of the hour. If it is possible to understand the basic abstract concepts of science, it will be a great help to student teachers. Studies indicate that lack of content knowledge affects their performance in the class room, as teaching requires 'what to teach' along with 'how to teach'. Improving this situation requires deliberate and planned provision of opportunities for brushing up and reorganizing of content knowledge that future teachers have from +2 level. To provide for this in a cost and time effective manner, content can be given along with pedagogic analysis as 'inbuilt', with no extra time.

Concept Maps-An Efficient Means to Organize Knowledge

In this technological era, students are required to process huge amount of information to create understanding. However, access to information does not guarantee the creation of knowledge because information and knowledge are not the same in nature. Information is the mass product of raw data and knowledge is the creation of individual minds drawing

on individual experience. In other words, meaningful knowledge is generated by mind through the process of meaning making. In generative learning, learners have an active, participatory role in order to interpret and construct meaning. Construction of conceptual relationships is a key to knowledge generation. Concept mapping is one powerful strategy to support the process of meaning making. Concept maps are graphical tools for organizing and representing knowledge. A concept map is defined as a set of interconnected propositions, each of them consisting of two or even more concepts connected by labeled links. Thus, any construction of concept map needs a translation of relevant cognitive structures into an external network. This allows an interpretation of knowledge coherencies. It can be simultaneously employed as a learning strategy, a method to capture the most significant aspect of a topic, and a resource with which to represent a set of conceptual meanings included in a structure of propositions.

Value of visual organization and connected understanding

In the field of education, some of the most useful models that address cognitive processes suggest that knowledge must be organized to be accessible from long term memory. According to such models, expertise is attained by developing rich, accurate, relevant and accessible sets of organized knowledge (Marshall, 1995). That is, expertise requires “connected understanding”-understanding of both concepts and connections among concepts (Schau & Mattern, 1997). Science education often deals with complex issues and requires multiple approaches in order to reach a long-term understanding. The acquisition of adequate conceptual knowledge involves an interconnection of basic scientific concepts from different disciplines such as biology and physics. Subject- integrated approaches promote the cross- linking abilities of learners. Learning

via interdisciplinary lessons leads to more complex thinking and improved reasoning abilities. In the more complex science education knowledge domains, retaining long- term conceptual knowledge is essential. Consequently, implementing authentic learning activities and cooperative learning in a 'real life' context, possible through concepts maps, promotes a multiple regrouping of knowledge and hence the chance for constructing interdisciplinary concepts. However, for successful interdisciplinary learning in complex knowledge domains learners will need instructional support.

Graphic organizers provide visual scaffolds that encourage students to extract and represent key details in their texts. Of these the concept map is a particularly useful graphic because it requires students express in writing how two linked concepts are related. This relating of concepts may aid in reading comprehension, since expository texts are often embedded with relational structures, including comparative, causative, explanatory and sequential. For example, a student may be more likely to comprehend the embedded causative relationship between low potassium and high blood pressure, if they are encouraged by the graphic organizer to read for how these concepts might be related and write “results in” between them. (More simplistic graphic organizers might only require students to connect these concepts or group them in a visual display, with the precise nature of the relationship remaining undefined or implicit at best).

An illustration of concept mapping for student teachers

Concepts in upper primary science can be represented in a few concept maps. As an illustration, this paper chose two units each from 5th, 6th and 7th standard science and by analysis the major concepts underlying each topic were found out as listed in table 1.

Table 1
Units in upper primary science and the major concepts included

No.	Unit	Major concept(s)
1.	ആഹാരത്തിന്റെ ആരോഗ്യം	Food production (photosynthesis)
2.	എനിക്കും വേണം ആരോഗ്യം	Components of healthy food (vitamins, minerals, carbohydrate, fats and proteins needed for making a person healthy)
3.	കണ്ണാടി നന്നായാൽ	Light and its characteristics (mirrors and their applications in different instruments)
4.	ശരീരത്തിലെ കുഞ്ഞറകൾ	Cell (cell organelles and their functions)
5.	നാം സംരക്ഷിക്കേണ്ട ജലം	Energy (especially kinetic and potential energies)
6.	താപം	Heat, density and convection These concepts can be put together in a single concept map and connections can also be made. This can be done as the following concept map illustrates (figure1).

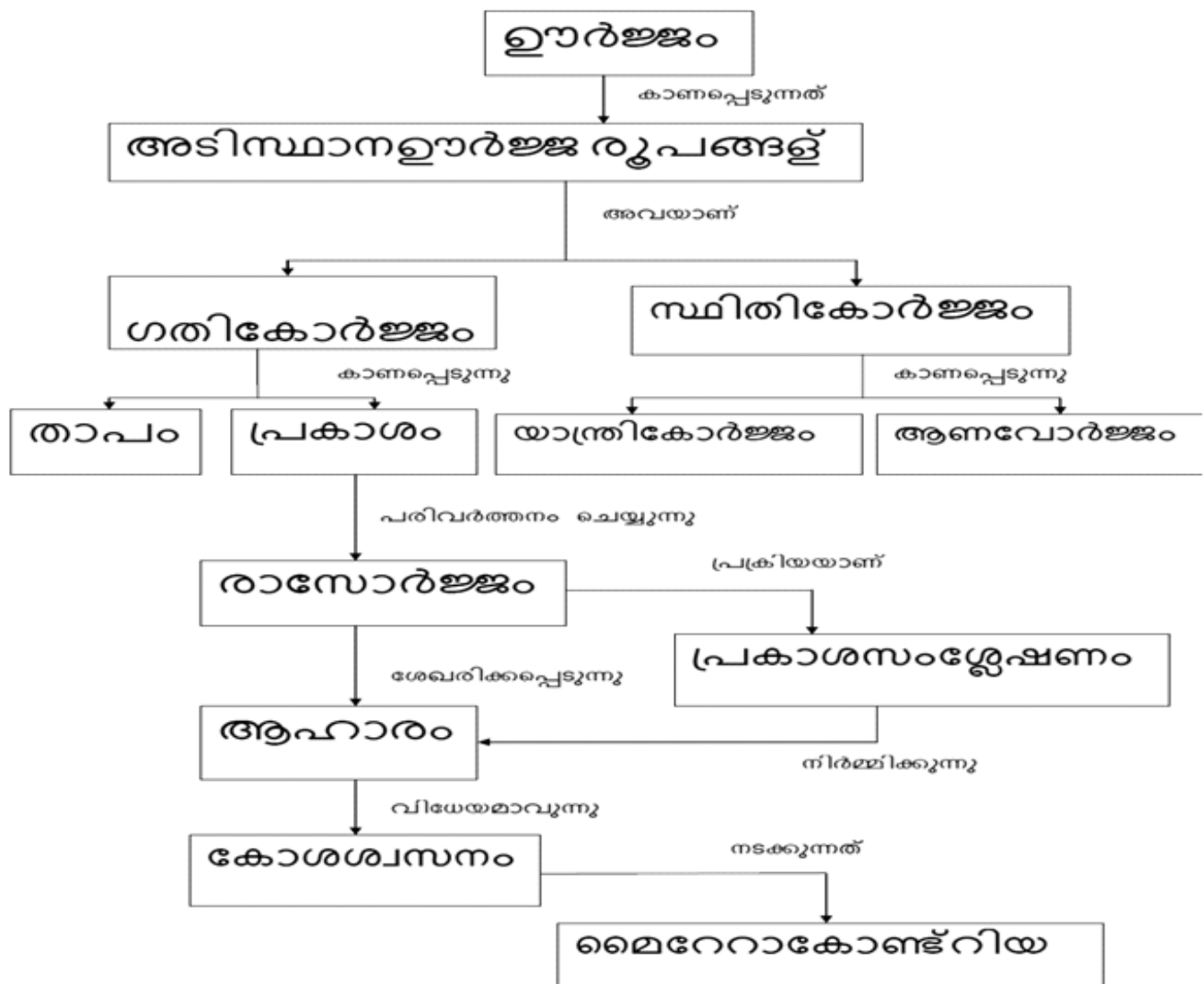


Figure 1. Concept Map Linking Major Concepts in Six units in Upper Primary Science.

The seemingly six different concepts in table 1 are linked in a concept map in figure 1. Using this main concept map and its six sub concept maps we can give an idea on basic concepts in science and make student teachers understand how these are interrelated. Students can understand the basic concepts easily. When they get what to teach in their hand they can easily contribute more on how to teach.

Conclusion

Concept mapping is the device that can be used to impart content knowledge with sense within a limited span of time. Technique of concept mapping can be employed as a learning strategy, as a method to capture the most significant aspect of a topic, and as a resource with which to represent a set of conceptual meanings in complex science education knowledge domains. This if applied in teacher education will turn an efficient and helpful means for future teachers to retain long-term conceptual knowledge and engage in more complex thinking and improved reasoning that in turn brings in qualitative improvement in school education.

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Teacher Educator's Vision on an Ideal Inclusive Classroom

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Abstract

All students have a right to expect the best possible learning environment; special needs students are no exception. Teaching children with special educational needs requires the same strategies and practices as teaching general education students. If the Right to Education for all is to become a reality, we must ensure that all learners have access to quality education that meets basic learning needs and enriches lives. Education is not simply about making schools available for those who are already able to access them. It is about being proactive in identifying the barriers and obstacles learners encounter in attempting to access opportunities for quality education, as well as in removing those barriers and obstacles that lead to exclusion. For removing these barriers and obstacles that lead to exclusion, inclusive education is inevitable. Inclusive education, an approach to educating students with special educational needs addresses the students' individual differences and needs. Inclusive classroom represent students of all ability levels. In an inclusive classroom it is especially important to create an atmosphere where differences are accepted. The attitude of the teacher sets the tone for the students. A positive classroom climate is friendly, respectful, trustworthy, cooperative, safe, supportive, and full of effective communication. Inclusive teaching is good teaching. Adjustments made for meeting the special educational needs of students often benefit all students. Here the researcher tries to mold an ideal inclusive classroom which addresses the issue of education of children with special needs, so that the stakeholders are better equipped to work in an inclusive environment.

Introduction

Inclusion is more than physical presence in the classroom. Classrooms that successfully include students with special educational needs are designed to welcome diversity and to address the individual needs of all students, whether they have disabilities or not. Students learn when they actively participate in the academic lessons and interact with others.

All students have a right to expect the best possible learning environment; special needs students are no exception. Teaching children with special educational needs requires the same strategies and

practices as teaching general education students. In other words, good teaching practices for some students will be good practices for special needs students as well. Inclusion into the general education classroom holds so many benefits for special needs students (as well as others involved in inclusion). Children taught in an inclusive classroom will be better prepared to interact with people with many differences in the real world.

Inclusive classroom represent students of all ability levels. Students have different strengths, needs, interests, and educational backgrounds. The challenge of most inclusive environments is in meeting the needs of

all learners according to their strengths, ability levels, and needs, without separating students homogeneously.

The main characteristics of inclusive classroom are:

- ❖ it involves all participants
- ❖ it has a range of activities and supports
- ❖ it is based on the needs and interests of the participant
- ❖ it aims for acceptance, success and fun for all participants
- ❖ it promotes step by step process

Accommodations & Adaptations

Academic Challenges

The Teacher

Special needs students that are included in a regular education classroom need to feel part of the class and also need to be challenged academically at their level. Teachers may need to make adaptations to the curriculum and learning activities in order to provide special needs students a challenging learning environment.

In an inclusive classroom the teacher's attitude is everything. The teacher should believe that all students can participate. S/he has to value the student and their independence. Independence, no matter how insignificant it may seem, builds self-esteem and preserves the student's integrity. Students learn independence by doing, not by watching others do for them. The teacher has to limit "hand over hand" assistance and use as few prompts as possible when assisting students. The teacher also has to structure academic lessons and social activities to require minimal adult supervision or participation.

The teacher should focus on present potential and future success. s/he should forget past failures. Student success is the responsibility of everyone on the team and everyone involved has valuable insights. Share stories, critical bits of information that one learns from daily contact with the student, or ideas from home. Collaborate when identifying lesson goals and modifications. Troubleshoot problems together. Give more importance to process than products.

The teacher also should understand the dynamics and the culture of the classroom, before making any recommendations for a student. Plan and consider all differences in abilities including speaking, sight, hearing, movement, reading, writing, attention, memory, and organization skills. A student's peers are an excellent resource. Consult peers for smart comments to put on communication devices, suggestions or advice on new ways to increase participation, and create meaningful interactions.

The Parents

In best practice teaching, teachers need a working relationship with parents to provide the best education for their students. This especially applies to students with special educational needs. Parents know their child better than anyone else; they will be able to tell the teacher his/her strengths and areas of need. Parents can be supportive in getting the services a teacher needs. Parents act as the teacher at home by being consistent with communication, rewards, and practicing skills at home (Friend & Bursuck, 1999/1996). In some cases, parents need to be educated about inclusion and the necessity of the home-school relationship. Parents of students with special needs may be reluctant to expose their child to an unknown environment. In that case, parents could be invited to observe the inclusive classroom to gain an understanding of how important inclusion is to the academic, social, and personal needs of their child.

The Method

Some general strategies to individualise instruction for students are to vary the learning objectives, adapt materials and resources, vary teaching strategies, provide flexible time, and use technology (Kauchak & Eggen, 1998). Technology can provide reinforcement by using computers for practice and adaptive tutorials to introduce new material with feedback. Students learn in different ways; it is important as a teacher with a diverse group of learners to provide opportunities to learn in different ways. Offer students choices in how they pursue the learning objectives.

Basic Skill Instruction

Basic skill instruction includes reading, writing, and math skills. There are four ways that basic skill instruction can be adapted for special needs students: pre-skills, selection and sequencing of examples, rate of introduction, and opportunities for practice and review (Friend & Bursuck, 1999/1996). It is important to assess students' pre-skills and teach the pre-skills directly before teaching a more complex skill. For special needs students, some skills should be introduced more slowly to allow the students' time to master those skills before introducing new ones. As is true of the whole class, special needs students need to practice the new skills they acquire to increase retention. This may require direct instruction and review.

Content Area Instruction

Content area instruction, such as social studies and science, may also need to be adapted to meet the needs of special needs students. Much of the learning in content areas involves reading textbooks. There are many reading strategies to activate background knowledge, organize information, and teach new vocabulary (Friend and Bursuck, 1999/1996, Vacca & Vacca, 1999). Brainstorming, making word maps, making analogies, and putting words into categories are some strategies to teach new vocabulary. Graphic organizers, such as story maps and semantic maps, help students organize information while they are reading.

There is a need to review adaptations in order to continue to provide a stimulating and challenging learning environment for students. It is important to avoid planning too much for a student and missing the informal learning that happens in social situations. Also, avoid underestimating or overestimating a student's ability to work.

Assessment and Evaluation

The inclusive class should conduct assessments every day. The annual progress meeting is too late to

assess student learning. The teacher should remember the value of informal assessments and communication and should make every effort to understand how the student best learns and demonstrates knowledge. Adjust teaching methods or learning activities accordingly.

Evaluation of students should be based on a student's achievement relative to his/her goals and ability. It is important to consider student needs when evaluating student assignments or tests. There may not be any standards or point of comparison for some special needs students. Grades will be based on the progress and achievement relative to the students Individual Educational Progress.

Some other ways to evaluate students are through self evaluation and peer evaluation. Peers in the same cooperative group will be able to provide insight into the special needs student's social skills, behavior, life skills, and organization. The student can also provide valuable information about his/her own progress by giving feedback on instruction and selecting work samples that reflect progress.

Well-designed evaluation fosters inclusion. Design evaluation to meet the needs of students. Give tests orally and accept oral responses to accommodate students with special needs or different learning styles. Highlight specific questions for students to answer, or block off certain portions of the test to accommodate students with differing needs.

Physical & Sensory Challenges

Teachers may need to make accommodations for students with physical and sensory challenges. Friend and Bursuck (1999/1996) offer some examples of learning tools that can be used with students with sensory or physical challenges:

Vision Impairments: Large print materials, Low vision devices (magnifying glass), Bright light, Closed circuit television, Portable note taker, Specialized computer software (screen reader, speech synthesizer)

Hearing Impairments: Hearing aids, FM system (microphone worn by the teacher and receiver worn by the student), Sign language, Ability to see the teacher

Physical Disabilities

Wide walkways, Desks adapted for wheelchairs, Handrails in classroom or hallway, Accessible chalkboards and bulletin boards, Safety plans for emergency drills

Students with other kinds of special needs may also be included in the classroom. Accommodations in the classroom for students with these kinds of special needs may be needed as well.

Assistive Technology

The inclusive classrooms should explore technology. Technology enables many students to participate actively in academic lessons and communication. Assistive technology is defined as technological tools that allow individuals with special needs reach their goals using their own abilities (Inclusion: School as a Caring Community website). Examples include talking word processors, specialized keyboards, communication devices, arm and wrist supports, amplified telephone handsets, screen magnifiers, and environmental controls. The class must have simple, efficient technology that all the students can understand and operate. The teacher should create goals for the student to use the technology for learning and communication in the classroom.

Building Community in the Classroom

A classroom community is a classroom of students, teacher(s), and others who all share in the responsibilities and rewards of being in that community. Everyone is accepted as they are and differences are not ignored, but embraced and used as learning tools. Many times, students with special needs have difficulty making friends and being part of the community (Friend & Bursuck, 1999/1996). It is the teacher's responsibility to facilitate social interaction in the classroom and create a safe learning environment for all students. Teachers

can do this by planning opportunities for social interaction, nurturing friendships and supportive behavior, and providing a positive role model.

Teachers also play an important role in educating students about people with disabilities (Friend & Bursuck, 1999/1996). Teachers can use direct instruction, video and other media, demonstrate assistive technology, and use simulation activities. Learning activities such as peer tutoring and cooperative groups can also foster positive social interactions (Friend & Bursuck, 1999/1996). Peer tutoring provides an opportunity for social interaction and academic support. Cooperative groups have four characteristics: positive interdependence (all succeed together), face-to-face interaction, individual accountability, and interpersonal skills are stressed. The benefits of both cooperative learning and peer tutoring are the same for general education students and special needs students. All students gain better social skills and learn to work together when using these approaches.

Dealing with Behavior Challenges

Classroom management is a major concern for all teachers. Classroom management is not just about rules and discipline; it is about creating an environment in which all students are able to learn. Effective management and effective instruction are inextricably intertwined (Kauchak & Eggen, 1998). The goals of an effective management plan are to promote learning and to develop independence in students, not to control students. It is important to begin the school year with a clear management plan. If used consistently, students will understand what is expected of them and behavior problems will be fewer. When planning for classroom management, teachers must keep the following in mind (Kauchak & Eggen, 1998):

- * Student developmental level
- * Physical environment
- * Classroom rules and consequences
- * Classroom procedures

Even with the best management plan, there will be times when the teacher needs to respond to certain behaviors. Some minimum intervention strategies are Catch them being good, make low demands first, respond to the reason for bad behavior, and group disruptive students with non-disruptive students. There may also be times when it is more appropriate to ignore a behavior than to respond actively. With consistent behavior problems, it may be necessary to use a problem-solving approach to respond to the student's behavior. Violence and aggression in the classroom need to be dealt with immediately by stopping the behavior and telling student(s) that it will not be tolerated. Long-term solutions include teaching problem-solving through communication rather than violence.

Prevention of behavior problems is the best way to deal with behavior challenges. Using effective teaching strategies and communication as well as creating a classroom environment that is conducive to learning will help prevent many behavior challenges (Friend & Bursuck, 1999/1996).

Organization of the Classroom

The organization of the classroom is a very important part of teaching. It includes the physical organization of the room, as well as classroom climate, rules, routines, and use of time (Friend & Bursuck, 1999/1996). All students are greatly affected by these things, but sometimes a special needs student may need additional consideration in this area.

The physical organization of a classroom can affect noise and disruption, student interactions, and time that students are engaged. The use of space is very important in a classroom. Wall space can be used for displaying student work, rules, and bulletin boards. The lighting in the classroom can cause problems for some special needs students. Students with visual or hearing impairments need a well-lighted and glare free work space. Other special needs students may be sensitive to

light and will need to work away from the light source. Floor space is an important consideration in the classroom. Desks and tables should be arranged to allow enough space for wheelchairs to pass. Also, for students with visual impairments, the classroom arrangement should be predictable or at least inform these students before making major changes. The arrangement of desks has a big impact on how students work in the classroom. There is no magic formula; different students do better in varying arrangements. One thing that should remain constant in arranging desks is that the teacher should be able to visually monitor all student work areas.

Rules and routines will be part of the classroom management plan, but also contribute greatly to the classroom organization. Many students need structure in their daily activities and will learn better in an environment with consistent, clear routines. Rules help create a sense of order and expectations for a classroom (Friend & Bursuck, 1999/1996). Students will be able to spend more time on learning activities if they know what to expect.

The use of time in a classroom is an important aspect of organization. The more time that students are engaged in learning activities, the more they learn. Transition time is the time it takes to change activities. This is one way that instructional time is wasted. Students with special needs may need more time for transitions because of mobility or behavior issues. Students should know what to expect during transition times and know what materials are needed for the next learning activity.

Classroom climate is the overall 'Feel' of the classroom. In an inclusive classroom it is especially important to create an atmosphere where differences are accepted. The attitude of the teacher sets the tone for the students. A positive classroom climate is friendly, respectful, trustworthy, cooperative, safe, supportive, and full of effective communication.

Conclusion

An ideal Inclusive classroom recognises, accommodates and meets the learning needs of all students. It means acknowledging that students have a range of individual learning needs and are members of diverse communities. Inclusive classroom avoids pigeonholing students into specific groups with predictable and fixed approaches to learning.

Inclusive classroom takes a coherent approach which is anticipatory and proactive. It has specific strategies for delivering equal opportunities and diversity policies. It involves the whole institution and matches provision to student needs. It incorporates regular reflection, review and refinement of strategies and methods that actively involve special educational needs of students.

Above all inclusive teaching is good teaching. Adjustments made for meeting the special educational needs of students often benefit all students. In making teaching inclusive the teacher reassesses the material s/ he uses in her/ his teaching and the way in which it is delivered and assessed.

Although provision for students with special educational needs has dramatically improved in recent years, it is still patchy, under-resourced and inconsistent. The benefits of increasing inclusion, linked to other priorities such as social justice and community cohesion, are also long-term and investment in early childhood education and an increasingly inclusive education system is likely to represent a more effective use of resources than short term initiatives designed to 'close gaps' or support certain marginalised groups. We live in a diverse society. We expect education to reflect, promote and facilitate this beauty of diversity.

'If we want to meet the challenges our global world faces today, the education offered needs to develop the full potential of every citizen in our diverse democracies so that they can contribute with all their experience and expertise to the way forward. This has

moved beyond a humanistic wish, it has become a necessity for the survival of our democracies'. Huber (2011)

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Internship and Mentoring - Vision and Reality

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Abstract

The two significant developments that influenced a serious rethinking in the field of teacher education are the NCF 2005 and the the Right of Children to Free and Compulsory Education Act 2009. In the light of the above two, the Kerala TTC Curriculum was revised and the new DE.d curriculum will be implemented during 2013-14. In this context this paper discusses the concepts of intenship and mentoring.

The University Education commission (1948-49) said “People in this country have been slow to recognize that education is a profession for which intensive preparation is necessary as it is in any other profession”. This concern is still relevant today. The two significant developments particularly, the National Curriculum Framework 2005 and the Right of Children to Free and Compulsory Education Act 2009 led to the development of National Curriculum Framework for Teacher Education (NCFTE-2009)

NCFTE, 2009 elaborates the context, concerns and vision underscoring that teacher education and school education have a symbiotic relationship and developments in both these sectors mutually reinforce the concerns necessary for qualitative improvements of the entire spectrum of educators.

The new DEd Curriculum which is to be implemented in Kerala from the academic years 2013-14, is developed based on the guidelines given in the national curriculum frame work for teacher education 2009. A new approach to curricular areas of teacher education has been highlighted. The curriculum of teacher education is broadly dealt with under foundations of education, curriculum and pedagogy and school internship. The foundations of education include learner studies, contemporary studies, and educational studies. Curriculum and pedagogy deal with curriculum studies,

pedagogic studies and assessment and evaluation studies.

The school internship is visualized by situating the practice of teaching in the broader context of vision and the role of teacher and sustained engagement with learners and schools.

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The school internship programme needs to have the following critical components

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- Visits to innovative centres of pedagogy and learning, wherever feasible.
- Classroom-based research project
- Internship in schools for a continuous period
- Developing Unit Plans and maintaining Reflective Journals and
- Creating and maintaining resources for teaching-learning in the Internship schools

A sustained contact through internship would help teachers to choose, design, organize and conduct meaningful classroom activities, critically reflect upon their

own practice through observations, record keeping and analysis and develop strategies for evaluating students' learning for feedback in to curriculum and pedagogic practice. The school internship programme provides the platform for the interns to give expression to their learning while planning and reflecting on their own practice.

In the present context, the concept of 'mentoring' is inbuilt through the internship programme. The definition of the term 'mentor' as per Oxford Dictionary is 'an experienced and trusted adviser.' An experienced person in a company or educational institution who trains and counsels new employees or students is a mentor.

Need of the beginners

The beginners in teaching may encounter problems mainly in the following areas.

- Management concerns
- Personal concerns
- Socialization concerns
- Personal environmental influences
- Organizational environmental influences
- Professional growth needs

A mentor functions best in this role by relating assessing coaching and guiding. These four functions drawn upon the eclectic body of knowledge that informs the mentoring process and are carried through varieties of skills and behaviours

The Four Mentoring Functions

Relating

Mentors build and maintain relationship with their mentees based on mutual trust, respect, and professionalism. Relating behaviors create an environment that allows mentors to develop a genuine understanding of their mentees ideas and needs and encourages mentees to honestly share and reflect upon their experiences.

Assessing

Mentors gather and diagnose data about their mentees' ways of teaching and learning. They determine their mentees' competency and confidence to handle a given situation. Mentors identify unique aspects of the school and community culture.

Coaching

Mentors help their mentees fine-tune their professional skills, enhance their grasp of subject matter, locate and acquire resources, and expand their repertoire of teaching modalities. Coaching behaviours allow mentors to serve as role models to their mentees; to

Guiding

Mentors wean their mentees away from dependence by guiding them through the process of reflecting on decisions and actions for themselves and encouraging them to construct their own informed teaching and learning approaches. These mentoring functions do not occur in isolation. They consistently overlap and complement each other during the mentoring process.

Student Learning is the Goal

We should always keep in mind that the ultimate purpose behind our effort to improve our mentees' teaching is to improve student learning. When assessing the mentees' needs, this question may be asked : "What else does this beginning teachers need to know and to do in order to help students achieve what they need to know and be bale to do?"

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School as “Centre of Excellence” through the Empowerment of Support Systems

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Abstract

Govt. High School , Bommanur is a unique Educational institution both in its academic achievement and in the availability of the exceptional physical infrastructural facilities. The institution could achieve this with the whole hearted support of the staff , PTA, Local Self Govt. members , NGOs, Clubs and such other community forums. The collaborative atmosphere that exist in this institution is very special to be mentioned here. The school has undertaken various innovative activities like ‘Akshaya (children’s bank) , voice of Bommannur (children’s radio) , etc. This article reveals various activities undertaken under the banner of GHS Bommanur and the way sought for in achieving the characteristics as an excellent educational institution in Palakkad district .

Introduction

Education acts as instrumental for social change targeting the overall development of pupils and society. Ways and means for improving quality of education is being discussed all over . Even in the context of physical and infrastructural backwardness, each school tends to be known as ‘Centre of Excellence’ . It is to be made possible by channelising all efforts in the most constructive way. The general schools of our nation try to overcome all the limitation by the empowerment of support systems, scientific planning and management, effective use of available resources, daring implementation and proper monitoring.

As per the contemporary observations, schools are child friendly, educationally rich and safe and secure from hazards. Schools also ensure to preserve the ecosystem and also act as agencies to utilize resources in a culturally and scientifically agreeable manner. These are possible only through a group work in which SRG, SSG, PTA, NGO and other components play their role constructively. For want of proper co-ordination and convergence of various groups , there should evolve effective

strategies and micro planning at all levels of implementation of School Development Plan – SDP. In order to implement the programmes, a prioritized attempt is to be carried out for ensuring success at the end. It is in this context that Government High School Bommanur took all efforts to implement the SDP aiming at the wholistic development of the institution.

Objectives of the Intervention

The present intervention is carried out with the following objectives.

1. To identify and recognize the role of each support system working in connection with the daily school activities.
2. To Develop strategies for the effective co-ordination and convergence of various support systems.
3. To plan and utilise the available material and non material resources for ensuring the total school development
4. To enrich the school environment both in physical infrastructural facilities and in the academic achievement level through various support systems.

Procedure

The following activities are undertaken in the school for the successful implementation of various programmes.

1. Analysis of the existing SDP SD as identify its strength and weakness.
2. Revision of the SDP based on the needs, requirements, availability of resources and the emerging trends in the field.
3. Scientific and systematic planning
4. Distribution of duties according to the input, output and the nature of task.
5. Co-ordination and convergence of various support systems.
6. Time bond reviews and monitoring.
7. Empowering various agencies / components and appreciating best attempt and results.
8. Sharing of best practice as per the needs of the society.
9. Ensuring excellence of each student in the academic level.

I. Achievements in Stakeholder Participation

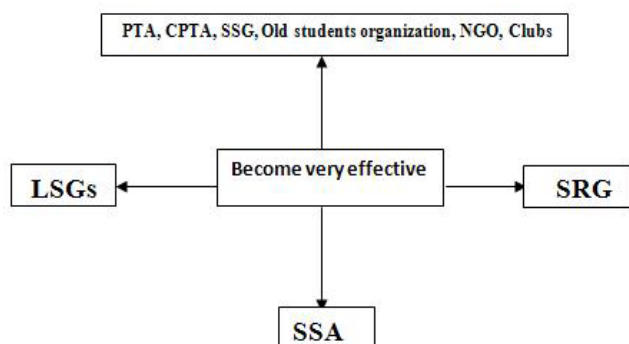


Fig.1 – Whole school development through stakeholder participation

The above mentioned stakeholders (Fig.1) participated well in the whole school development activities and they became very active through the following ways.

1. SRG

- * Discussion on academic affairs where the HM became a true academic leader
- * Creative discussion on academic calendar, year plan, whole school development plan, day to day activities etc

- * Decentralisation of academic and administrative power
- * Exposure for each teacher to become resourceful through expert classes, workshops, study tour, family meets, etc.
- * Ensured the learning facilities and other infrastructural requirements at the best

2. PTA, CPTA, SSG, ALUMNI, NGO, Clubs

1. Ensured the role and involvement of all the above stake holders from the beginning of various activities in school.
2. Fixed the roles of above agencies in various school activities like assembly, day celebrations, utilizing resources in training programmes, workshops, home visits, in mobilising the various resources, etc.
3. Ensured parental involvement through the activities like library in every house, encouraging mothers' reading, a book for birthday, training for soap making– mat making, awareness programmes on food adulteration etc,
4. Conducted house visits, Local PTA, Counselling classes, Family meets, health classes, job training, bio farming, waste management models, savings programme 'Akshaya' students' bank ,etc
5. Facilities in schools such as library, computer lab, play ground, class rooms are being made available for the public.
6. Teachers used to involve in the various societal activities

7. Developing and implementing action plan suitable for solving various issues in the society
8. Conducting various awareness programmes on various societal issues
9. Providing financial help for the treatment of diseases and other relevant affairs
10. Providing assistance to SEN students (enrolled 19 students with cerebral palsy)
11. Giving due recognition and encouragement to each support system.
12. Keeping transparency in financial transactions related to all school affairs .
13. Conducting effective monitoring and reviews inorder to help and honour all support systems

3. LSGs

1. Ensuring effective participation in "Grammasabha"
2. Informing LSG members regarding the needs of the school prior to the preparation of annual work plan of the Grama Panchayat.
3. Ensuring the active participation of people representatives in school activities.
4. Honouring people representatives in school celebrations .

4. SSA

1. Timely submission of plans and projects
2. Prioritising the programmes in a scientific way to make it more feasible .

3. Ensuring academic support of SSA personnels in SRG Planning Process, Training programmes and other school activities
4. Expending of available funds keeping proper records ensuring transparency.
5. Implementing learning enhancement programmes at school level.

II. Academic and other related achievements

Due to the strenous efforts made by all stakeholders , the school could attain better heights in academic achievements. Sopme of them are presented below:

1. Able to maintain 100% result in various competitive examinations and tests.
2. Improved the academic level in each subject
3. Admission in the school increased considerably.
4. Parents and other societal members became more responsible in various school activities
5. Parents and other members of the society became daily visitors in school
6. Parent used to deal classes with the teacher and even in the absence of teachers (School Support Group)
7. Parents actively participated in various fairs such as work experience, sports , games, art and cultural fests .
8. Society used to take initiative in ensuring pupils attendance and enhancing students enrolment.

9. Ensured participation and leadership of experts and local resources in school activities
10. Ensured quality noon meal programme through societal support.
11. Made the day celebrations more attractive and informative
12. Provided help for protecting the health, hygiene and biodiversity of school campus.
13. Ensured participation of more than 90% of parents in PTA and CPTA meetings.
8. 16 Toilets (Girls friendly, adopted and common toilet)
9. Drinking water facility and a good rain water harvesting system.
10. Children's park, open classroom facilities, herbal garden, garden, shady trees with sitting facility, vegetable garden, bio farming, earth worm compost, compost pits and waste management system
11. BALA (Building As a Learning Aid) in 2000 sq feet and child friendly classrooms, green boards, special designs created for having mathematical atmosphere etc,

III Physical achievements

The entire school structure has changed due to the whole hearted efforts of various persons and some of the achievements in this connection are mentioned below.

The school is having:

1. Laboratories for science, social science and maths, and class labs and archeology museum
2. Library, rich with all types of books.
3. 12 classrooms, stage cum classroom, kitchen, dining hall, open shed etc..
4. IT lab with 40 computers, 8 laptops, 2 projectors, 4 printers, digital camera and a smart class room
5. Class rooms have fans, display boards, book exhibition board, port folio carry bags and corner shelf for class lab and library.
6. Voice of Bemannur (speaker connection in all class rooms, voice recording room etc,)
7. Furniture designed in special usable form -both as TLM and child friendly one.
12. Training in Karate, Cycling and Work Experience.
13. Earning through plastic eradication programmes (Children's bank – Akshaya-production and sales of cotton bags.
14. The programme on zero waste classroom, zero waste school to zero waste village.
15. School is having a very secured climate as the society itself is in charge of protecting it.

Conclusion

The experience of GHS Bommanur clearly shows how a school can turn as a 'Centre of Excellence'. As the definition denotes, it was made possible through intentional and daring steps on the part of all who are concerned. Visioning, planning, prioritizing, implementing, managing the resources, strategic approaches, effective co ordination, convergence of support system and proper monitoring of activities helped the institution to achieve the dreams. Efforts are also made to look back into the weakness in performance and to overcome the same through intensification of the efforts.

“Weak Performance of Teacher Trainees in Creating Apt and Organic Problem Situations in Classroom Teaching as the Initial stage of Knowledge Construction.”

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Abstract

To initiate learning is not a matter of joke. Teacher trainees should get better opportunities to equip themselves to trigger the thinking process of children leading to knowledge acquisition. Creating good problem situation is a challenge as well as a pre-requisite of effortless learning. Systematic and planned attempts on the part of the teacher educators will create best result in this connection. Hence the need for enriching the experiential orbit of each teacher trainee by implementing an action plan.

The concept of teaching and learning is getting changed as we move towards and attain better heights in life. These advancements create newer and newer concerns and challenges in the field. The programme of teacher education is no way free from this.

In Kerala, general education curriculum is mainly developed on constructivism. In such a pedagogy, the role of teacher is different from that of the past. In the present situation, the responsibility of teacher educators becomes more crucial and important. As we cherish to have teachers of good quality, the process of teacher education must be free of barriers of all types. Teacher trainees need to be highly competent to help children for constructing knowledge as envisaged in the curriculum. This becomes possible as the teacher raises to the level of a guide, facilitator, friend and a dependable source of inspiration.

In the present programme of TTC curriculum, the teacher trainees do not keep the expected

performance in creating good and apt problem situation in the classrooms. Since this is the initial stage of knowledge construction, it is quite important and crucial because of many reasons. Even though most of the teacher trainees could score very high grades for their +2 courses, they fail to prepare and develop meaningful slots or classroom situations which are most suited. Since teaching is an art, it demands creativity of all types to convert the situations conducive for better learning. Hence ‘to teach’ becomes difficult from ‘to learn’. The experience, presentation, attitude and motivation of the teacher play a major role in this regard.

Need and Significance

As a teacher educator, the researcher has been witnessing the weak performance of the teacher trainees in creating good problem situation. Despite the efforts from the faculties and institution it becomes worse year by year. In the early part of the classroom activities, they either skip or deviate from the task of brainstorming

or motivating the children to make the learning process easier. Some of them do attempt for the same, but fail miserably because of many reasons which are yet to be identified. The researcher has been watching the same and the problem has been haunting the researcher over years. In this context, it was decided to undertake the problem for a study as action research.

Problem

“Weak performance of teacher trainees in creating apt and organic problem situations in classroom teaching as the initial stage of knowledge construction.”

Probable reasons for the weak performance

1. Lack of awareness regarding the need of creating problem situation in the constructivist way of learning.
2. Lack of awareness regarding the craft and techniques of creating apt problem situation.
3. Lack of awareness regarding the strategies to be adopted for developing TM depending materials apart from TB & HB.
4. Weak general knowledge and reading habits.
5. Lack of concentration and research oriented mentality related to observation classes, analysis classes and practice teaching.
6. Lack of previous experience from their teachers during HS & HSS classes.
7. Lack of initiative and inquisitiveness.

Objectives

1. To seek the performance level of teacher trainees with respect to the task of creating apt problem situation in their SEP.

2. To analyse and identify the problem faced by teacher trainees for creating apt problem situation.
3. To develop strategies to convince the target group about the need of designing problem situation simple, fit, organic and apt to the situation.
4. To equip the trainees to develop TM rich in strategies and techniques pertaining to the area.
5. To examine the awareness developed as a result of better experience and sharing.

Hypotheses

1. Awareness regarding the relevance and effect of problem situation will help the target group to perform better.
2. More opportunities and experiences will help the teacher trainees to improve the awareness in this connection.

Sample Selected

22 PSTE – II year students of GTTI (W)
Palakkad.

Tools and other Techniques used

1. Rating scale for assessing the level of performance or awareness.
2. Survey form for checking the involvement in co-curricular activities.
3. Check list for assessment.
4. Assignments for empowering in the use of ICT.
5. Workshops and worksheets for equipping in the craft of creating apt problem situation.
6. Simulation classes and discussions.

Period of study

September, 2012 to February, 2013.

Action Plan

Action plan followed for planning and implementation of various activities is given in Table 1

Table 1
Action Plan

September-2012	Presentation of Action Research Proposal – in the SRG meeting
October, 2012	Pre-test, Survey, Analysis and Discussion based on the findings.
October, 2012	◆ Implementation of action plan. ◆ Assignments based on ICT.
November & December, 2012	Workshops for equipping the target group. ◆ Observation classes ◆ Simulation classes – expert classes ◆ Use of worksheets ◆ Assessment
January, 2013	◆ Analysis of the observations ◆ Developing report

Findings of the study

- ◆ Teacher trainees keep weak performance in identifying and selecting apt problem situations.
- ◆ Better opportunities and experiences helped them to equip better at micro level.
- ◆ Assessment process provided opportunities to grade oneself and to seek possibilities for betterment.
- ◆ They should be provided with living examples and classroom situations with proper analysis.
- ◆ Planning and developing TMs helped the target group to improve the skill and craft in the area.
- ◆ Of the seven items/tasks given for exposure, all the 22 students showed improvement in grades.
- ◆ 15 out of 22 showed considerable progress regarding planning and classroom performance.
- ◆ Implementation of the action plan provided strong moral support to all the teacher trainees to improve their level of confidence.

“Is Problem Analysis a Problem in Standard IV Mathematics?”

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Abstract

Various skills in mathematics should equip one not only to solve mathematical problems, but problems related to his/her life. This is an indication towards the need of converting or blending theory with practice in an organic manner. Most of the fourth class students in the class felt incapacity to analyse problems systematically leading to a sensible solution. Lack of skill in basic operations, individual attention from the teacher and weak confidence level on the part of children are the main causes. A well implemented action plan helped the investigator to tackle the situation effectively within a short period of time.

Mathematical ideas and concepts were evolved and shaped in the contemplations of human beings even in the primitive world. As advancement occurred in all walks of life, the subject acquired an unequalled position in the day-to-day life of humanity. As a result of the efforts of eminent mathematicians facts, concepts and ideas were defined and interpreted in view of strong mathematical principles and theories. It is essential for each child to conceive mathematical concepts with proper understanding from the initial stage of school education. This is quite essential for developing logical reasoning and critical thinking in the later stages of one's life. No doubt, mathematical understanding makes human life rich, meaningful and even entertaining.

We meet with mathematical problems at all times. In the present formal education, the role of mathematics is unique since it helps one to face life situations successfully. Whenever a mathematical problem is faced, the child / person should be in a comfortable situation to analyse it in a scientific manner. The present primary curriculum offers ample opportunities for making

the learning of mathematics more effective and effortless. In the cluster meetings of teachers, there are occasions to convert the process of learning/teaching mathematics easy and attractive.

At the same time the initiative on the part of children is getting diminished especially in the area of problem analysis. The set back in the area has a history of more than a decade. These observations are emerged not only from a single class, but from the experiences of classroom teaching in the district.

Need and Significance of the Study

The basic operations such as addition, subtraction, multiplication and division have a dominant role in the learning of mathematics. To be successful in solving a mathematical problem, each child need to master the skills mentioned. As the subject is a scientific one, all the above processes have to be carried out in a meaningful and organic situation. Moreover, each step has to be blended to the needs and requirements that the problems demands.

As a teacher dealing mathematics in standard IV for the last many years, the investigator could develop the following observations at micro level:

1. Children face difficulty in learning and understanding the problem minutely.
2. They take less initiative to analyse the problem in a wider, scientific and sensible perspective.
3. Processing the available data is a matter of confusion to them.
4. They don't have a positive attitude or initiative towards the problem solving approach.

As the teachers from all schools in the panchayath also raise the same problem in the cluster level discussions, the investigator decided to take it as an action research.

Problem

“Identifying and solving the problems in the area of ‘problem analysis’ among fourth standard students and teachers.”

Probable causes for the state of affairs

1. Lack of awareness and skill in basic operations.
2. Inability to deal with problems where ‘balance’/ carry over arises in the basic operations.
3. Lack of experience in analysing mathematical problems in classrooms.
4. Incapacity to identify and apply the basic operations in the given context.
5. Lack of need feeling so as to solve it with proper spirit.
6. Inability to approach problems in a wider perspective.
7. Inability to learn problems at micro level.
8. Weak planning and presentation of teachers.

Objectives

1. To identify the reasons for the weak performance in the area of problem analysis.

2. To seek and identify the difficulties faced by practising teachers in the area of analysing problems.
3. To identify the hard spots in the area and to propose remediation.
4. To design and implement an action plan for the betterment in performance level.
5. To assess the improvement in performance through systematic assessment and feedback.

Hypotheses

1. Presentation of and skill in basic operations with proper backgrounds in relation to problem analysis will help the children to improve the level.
2. Worksheets, cards and other materials related to basic operations will enrich the level of performance among children.
3. Intentional classroom techniques will help the target group to develop better understanding.
4. Individual attention helps to improve the level of performance.

Target Group

1. 40, IVth Standard students of Chamaparamba AMLPS, Mannarkkad Sub district.
2. 20 students each from 5 neighbouring schools in Thachanattukara Panchayath of Palakkad District.

Period of Study

October, 2012 to February, 2013.

Tools and materials used

- * Test for pre and post tests.
- * Worksheets, mathematical cards and charts.
- * Activity package.

Table 1
Action Plan

Duration	Action/Activities conducted
10/10/2012 to 01/11/2012	Pre test in all the 6 schools.
10/11/2012 to 20/11/2012	Visiting practicing teachers dealing mathematics in the sample schools.
25/11/2012 to 30/11/2012	Analysing the test results and the responses of teachers.
01/12/2012 to 05/12/2012	Grouping, awareness activities.
05/12/2012 to 10/12/2012	Activities related to simple problems with emphasis to addition; evaluation.
11/12/2012 to 16/12/2012	Activities related to simple problems with emphasis to subtraction; evaluation.
01/01/2013 to 10/01/2013	Activities related to simple problems with emphasis to multiplication; evaluation.
11/01/2013 to 22/01/2013	Activities related to simple problems with emphasis to basic operations; evaluation.
22/01/2013 to 10/02/2013	Developing and familiarising new problems, analysis; evaluation.
15/02/2013 to 16/02/2013	Post test in all the 6 schools ,data processing, analysis of data, preparing the report

Other highlights:

- * 140 students constitute the sample.
- * 8 teachers representing 6 schools participated in the implementation stage of the study.

Limitation:

- * Division is not considered and included the process.

Findings of the study:

1. Less than 50% of target group keep number sense and skill in the basic operations.

2. Mastery in each basic operation is quite essential to undertake tasks related to problem analysis.
3. There evolved a hike in the A grades and B grades with respect to the problems solving with focus on analysis.
4. The planning and individual attention on the part of the teachers provided good momentum to the target group in their performance level.

An Analytical Observation on School and Teachers Empowerment Programme-STEP

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Abstract

Vision and scholarship are the main necessities to undertake educational tasks with perfect confidence. But in the new social and academic contexts in Kerala, apart from the above, management skill is also quite essential to serve the purpose. Whenever a manager receives support, training and recognition with a sense of reality, the capacity and the attitude get boosted to provide unbelievable and surprising results. STEP is one of the tryout attempts undertaken by DIET Palakkad with scientific, systematic and research oriented backing. Coordination and convergence make it worthy and exalted.

Introduction

The activities of DIET become more acceptable and accountable when educational activities within the district are better coordinated to produce best results. Apart from PSTE classes, DIETs all over India undertake programmes related to planning, training, material development, research activities and tryouts as per the needs and requirements in the field. School and Teachers Empowerment Programme – STEP – is one of the district specific innovative tryout programmes undertaken by DIET Palakkad, Kerala with special focus on academic excellence which is visioned and designed by the institute under the label, Pedagogy Lab. District Panchayath, Palakkad provides all institutional support for the successful implementation of the programme.

Objectives

- * To equip each sample school to prepare a School Development Plan – SDP- and to plan academic activities accordingly.
- * To create a conducive atmosphere among the sample schools for ensuring quality education under the label Pedagogy Lab.
- * To develop a research oriented assessment strategy in order to ensure academic excellence.

- * To coordinate the activities of STEP through systematic monitoring and feedback.
- * To disseminate the best practices among teacher community and the society by means of discussions, seminars, debates and appreciating the strategies of best achievers.

Procedure Sample

Being a tryout programme, 100 schools were selected for STEP 2012 ensuring representation to all Grama Panchayaths and Municipalities of the District.

Special features of STEP 2012

- * Selection of the sample was done at district level with proper consultation with AEOs, BPOs and the Faculties in charge of the BRCs.
- * No additional burden was imposed on the sample schools
- * Planning, implementation, monitoring and evaluation were carried out at sub district level.
- * DIET act as the leading agency where as other educational functionaries play the roles assigned.
- * School level activities are designed in such a way that all activities ultimately provide an impetus to the academic level of each student.

- * School is taken as a unit targeting excellence in all respects.

STEP - Areas of Interventions

As the basic academic unit in the educational scenario, the role and function of schools are highly significant at all times. Apart from the programmes initiated at state level, each STEP school can design and undertake innovative activities for evolving better academic performance. STEP 2012 initiates such exclusive activities with proper academic spirit. The activities are planned in such a way that students are the ultimate beneficiaries. The specific areas suggested as the part of interventions are:

1. Programmes related to Mathematics – with special focus on National mathematics Year
2. Total school health and sanitation programme
3. Programmes on parental empowerment
4. Programmes enabling to use ICT as a pedagogic tool
5. Programmes for Lab and Library development.

The tryout programme includes planning, material development, training, monitoring, mid-term reviews, sharing of experience and appreciating best practices. It extends from June 2012 to February 2013

Action Plan for STEP 2012

An action plan for STEP 2012 was prepared, the programmes were implemented and the details are given in Table 1

Table 1
Programmes Implemented in the District through STEP

Sl. No.	Activity Undertaken	Level at which it is organised	Responsibility	Nature of activity	Period
1.	Planning Meeting	District	DIET	Planning the try out programmes, fixing the target group, assigning the duties for preparing vision paper	July 2012
2.	STEP - 2012 Vision paper preparation	District	DIET	Familiarisation of the programme among the target group (HMs, SGR convenors of the sample schools were the participants)	July 2012
3.	Guidelines STEP - 2012	Sub District	DIET faculties and BRC functionaries	Training based on the vision of STEP 2012	July 2012
4.	SDP (School development Plan) - Revision	School	HM, PTA and SRG	Revising SDP based on the guidelines prepared on STEP activities	July 2012
5.	Inauguration of STEP	Sub District	DIET faculty, AEO and BPO	Formal inauguration of STEP 2012 at subdistrict level	August 2012

Sl. No.	Activity Undertaken	Level at which it is organised	Responsibility	Nature of activity	Period
6.	Developing supporting materials	District	DIET	3 - exclusive materials were developed * 'Cheppu'-for standard 1 teachers * 'Ayutham'-for UP mathematics * 'Bhramanam'-for UP social science teachers	Oct.2012
7.	Monitoring	Sub District	DIET faculty AEO and BPO	Combined visit and monitoring of activities related to STEP	Every month
8.	Workshop on Mathematics	Sub District	DIET	Training to mathematics teachers for setting maths lab and developing TLM s	Nov. 2012
9.	Maths camp	School	HM, SRG	Two days camp on Mathematics focussing on National mathematics year	Nov. 2012
10.	Training on digital documentation	Sub District	DIET	Hands on training on various forms of digital documentation	Jan. 2013
11.	Mid term review	Sub District	DIET faculty, AEO BPO	Review based on the vision paper and school level performance	Jan. 2013
12.	Strengthening the activities of STEP	Sub District and school	HMs, SRG	Activities are intensified to attain the targets. Review reports are treated as indicators	Jan 2013 to Feb. 13
13.	Documentation	School	HM, SRG	Preparing textual/ digital documents on STEP activities	July 2012 to Feb. 2013
14.	One day educational seminar	Sub district	HM in charge of the host school	Seminar for disseminating the best practices among STEP schools.	Feb. 2013
15.	Appreciation ceremony	District	DIET and District Panchayat Palakkad	A two day, state level seminar was organised in DIET campus in which leading educationalists participated.	March 2013

Analytical observations

As a tryout programme at district level, the main focus was on the activities at school level. As it is suggested by the title of the programme, the ultimate goal was the empowerment of school as a whole, and the teachers who act as a deciding factor for all kinds of development. The activities were monitored and qualitative changes were accounted systematically based on the tools developed for the purpose. All the five areas were analysed and assessed separately with the proper vigilance.

Findings

1. Parents could take hold of the planning process of the school and became aware regarding SDP
2. Parental involvement in PTA and CPTA meetings increased considerably.
3. Activities like house visit, vocational training, awareness programmes, day celebrations and orientations to students could attain better momentum.
4. Schools initiated to set mathematics lab and made library facilities rich through community participation.
5. The easy and best access to the library created a good reading culture among the students and mothers.
6. Developed resource maps based on home visits and conducted corner meetings. This attempt created better harmony among the parents and the school authorities.
7. Workshop on mathematics helped the teachers to perform better in classroom transactions.

8. Maths lab, honesty shop, school bank and school level exhibitions were the positive developments due to this intervention.
9. Community participation attained better heights and schools established better rapport with governmental and non governmental agencies including people representatives.
10. Effective use of support materials is the speciality of STEP.
11. Most of the schools could establish well equipped computer lab with the assistance of MLAs, MPs and other educational agencies.
12. The health and sanitation became an agenda at each school.
13. HMs, SRGs and PTAs got better role and they were trained well to prepare and implement SDP
14. High schools became successful to form TAGs (Teacher Adopted Groups).
15. Students academic achievements showed vertical growth where STEP was implemented successfully.

Conclusion

The success of a programme or an institution by and large depends on the capacity, unity, dedication, planning and the way the programmes are conducted. Research is the foundation of each stage of success in this connection. STEP supported the schools and the authorities to undertake all activities with a positive mind and to create empirical developments in each area. Development of management skill is one of the objectives realised as a part of STEP implemented by DIET Palakkad.

“Bhashyam” - Inservice Teacher Training through Distant Mode

An Innovative Attempt of DIET, Palakkad

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Abstract

Distant mode training is not a panacea to the problems met by teachers dealing language. But the tryout programme conducted in Palakkad district of Kerala proved that the teachers are highly motivated and satisfied of the performance on the part of the core group and DIET personnels. The programme leaves ample slot for further research to evolve better results in the area of teacher training. The tryout programme Bhashyam has succeeded in realising the objectives put forward.

Introduction

Training has a remarkable role in converting human and non human resources into socially desirable and easily accessible. This dictum is applicable to all disciplines especially to education where human resources are channelised effectively depending on the situation. The advancements in Science and technology lead to the evolution of newer branches like ICT which could redefine and restructure the concept of training in most respects. In this context there is a need for rethinking in the traditional training strategies that prevail in the present educational Scenario with special reference to teacher training. It is evident that institutions like DIETs can play a vital role in this regard. NCF TE -2009 proclaims that :

“Courses of short and long duration designed to develop either specific skills or areas of interest could be developed and offered to teachers to take over the year. For example, a DIET could design and offer courses in specific topics such as ‘teaching fractions’, developing secular attitudes among children’, ‘aids education’ etc. Some of these could

be of a short duration, say 4 to 5 days, while others may even be for a longer period of time, from 1 to 3 months to enable teachers to develop a specific core area in which they need to strengthen their knowledge-base and professional skills, e.g. using theatre in the classroom, organizing and managing group activities etc. If schedules for such courses along with their content areas are announced well in advance, teachers could sign up and take these courses as and when they wish to. Some of these courses may be designed as continuous periods, while others may be designed with gaps in between, during which teachers could practice and come back to share experiences. Such courses could award certificates. Mass trainings cannot and do not have any impact on teachers practice and are a waste of resources and time”- NCF TE 2009

Many education committees including JS Varma committee pointed out the importance of distant mode training for the professional development of teachers. Moreover, the practicing teachers in the state of Kerala are looking forward for a shift in the traditional style of

training either in content knowledge or at pedagogic level. The feedback from the field also necessitates such a change and instructional level, irrespective of the subjects.

It is in this context that DIET Palakkad attempted to design a training strategy ‘Bhashyam’ so as to tryout the same for the further implementation to a wider mass of teacher community.

Significance of the intervention

Teaching of Malayalam language and literature in the state confront with innumerable challenges. Both content knowledge and pedagogic awareness of the teachers are often challenged in the context of paradigm shift. The issues and concerns are listed below:

1. Most of the teachers transacting Malayalam at UP level do not have a basic degree in the language.
2. They fail to deal the classes with a deep awareness regarding constructivism.
3. Many of the teachers are not ‘running streams’ but ‘stagnant pools’ in the case of reading and updation.
4. The incapacity and lack of interest of the students create hurdles in the classroom process.
5. The flexibility of the evaluation system provoke them to skip whatever they need.
6. The teacher takes less initiative to recognise and inspire creative students.
7. The prevailing training and monitoring strategies are less attractive and supportive.

Objectives of the programme

1. To develop a new and attractive training strategy among the teachers dealing Malayalam at UP and HS level.
2. To provide necessary content and pedagogical inputs to the sample group.
3. To design and implement the new mode of training as a tryout among the selected sample.
4. To equip the teachers to use ICT effectively for better training and also for curriculum transaction.
5. To suggest measures to extend the programme based on the experience in the field.

Sample

60 practising teachers in the district who had registered to this programme by online are treated as the sample.

Method adopted for implementing Bhashyam:

- * Constitution of a core team consisting eminent language teachers, poets, writers and educationists.
- * Course content was developed by the core team through workshops conducted thrice in the year 2012-13.
- * Training modules were developed in tune with the TB, HB and curriculum for the classes.
- * A course book named ‘Bhashyam’ was developed discussing all about the programme including vision, strategies, objectives, process and feedback.

- * Course book was familiarised and published in the inaugural function by the standing committee chairman, District Panchayat, Palakkad.
- * Course participants went on with tryouts in the respective class rooms.
- * Field experiences were uploaded in the blog and shared through e-mail.
- * Course participants were invited for face to face interaction during the last phase.
- * A seminar was conducted to disseminate the findings and class room experiences.
- * Course participants were exposed to interact with eminent teachers, poets, educationists and literary figures in the state.
- * A special material ‘Elaneer’ was developed and published by DIET Palakkad by incorporating the creative works of the students in the tryout classes.
- * A childrens’ camp was also conducted for sharing the field realities and to initiate further discussion on ‘Bhashyam’

Findings and Educational implication of the programme

1. The programme highlighted the necessity of dealing language classes with proper footing on the beauty of language.
2. Could equip a district core team which is competent to provide all kinds of academic support through on line.
3. The material ‘Bhashyam’ received attention and recognition among the participants and even among the teacher community.
4. Tried out the need and possibility of re-using the creative works of children.
5. Created a union of sixty language teachers who worked systematically with a research motive.
6. Could converge various interventions like ‘Sarga koottayma’ of SSA, ‘Vidyaramam’ and teacher training programme of the department of education.
7. In the context of implementation of RTE, the programme could ensure training with the presence of the teachers in the classroom and is a remedy for teacher absenteeism.

Plan for 2013-2014

- * DIET wishes to extend the programme for a wider group of teachers.
- * A contact programme will be scheduled for enriching the awareness regarding possible strategies of dealing language with an aesthetic sense.
- * More and more research oriented materials will be developed to equip the team.
- * Better assignments will be given to the course participants to undertake try outs.
- * Appreciation certificates will be issued to the course participants in the last phase of the programme.

Conclusion:

Distant mode training has to be planned properly for effective implementation. The course participants are highly motivated by the spirit of the programme. Constitution of the district level core team, online communication and the training through blog are the highlights which created far-reaching effect in the field.

A Review on the Effective Use of ICT in Teacher Training

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Abstract

Information and Communication Technologies (ICT) have become common place entities in all aspects of life. Across the past twenty years, the use of ICT has fundamentally changed the practices and procedures of nearly all forms of endeavours within business and governance. Education is a very socially oriented activity and quality education has traditionally been associated with strong teachers having high degrees of personal contact with learners. The use of ICT in education lends itself to more student- centered learning settings. But with the world moving rapidly into digital media and information, the role of ICT in education is becoming more and more important and this importance will continue to grow and develop in the 21st century. In this paper, a theoretical review regarding the effective use of ICT in teacher training is provided.

Introduction

Teaching is becoming one of the most challenging professions in our society where knowledge explosion occur in undefinable pace and strength. As new concepts of learning have evolved, teachers are expected to facilitate learning and make it meaningful to individual learners rather than acting as donors of knowledge and skills. Modern developments of innovative technologies have provided new possibilities to teaching profession, but at the same time have placed more demands on teachers to learn how to use these new technologies in their teaching. These challenges demand teachers to continuously retrain themselves and acquire new knowledge and skills while moving ahead. These challenges necessitate learning and training for want of equipping and updating.

Today, a variety of Information and communication technology (ICT's) can facilitate not only delivery of instruction, but also the very process of learning itself. More over, ICT can promote international collaboration and networking in education along with professional development. Because of rapid

developments in ICT, especially the Internet, traditional teacher training as well as in-service teacher training institutions are undergoing rapid change in their structure and function. Naturally there evolved changes with respect to content and strategies. However, combining new technologies with effective pedagogy has become a task for both pre- service and in-service teacher training institutions.

Objectives

1. To review the effective use of Information and Communication technology in the field of teacher training.
2. To review the new needs of teachers as well as possibilities and challenges of ICT in education.

Theoretical Overview

Researches have proved that ICT can cause for changes in the following areas related to learning and instruction.

- * Instructional strategies adopted by teachers with main focus on student centered approach.

- * Efforts for creating higher order skills by promoting collaborative activities.
- * Ensuring speed and quality with regard to either the concept or facts.

Recognizing the importance of ICT in teaching and learning, majority of the countries in the world have provided ICT teacher training in a variety of forms and degrees. Even though many teachers report that they didn't undergo adequate training to prepare themselves to use technology in teaching, they are forced to develop the capacity by themselves.

The application of ICT in classrooms addresses the issues such as selecting appropriate ICT tools, supporting students in the use of those tools, using ICT to promote learning activities, developing new methods of facilitating learning and evaluating student performance and so on. One example for category of ICT in teacher training is given in Fig(1) below.

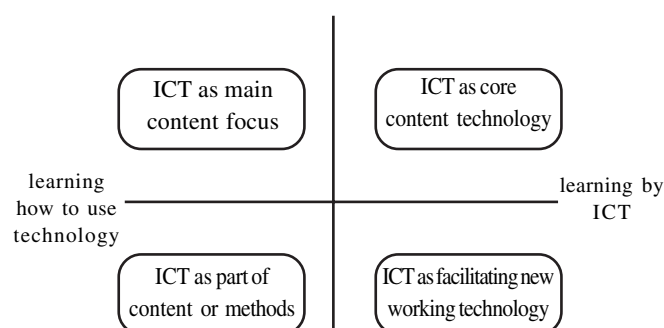


Fig (1) ICT Core Technology

Needs and requirements based on the emerging trends

Advancements in ICT has triggered crucial and drastic changes in the pedagogic spectrum of our society. In addition to the skills in manipulating the hardware, efforts are also needed to make use of system for effective curriculum transaction. At the same time there arises the demand for the following.

- * Strengthening the knowledge about ICT.
- * Familiarising the hardware and software with deserving importance.
- * Developing techno- pedagogical skills to integrate ICT with curriculum.

- * Arranging the material resources (hardware) in reach
- * Developing professional skills in the effective use of ICT in day to day classroom instruction
- * Slot for self study so as to ensure professionalism.
- * Creating and sharing of easy platform for collaboration, extension and dissemination.

Possibilities of ICT in Teacher Education

As the learning process is increasingly becoming an experiential practice, a teacher has to organise various activities in this connection. Here, ICT will help her a lot if she is capable of integrating it into classroom transactions. The teacher training programmes need to be reshaped by giving more importance to ICT and the teacher capability can be enhanced by the following ways.

- * Teacher should be trained in such a way that she could be able to use ICT as a pedagogical tool
- * Teacher need to be motivated through training to undertake research based collaborative interventions by integrating ICT into the classroom process and to reflect up on it.
- * Teacher capability can be updated through the internet based training programmes, where interactive softwares can be utilised at the desired level.
- * Teacher training on ICT shall be organised by which the teachers can undertake collaborative efforts in each school in developing and utilising various digital resources.
- * Online training programmes can also be mooted in this direction. Teachers can interact with expertised persons at various levels through the internet via experiences like tele-learning process using facilities of SKYPE or such other online softwares.
- * Teachers online forums can also be formed and this will help to share various experiences among them.

- * Teachers can be trained to develop Blogs , so they can upload and make use of various digital resources at their will.
- * Teachers need to be motivated for the self updation by using all possible resources both in digital and other forms.

Challenges in Using ICT in Teacher Training

There are various challenges that exist in the process of teacher training using ICT , of which some are listed below.

- * The available computer facilities of various training institutions are not able to utilise at the level best.
- * The availability and utility of the free softwares to provide the best possible ICT facilities to the teacher training institutions are still not catered.
- * It couldn't undertake various teacher training programmes by using ICT as a pedagogical tool and in organising face to face training by using online learning facilities .
- * Supporting the teacher training institutions by providing all possible resources especially in ICT is a demand which is yet to be achieved.
- * Digital based management of various institutional activities via specific softwares and thereby reducing the work load is still a distant dream.
- * Legal barriers that exist in using and sharing certain digital resources do also cause problems.

Conclusion

A well-designed teacher training programme is essential to meet the demands of teachers who are in need of the craft of using ICT effectively in teaching learning process.. Due to the fast developments in ICT, it is expected that ICT will bring drastic changes in the modes of teacher training throughout the world. It is thus important for teacher educators and policy makers to understand the factors that affect teacher training with proper skills on ICT.

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സംഗ്രഹം

പുതിയ നൂറ്റാണ്ടിലെ അധ്യാപകരിൽ നിന്നും സമൂഹം നിരവധി സംഭാവനകൾ പ്രതീക്ഷിക്കുന്നുണ്ട്. മാറുന്ന കാലത്തിനനുസരിച്ച് കുട്ടികളെ സഹായിക്കാനുള്ള കഴിവും മനോഭാവവും ജീവിത നൈപുണികളും അധ്യാപകർക്ക് സ്വായത്തമായിരിക്കണം. കുട്ടിയെ രൂപപ്പെടുത്തുന്ന ആൾ (Student Mentor) എന്ന നിലയിൽ ക്ലാസ്സിൽ ഫലപ്രദമായി ഇടപെടാൻ ടീച്ചർക്ക് കഴിയണം. ഐസിടി സംബന്ധിച്ച വ്യക്തമായ ധാരണകളും സാമൂഹ്യസംയോജകൻ എന്ന നിലയിൽ പ്രവർത്തിക്കുവാനുള്ള സന്നദ്ധതയും ടീച്ചറിൽ വികസിപ്പിച്ചെടുക്കേണ്ടതുണ്ട്. ഈ നിലകളിൽ അധ്യാപകരെ പരിവർത്തിപ്പിച്ചെടുക്കേണ്ട (transform) ബൃഹത്തായ മാനേജ്മെന്റ് പരിശീലന പദ്ധതി സംസ്ഥാനത്ത് 2012 ജൂലൈയിൽ ആരംഭിച്ചു. പദ്ധതിയുടെ ഫലപ്രാപ്തി വിലയിരുത്തുന്നതാണ് ഈ പഠനം.

വിദ്യാഭ്യാസ വിചക്ഷണന്മാരും മാനേജ്മെന്റ് വിദഗ്ദ്ധരും അധ്യാപകരും ചേർന്ന് തയ്യാറാക്കിയ 60 മണിക്കൂർ ദൈർഘ്യമുള്ള പരിശീലന മൊഡ്യൂളും വിനിമയ രീതിയും ഈ പഠനത്തിൽ വിശകലനം ചെയ്യുന്നുണ്ട്. തെരഞ്ഞെടുത്ത പരിശീലന ക്ലാസ്സുകൾ നിരീക്ഷിച്ചും അധ്യാപകരിൽ നിന്നും വിദ്യാഭ്യാസ ഓഫീസർമാരിൽ നിന്നും വിവരങ്ങൾ ശേഖരിച്ചുമാണ് പഠനം നിർവഹിച്ചിരിക്കുന്നത്. പരിശീലന ഉദ്ദേശ്യങ്ങൾ സ്വായത്തമാക്കുവാൻ അധ്യാപകർക്ക് എത്രമാത്രം കഴിഞ്ഞു എന്ന് കൃത്യമായി വിലയിരുത്തുവാൻ ഇതുവഴി സാധ്യമായി. പുതിയ നൂറ്റാണ്ടിന് ചേർന്ന അധ്യാപകൻ (Millenium teacher) എന്ന കാഴ്ചപ്പാടിൽ സംസ്ഥാനത്ത് മികച്ച അധ്യാപകരെ രൂപപ്പെടുത്തുന്ന പ്രക്രിയക്ക് തുടക്കമിടാൻ മാനേജ്മെന്റ് പരിശീലനത്തിലൂടെ കഴിഞ്ഞിട്ടുണ്ട് എന്ന് പഠനം തെളിയിക്കുന്നു.

ആമുഖം

പുതിയ സഹസ്രാബ്ദം നിലവിലുണ്ടായിരുന്ന വിദ്യാഭ്യാസ സങ്കല്പങ്ങൾ മാറ്റി മറിക്കുകയാണ് വിദ്യാഭ്യാസം കൊണ്ട് വ്യക്തിക്കും രാജ്യത്തിനും നേരത്തെ അടയാളപ്പെടുത്തിയിരുന്ന നേട്ടങ്ങൾ മാറ്റത്തിന് വിധേയമായിക്കൊണ്ടിരിക്കുന്നു. പുതിയ തലമുറയുടെ സാമൂഹികമായ ആവശ്യങ്ങളും തൊഴിൽ സാധ്യതകളും അനുദിനം നവീകരിക്കപ്പെട്ടുകൊണ്ടിരിക്കുന്നു. അവരാണ് മാറുന്ന ലോകത്തിന് ഉടമകളാകേണ്ടത്. കാലം ഉയർത്തുന്ന വെല്ലുവിളികളെ ഏറ്റെടുക്കുവാൻ പുതിയ തലമുറയെ പ്രാപ്തരാക്കേണ്ടത് അധ്യാപകരാണ്. സ്വന്തം വ്യക്തിത്വവും കഴിവും തിരിച്ചറിഞ്ഞ് പ്രവർത്തനങ്ങളെ വിശകലനം ചെയ്യുന്ന അധ്യാപകർക്ക്

മാത്രമേ രാഷ്ട്രം മുന്നോട്ടുവെക്കുന്ന സുപ്രധാനമായ ഈ ദൗത്യം ഏറ്റെടുക്കുവാൻ കഴിയൂ.

ഇന്ത്യയിലെ ഏറ്റവും വിദ്യാസമ്പന്നരുള്ള നാടാണ് കേരളം. മാറുന്ന ലോകത്തിന്റെ ആവശ്യങ്ങളെ ഉൾക്കൊണ്ട് പ്രവർത്തിക്കാൻ കേരളത്തിലെ സ്കൂൾ അധ്യാപകരെ സജ്ജരാക്കുന്നതിനായി പൊതുവിദ്യാഭ്യാസ വകുപ്പ് 10 ദിവസം നീണ്ടു നിൽക്കുന്ന മാനേജ്മെന്റ് പരിശീലനം ആസൂത്രണം ചെയ്ത് നടപ്പിലാക്കി വരുന്നു. കേരളത്തിലെ ഏറ്റവും വലിയ ജില്ലയാണ് പാലക്കാട്. 2013 ജനുവരി 31 വരെ 175 വിദ്യാലയങ്ങളിൽ നിന്നായി 2370 അധ്യാപകർ (20.60 ശതമാനം) പരിശീലനം പൂർത്തിയാക്കിക്കഴിഞ്ഞു. ഈ പരിശീലനത്തിന്റെ ഫലപ്രാപ്തി വിലയിരുത്തുകയാണ് ഈ പഠനത്തിന്റെ ലക്ഷ്യം.

1. ഉദ്ദേശ്യങ്ങൾ

1. പാലക്കാട് ജില്ലയിൽ ടീച്ചർ ട്രാൻസ്ഫർമേഷൻ പ്രോഗ്രാമിന്റെ ആസൂത്രണം, സംഘാടനം, വിനിമയരീതികൾ, എന്നിവ വിലയിരുത്തുക.
2. പരിശീലനത്തിന്റെ ഉള്ളടക്കം അധ്യാപകർ എപ്രകാരം ഉൾക്കൊള്ളുന്നു എന്ന് കണ്ടെത്തുക. മികവുകളും പരിമിതികളും അടയാളപ്പെടുത്തുക.

2. പഠനരീതി

പാലക്കാട് ജില്ലയിൽ 13 കേന്ദ്രങ്ങളിലാണ് അധ്യാപക പരിശീലനം ആരംഭിച്ചത്. ഇതിൽ പാലക്കാട്, ആലത്തൂർ, ഒറ്റപ്പാലം, തൃത്താല, പറളി, എന്നീ 5 കേന്ദ്രങ്ങളിലെ പരിശീലന ക്ലാസ്സുകൾ പഠനത്തിനായി തെരഞ്ഞെടുക്കുകയുണ്ടായി. പരിശീലനം മോണിറ്റർ ചെയ്യുന്ന ഉപജില്ലാ വിദ്യാഭ്യാസ ഓഫീസർമാർ, ഡയറ്റ് ഫാക്കൽറ്റി അംഗങ്ങൾ എന്നിവരെയും പഠനത്തിൽ പങ്കാളികളാക്കിയിരുന്നു. പരിശീലന കേന്ദ്രം സന്ദർശിച്ച് അധ്യാപകരുമായും ആർപി മാരുമായും ചർച്ച ചെയ്തും, ഫീഡ്ബാക്ക് റിപ്പോർട്ടുകൾ സമാഹരിച്ചും വിവരശേഖരണം പൂർത്തിയാക്കി. സർവ്വേ രീതിയാണ് വിവരശേഖരണത്തിനായി അവലംബിച്ചിട്ടുള്ളത്.

2.1. പരിശീലന മൊഡ്യൂളിന്റെ ഘടന

ഇന്ത്യയിലെ വിദ്യാഭ്യാസ വിചക്ഷണരും മാനേജ്മെന്റ് വിദഗ്ദ്ധരും സംയുക്തമായിട്ടാണ് 60 മണിക്കൂർ സമയദൈർഘ്യമുള്ള പരിശീലന മോഡ്യൂൾ രൂപകല്പന ചെയ്തത്. പേഴ്സണൽ മാനേജ്മെന്റ്, റിസോഴ്സ് മാനേജ്മെന്റ്, ഐ.സി.ടി എന്നിവയ്ക്ക് പ്രാധാന്യം നൽകിക്കൊണ്ട് ക്ലാസ്റൂം മാനേജ് ചെയ്യുവാനുള്ള അധ്യാപകരുടെ കഴിവുകൾ വികസിപ്പിക്കും വിധത്തിലാണ് മോഡ്യൂൾ രൂപകല്പന. 15 ലെഫ് സ്കിൽ മേഖലകൾ ഇതിൽ ഉൾപ്പെടുത്തിയിരിക്കുന്നു. കേരളത്തിൽ അധ്യാപക ശക്തീകരണവുമായി ബന്ധപ്പെട്ട് കഴിഞ്ഞ 2 വർഷത്തിനിടയിൽ തയ്യാറാക്കിയ സമഗ്രമായ മൊഡ്യൂൾ ആണ് പരിശീലനത്തിന് ഉപയോഗിക്കുന്നത്. ഐ.സി.ടി സാധ്യതകളെ പരമാവധി ഉപയോഗപ്പെടുത്തി പ്രവർത്തനാധിഷ്ഠിതമായ രീതിയിലാണ് പരിശീലനം വിഭാവനം ചെയ്തിരിക്കുന്നത്. പെരുമാറ്റ രീതികൾ (Behaviour), ശേഷികൾ (Skills), വിവര വിനിമയ സാങ്കേതിക വിദ്യാഭ്യാസപുണി (ICT skills) എന്നിങ്ങനെ 3 മേഖലകളാക്കി തിരിച്ച് പ്രവർത്തനങ്ങൾ വിന്യസിച്ചിരിക്കുന്നു.

പരിശീലനം വിജയകരമായി പൂർത്തിയാക്കിയ ടീച്ചർ മികച്ച സാമൂഹ്യസംയോജകൻ (Social co-ordinator), കുട്ടിയെ രൂപപ്പെടുത്തുന്ന ആൾ (Student Mentor), മികച്ച ടീം പങ്കാളി (Team member) വിവര വിനിമയ സാങ്കേതിക വിദ്യ ഉപയോഗപ്പെടുത്തുന്ന ആൾ എന്നീ നിലകളിൽ മികവു പുലർത്തുമെന്നും അവർക്ക് വിദ്യാലയം മികവിന്റെ കേന്ദ്രം (Centre of Excellence) ആയി രൂപപ്പെടുത്തുവാൻ കഴിയുമെന്നുമാണ് പരിശീലന ഏജൻസിയായ എസ്.സി.ഇ.ആർ.ടി പ്രതീക്ഷിക്കുന്നത്.

3. നിരീക്ഷണങ്ങൾ

ഒരു പരിശീലനപരിപാടിയുടെ ഫലപ്രാപ്തി നിശ്ചയിക്കുന്നത് അത് ഗുണഭോക്തൃ സമൂഹത്തിൽ എന്തെന്ത് ധനാത്മകമായ മാറ്റങ്ങൾ സൃഷ്ടിക്കുന്നു എന്ന് സൂക്ഷ്മമായി വിലയിരുത്തിക്കൊണ്ടാണ്. ഈ നിലയിൽ ഒരന്വേഷണത്തിന് ഇവിടെ സാധ്യമായിട്ടില്ല. മികവുറ്റ വ്യക്തി എന്ന നിലയിലുള്ള പ്രകടനങ്ങൾ വിലയിരുത്തേണ്ടത് ക്ലാസ്/സ്കൂൾ അനുഭവങ്ങളെ മുൻ നിർത്തിയാണ്. അതേ സമയം, പരിശീലന മൊഡ്യൂളിന്റെ ഉള്ളടക്കം, അധ്യാപകരുടെ പ്രതികരണം, മോണിറ്ററിംഗ് ഏജൻസികളുടെ വിലയിരുത്തൽ ആർ.പിമാരുടെ വിലയിരുത്തൽ എന്നിവ വിശകലനം ചെയ്തുകൊണ്ട് അധ്യാപകരിൽ പരിശീലനം സൃഷ്ടിക്കുന്ന ഗുണപരമായ മാതൃകകൾ തൽസമയം തന്നെ തിരിച്ചറിയാൻ കഴിയും. ഈ വിധത്തിലുള്ള ഒരു ഇടപെടലിന്റെ വിശദാംശങ്ങളും നിരീക്ഷണങ്ങളുമാണ് താഴെ രേഖപ്പെടുത്തുന്നത്. ഐ.സി.ടി സെക്ഷൻ അവധിക്കാലത്തേക്ക് മാറ്റിവെച്ചതിനാൽ പ്രസ്തുത മേഖല ഇവിടെ വിലയിരുത്തുന്നില്ല.

3.1 സംഘാടനം സംബന്ധിച്ച്

3.1.1 പരിശീലനത്തിന്റെ ആസൂത്രണത്തിന് പ്രത്യേക സമയവും തിര്യതിയും നേരത്തെ നിർദ്ദേശിച്ചിട്ടുണ്ട്. ഒരു കേന്ദ്രത്തിലേക്ക് നാല് ആർ.പി മാരെ നിയോഗിച്ചിട്ടുണ്ട്. രണ്ടുപേർ ബിഹേവിയർ വിഭാഗത്തിലും രണ്ടു പേർ സ്കിൽ വിഭാഗത്തിലും പരിശീലനം നേടിയവരുമാണ്. ഡയറ്റ് ഫാക്കൽറ്റി അംഗങ്ങൾക്ക് അസൂത്രണത്തിൽ പങ്കെടുക്കുവാൻ മുൻകൂട്ടി നിർദ്ദേശം നൽകിയിട്ടുണ്ട്. ഇങ്ങനെ സമയബന്ധിതമായി നടന്ന പ്രവർത്തനങ്ങൾ പരിശീലന പ്രക്രിയ കാര്യക്ഷമമാക്കുന്നു.

3.1.2. പരിശീലനത്തിനിടയിൽ ഡയറ്റിന്റെ ആഭിമുഖ്യത്തിൽ ഇടക്കാല വിലയിരുത്തൽ നടത്തിയിരുന്നു. മികവുകൾ കാര്യക്ഷമാക്കുവാനും പരിമിതികൾ തിരിച്ചറിയാനും ഈ പ്രവർത്തനം ആ.ർ.പിമാരെ സഹായിച്ചിട്ടുണ്ട്.

3.1.3. മോഡ്യൂളിൽ സൂചിപ്പിക്കുന്ന ഉപകരണങ്ങൾ സൗകര്യങ്ങൾ എന്നിവ എല്ലാ കേന്ദ്രങ്ങളിലും ലഭ്യമാണ്. ഇത് സമയബന്ധിതമായി പരിശീലനം പൂർത്തിയാക്കാൻ സഹായിക്കുന്നു.

3.1.4. പരിശീലന കേന്ദ്രത്തിലെ സൗകര്യങ്ങളും തൃപ്തികരമാണ്. അധ്യാപകരെ തെരഞ്ഞെടുക്കുന്ന രീതി മുൻകൂട്ടി നിശ്ചയിച്ചിട്ടുണ്ട്.

3.1.5. ഡയറ്റ് ഫാക്കൽറ്റി അംഗങ്ങൾ, എ.ഇ.ഒ, ഡി.ഇ.ഒ, ഡി.ഡി.ഇ തുടങ്ങിയ വിദ്യാഭ്യാസ ഉദ്യോഗസ്ഥരുടെ മോണിറ്ററിംഗ് പരിശീലനത്തിന്റെ ഗതി നിശ്ചയിക്കുന്നു. ഡയറ്റ് പ്രത്യേകം വിലയിരുത്തൽ ഫോർമാറ്റ് തയ്യാറാക്കി നൽകിയിട്ടുണ്ട്.

3.2 പങ്കാളികളുടെ വിലയിരുത്തൽ

അഞ്ചു ചോദ്യങ്ങളെ കേന്ദ്രീകരിച്ച് നടത്തിയ അന്വേഷണത്തിലൂടെയാണ് പങ്കാളികളുടെ പ്രതികരണം വിലയിരുത്തിയത്.

1. മുൻ വർഷങ്ങളിൽ നടന്ന പരിശീലനങ്ങളിൽ നിന്നും ഈ പരിശീലനത്തിന് എന്ത് സവിശേഷതകളാണ് നിങ്ങൾക്ക് അനുഭവപ്പെട്ടത്.
2. ഏറ്റവും ഉപയോഗപ്രദമായ മേഖലകൾ ഏതെല്ലാമാണ്. ഇത് എങ്ങനെ പ്രയോജനപ്രദമാകുന്നു.
3. പരിശീലനം വഴി നിങ്ങൾക്ക് ലഭ്യമായ കഴിവുകൾ, തിരിച്ചറിവുണ്ടായ മേഖലകൾ
4. പരിശീലനത്തിലെ പരിമിതികൾ
5. ഈ അനുഭവങ്ങൾ വിദ്യാലയത്തിൽ നടപ്പിലാക്കുമ്പോൾ നേരിടാവുന്ന വെല്ലുവിളികൾ.

3.3 പങ്കാളികളുടെ പ്രതികരണങ്ങൾ

ക്ലസ്റ്റർതല പരിശീലനങ്ങളിൽ നിന്നും ഏറെ വ്യത്യസ്തമാണ് മനേജ്മെന്റ് പരിശീലനം. പാഠഭാഗങ്ങൾക്കും വിഷയങ്ങൾക്കുമപ്പുറത്ത് വൈകാരികതലങ്ങളിൽ ആഴത്തിൽ സ്പർശിക്കുന്ന അനുഭവങ്ങൾ ഇതിലുണ്ട്. ജീവിതാനുഭവങ്ങളെ വിവിധ രീതിയിൽ വിലയിരുത്തലിന് വിധേയമാക്കുന്നു. സ്വന്തം കഴിവുകളും പരിമിതികളും തിരിച്ചറിയാൻ സഹായിക്കുന്നു. വ്യക്തി

എന്ന നിലയിൽ എല്ലാ അനുഭവങ്ങളെയും ഇവിടെ വിശകലനം ചെയ്യുന്നു. വ്യക്തിഗതമായ വികസനം, ചിന്താശേഷിയുടെ വികസനം എന്നിവയ്ക്ക് ഊന്നൽ നൽകുന്നു.

സമയ മാനേജ്മെന്റ്, സ്റ്റേക്ക്ഹോൾഡർമാരുടെ പങ്കാളിത്തം എന്നീ സെഷനുകൾ ഏറെ മികവു പുലർത്തി. പിരിമുറുക്കം കുറയ്ക്കാനുള്ള തന്ത്രങ്ങൾ, സഹഭാവത്തെ സംബന്ധിച്ചു കാഴ്ചപ്പാടുകൾ എന്നിവ പെരുമാറ്റം ചിട്ടപ്പെടുത്തുവാൻ സഹായിക്കുന്നു. സ്വഭാവ പരിമിതികൾ സ്വയം തിരിച്ചറിയാൻ കഴിയുന്നു എന്നതാണ് പ്രധാന നേട്ടം. അതേ സമയം അഭിപ്രേരണ, തൊഴിൽപരമായ മൂല്യങ്ങൾ എന്നീ സെഷനുകൾ വേണ്ട രീതിയിൽ ഉൾക്കൊള്ളാൻ കഴിഞ്ഞിട്ടില്ല.

എല്ലാവർക്കും അനുഭവങ്ങൾ പങ്കുവെക്കാവസരമില്ല. ചിലർ ഡോമിനേറ്റ് ചെയ്യുന്നു. കുറച്ചുപേർ നിസ്സഹായരായി ഇരിക്കുന്നു. ഈ അനുഭവങ്ങൾ ക്കനുസൃതമായി സ്കൂളിൽ ചെന്നാൽ പെരുമാറ്റത്തിൽ മാറ്റം വരുത്തി പൂർണ്ണമായും പ്രവർത്തിക്കാൻ കഴിയും എന്ന് കരുതുന്നില്ല. സഹപ്രവർത്തകരും പ്രഥമാധ്യാപകരുമൊക്കെ പലതരക്കാരാണ്. എങ്കിലും അവരുമായി നല്ല ബന്ധം സ്ഥാപിക്കാൻ കഴിയുമെന്നാണ് പ്രതീക്ഷിക്കുന്നത്. കുട്ടികളെ കുറെയൊക്കെ സഹായിക്കാൻ കഴിയും സ്കൂൾ മികവിന്റെ കേന്ദ്രമാക്കുവാൻ സഹകരിക്കാം, നേതൃത്വം നൽകാൻ ആത്മ വിശ്വാസം പോര.

3.4 ആർ.പി മാരുടെ പ്രതികരണം

3.4.1 അധ്യാപകർ ഏറെ സംതൃപ്തരാണ്. പലരും നാളിതുവരെ കാണാത്ത വിധം മനസ്സു തുറക്കുന്നു. ചില ശീലങ്ങളും സ്വഭാവങ്ങളും മാറ്റണമെന്ന് പലരും തുറന്ന് സമ്മതിക്കുന്നു. പരിശീലനം അവസാനിക്കുന്നതോടെ അധ്യാപകരിൽ കൂട്ടായ്മകൾ രൂപപ്പെട്ടുവരുന്നു. ലീഡർമാർ ഉത്തരവാദിത്തങ്ങൾ സ്വയം ഏറ്റെടുക്കുന്നു. വീട്ടിലും വിദ്യാലയത്തിലും ചില ഉത്തരവാദിത്തങ്ങൾ ഏറ്റെടുക്കുമെന്ന് അധ്യാപകർ പ്രഖ്യാപിക്കുന്നു. അവസാന ദിവസം എല്ലാവരും ഒത്തുചേർന്ന് പ്രത്യേകം ഉച്ചഭക്ഷണം ഒരുക്കി യാത്രയയപ്പ് സംഘടിപ്പിക്കുന്നു. ആർ.പിമാരുമായും നല്ലബന്ധം രൂപപ്പെടുത്തുവാൻ പങ്കാളികൾ തയ്യാറാണ്.

പുതിയ അറിവുകൾ പങ്കു വെക്കുവാൻ ഏറെ താൽപര്യം കാണിക്കുന്നു.

3.4.2 എല്ലാവർക്കും അവസരം നൽകാൻ സമയം അനുവദിക്കുന്നില്ല. അസൈൻമെന്റുകളോട് തണുത്ത പ്രതികരണമാണ്. ഗ്രൂപ്പ്വർക്കുകൾ ചലനാത്മകമാകണമെങ്കിൽ ഓരോ ഘട്ടത്തിലും ആർ.പി ഇടപെടേണ്ടി വരുന്നു. അഭിപ്രേരണ പോലുള്ള ചില വിഷയങ്ങളിൽ സ്റ്റൈഡുകളുടെ അവതരണം ഫലപ്രദമാകുന്നില്ല. വിദേശികളുടെ ജീവിതം ചിത്രീകരിക്കുന്ന clipping കൾ അധ്യാപകർക്ക് ഉൾക്കൊള്ളാൻ കഴിയുന്നില്ല.

3.4.3 മനോഭാവപരമായ മാറ്റം ലക്ഷ്യമിട്ടാണ് സെഷനുകൾ രൂപപ്പെടുത്തുന്നതെങ്കിലും നിർവചനങ്ങൾ എഴുതിയെടുക്കുവാൻ കൂടുതൽ പേരും താൽപര്യം കാണിക്കുന്നു. പരിശീലനത്തിന്റെ തൊഴിൽപരമായ തലം പലരും വേണ്ടത്ര ഉൾക്കൊള്ളുന്നില്ല. ആ രീതിയിൽ മനോഭാവപരമായ മാറ്റം പ്രകടിപ്പിക്കുന്നത് കുറച്ച് പേർ മാത്രം.

3.5. വിദ്യാഭ്യാസ ഓഫീസർമാരുടെയും ഡയറ്റ് ഫാക്കൽറ്റി അംഗങ്ങളുടെയും പ്രതികരണം

3.5.1. ക്ലാസ്റും അനുഭവങ്ങളിൽ നിന്നും വ്യത്യസ്തമായി വ്യക്തിപരമായ കഴിവുകളെയും പരിമിതികളെയും മുൻനിർത്തിയുള്ള ഉള്ളടക്കവും പ്രവർത്തനങ്ങളും അധ്യാപകർ ഏറെ താൽപര്യത്തോടെയാണ് സ്വീകരിക്കുന്നത്. പരിശീലന രീതി പലരും പ്രശംസിക്കുന്നു. വിനിമയരീതി ആർ പി കേന്ദ്രീകൃതമാണ്. പങ്കാളികൾ അധിക സമയവും ശ്രോതാക്കളായി മാറുന്നു. മൊഡ്യൂളിലെ അനുഭവങ്ങളുടെ അവതരണം മാതൃകാപരമാണ്. അതേ സമയം ചർച്ചക്കിടയിൽ രൂപപ്പെടുന്ന അധ്യാപകരുടെ അനുഭവങ്ങളും കാഴ്ചപ്പാടുകളും യഥാവിധിം ക്രോഡീകരിക്കാൻ പരിചയസമ്പന്നരായ ആർ.പി മാർക്ക് മാത്രമാണ് സാധ്യമാകുന്നത്. ഒരു സ്റ്റൈഡ് വിട്ടുപോയാൽ കണ്ടെത്തലും ക്രോഡീകരണവും ഗതിമാറുന്നു. ഗൃഹപാഠങ്ങൾ പരിമിതമാണ്. പരിശീലനത്തെ ലാഘവത്തോടെ സമീപിക്കുന്നവർക്ക് ഇത്തരം നിലപാടുകൾ സഹായകരമാകുന്നു.

3.5.2. അഭിപ്രേരണ പോലുള്ള വിഷയങ്ങളിൽ ആശയം ചർച്ച ചെയ്യുക എന്നല്ലാതെ മാനേജാവപരമായ മാറ്റം അടയാളപ്പെടുത്തുവാൻ കഴിയുന്നില്ല. ലീഡർഷിപ്പ് ചർച്ച ചെയ്യുമ്പോഴും പുതിയ ലീഡർ മാരെ രൂപ

പ്പെടുത്തുന്നതിന് കഴിയുന്നില്ല. റിസോഴ്സ് ഗ്രൂപ്പ് അംഗങ്ങളുടെ വ്യക്തിപരമായ കഴിവുകളാണ് ഓരോ സെഷന്റെയും ഫലപ്രാപ്തി നിശ്ചയിക്കുന്നത്.

3.5.3 സമയക്രമം പാലിക്കാൻ ശ്രമിക്കുന്നുണ്ടെങ്കിലും മൊഡ്യൂൾ രൂപരേഖയിൽ നിന്നും 8 മുതൽ 20 ശതമാനം വരെ സമയവ്യത്യാസത്തിലാണ് സെഷനുകൾ നീങ്ങുന്നത്. അവസാന ദിവസമാണ് പലപ്പോഴും സമയം ക്രമീകരിക്കുവാൻ കഴിയുന്നത്.

4. കണ്ടെത്തലുകൾ

4.1. മുന്നൊരുക്കങ്ങളും മെച്ചപ്പെട്ട സംഘാടനവും മാനേജ്മെന്റ് പരിശീലന പരിപാടിക്ക് മുൻകാലങ്ങളിൽ നിന്ന് വ്യത്യസ്തമായ ആസൂത്രണ സംസ്കാരം പ്രദാനം ചെയ്യുന്നുണ്ട്. ജീവിതനൈപുണികൾ ഉൾപ്പെടുന്ന ഉള്ളടക്കം പങ്കാളികൾക്ക് പൊതുവെ സ്വീകാര്യമാണ്. അതേസമയം അവതരണ രീതികളിലെ അവ്യക്തതയും ചില ടൂളുകളുടെ പരിമിതികളും സമയപരിമിതിയും ഏതാനും സെഷനുകളുടെ വിനിമയം പരിമിതപ്പെടുത്തുന്നു.

4.2 വ്യക്തിഗതമായ സവിശേഷതകൾ ഉൾക്കൊണ്ട് സ്വന്തം മികവുകളും പരിമിതികളും തിരിച്ചറിയാൻ അധ്യാപകർക്ക് പരിശീലനത്തിലൂടെ കഴിയുന്നു. എന്നാൽ ഓരോ മേഖലയുടെയും തൊഴിൽപരമായ സാധ്യതകൾ വേണ്ട രീതിയിൽ ഉൾക്കൊള്ളാൻ പങ്കാളികൾക്ക് കഴിയുന്നില്ല.

4.3 പരിശീലനത്തിന്റെ ഉള്ളടക്കത്തിന് അനുയോജ്യമായ വിധത്തിൽ പങ്കാളികൾ തമ്മിൽ കൂട്ടായ്മ രൂപപ്പെടുന്ന് ശ്രദ്യേയമായ മാറ്റമാണ്.

5. ക്രോഡീകരണം

പരിമിതികൾ പലതും നിലനിൽക്കുമ്പോഴും മികച്ചപരിശീലനം എന്ന അഭിപ്രായമാണ് അധ്യാപകർ പൊതുവെ പുലർത്തുന്നത്. എസ്സിഇആർടി മുന്നോട്ടു വെച്ച 4 സുപ്രധാന ലക്ഷ്യങ്ങളുടെ പ്രാധാന്യം തിരിച്ചറിയാനും സന്ദേശം സ്വാംശീകരിക്കാനും പാലക്കാട് ജില്ലയിൽ പരിശീലനത്തിൽ പങ്കെടുത്ത ഭൂരിഭാഗം അധ്യാപകർക്കും കഴിഞ്ഞിട്ടുണ്ട്. - അതേ സമയം ടീച്ചർ എന്ന നിലയിൽ തൊഴിൽപരമായ മികവുകൾ വളർത്തുന്ന തലത്തിലേക്ക് പരിശീലനം പുന:ക്രമീകരിക്കേണ്ടതുണ്ട്. ജീവിതനൈപുണികളെ തൊഴിൽ മേഖലയുമായി കൂടുതൽ ബന്ധപ്പെടുത്തി തുടർപരിശീലനങ്ങൾ ആസൂത്രണം ചെയ്യാവുന്നതാണ്.

ഗണിതവർഷാചരണവും ആശയവിനിമയശേഷിയും

നാരായണനുണ്ണി എം.പി.
ലക്ചറർ ഡയറ്റ് പാലക്കാട്.

സംഗ്രഹം

കുട്ടികളുടെ സാമാന്യബോധത്തെ പഠനവസ്തുതകളുമായി സമന്വയിപ്പിക്കുന്നതിൽ ഗണിത ക്ലാസ്സുമുറി കൾ പരാജയപ്പെടുന്നു എന്നത് സ്റ്റാനിസിഡാസ് ദിഹൈൻ എന്ന വിദ്യാഭ്യാസ ചിന്തകൻ നിരീക്ഷിച്ചതാണ്. നല്ലൊരു തുടക്കത്തിന്റെ അഭാവം കൊണ്ടുമാത്രം ആശയഗതമാനം കുട്ടികൾ ഗണിതത്തിൽ വൈകല്യം (Mathematically handicapped) ഉള്ളവരായി മാറിയിട്ടുണ്ടത്രെ! ഇവിടെയാണ് ഗണിതശാസ്ത്ര അദ്ധ്യാപകരുടെ ആശയവിനിമയശേഷി സവിശേഷശ്രദ്ധ ആകർഷിക്കുന്നത്. കുട്ടിയുടെ പഠനസന്ദർഭത്തിൽ ഉള്ളടക്കത്തെ ടീച്ചർ എങ്ങനെ വ്യാഖ്യാനിക്കണം, പ്രയോഗിക്കണം എന്നതു തന്നെയാണ് പ്രധാനം. ഒരധ്യാപകയുടെ ഉള്ളടക്കധാരണയെ ബോധനശാസ്ത്രപരമായി കൂടുതൽ കരുത്തുറ്റതാക്കാൻ ദേശീയ ഗണിതശാസ്ത്ര വർഷാചരണത്തെ എങ്ങനെ ഉപയോഗിക്കാനാകും എന്നതാണ് പാലക്കാട് ഡയറ്റ് അന്വേഷിച്ചത്. ഗണിത ശാസ്ത്രപരമായ ആശയവിനിമയത്തിന്റെ, മറ്റുള്ളവരോടൊത്തുള്ള ഗണിതപ്രയോഗത്തിന്റെ, ഗണിതാശയത്തിന്റെ ദൃശ്യവൽക്കരണസാധ്യതയുടെ... തുടങ്ങി വ്യത്യസ്ത തലങ്ങളിലാണ് ഇടപെടൽ നടത്തിയത്. ആശയവിനിമയ ക്ഷമയുടെ കാര്യത്തിലും മനോഭാവത്തിന്റെ തലത്തിലും ഗുണപരമായ മാറ്റങ്ങളാണ് അദ്ധ്യാപകരിലും കുട്ടികളിലും ഉണ്ടായത്.

ആമുഖം

ഗണം A യിലുള്ള എല്ലാ അംഗങ്ങൾക്കും ഗണം B യിൽ പ്രതിബിംബം ഉണ്ടായിരിക്കുകയും ഒരേ ഒരു പ്രതിബിംബം മാത്രം ഉണ്ടായിരിക്കുകയും ചെയ്താൽ ആ ബന്ധം ഏകദമായിരിക്കും.

പഴയ അഭിനവഗണിതം പാഠപുസ്തകത്തിൽ ഏകദത്തെ (Function) സംബന്ധിച്ച വിശദീകരണമാണ് മുകളിൽ കൊടുത്തിരിക്കുന്നത്. ഈ ആശയം വേണ്ടതുപോലെ ഗ്രഹിക്കാൻ പ്രയാസപ്പെടുന്ന കുട്ടികളുടെ മുന്നിൽ മാതൃകാപരമായ ദാമ്പത്യബന്ധം എന്ന ആശയത്തിന്റെ സഹായത്തോടെ ചർച്ച തുടങ്ങുകയാണ് രാമൻ മാസ്റ്റർ ചെയ്തത്. രസകരമായ വിശദീകരണങ്ങളിലൂടെ ചിന്തോദ്വീപകങ്ങളായ ചോദ്യങ്ങളിലൂടെ ക്ലാസ്സിനെ അദ്ദേഹം സജീവമാക്കി. തുടർന്ന് ആശയ വ്യക്തതയ്ക്കായി മഹാഭാരതത്തിലേക്കും പാഞ്ചാലി സ്വയംവരത്തിലേക്കുമുള്ള അദ്ദേഹത്തിന്റെ കുട്ടികളോടൊത്തുള്ള ഗണിതാസ്വാദന യാത്ര ഏറെ കൗതുകമുണർത്തുന്നതാണ്. പാഠഭാരത്തെ കുട്ടിയുടെ പഠന സന്ദർഭത്തിൽ പുനർ വായനയ്ക്കു വിധേയമാക്കാനായി എന്നതാണ് രാമൻ മാസ്റ്ററുടെ വിജയം. അങ്ങനെയാണ് കുട്ടികളോട് സമർത്ഥമായി കണക്കുപറയുന്നതിൽ അദ്ദേഹം വിജയിക്കുന്നത്.

2012 നെ ദേശീയഗണിതവർഷമായി ഭാരതസർക്കാർ പ്രഖ്യാപിക്കുമ്പോൾ മുന്നോട്ടുവെച്ച പ്രധാന ലക്ഷ്യം ഗണിതത്തിന്റെ ജനകീയവൽക്കരണത്തിലൂടെ ഗൗരവമായി കണക്ക് പഠിക്കുന്നവരുടെ എണ്ണം വർദ്ധിപ്പിക്കുക എന്നതാണ്. ഇവിടെയാണ് കുട്ടികളോട് മനോഹരമായി

കണക്കുപറഞ്ഞ് അവരെ ഗണിതത്തിലേക്ക് അടുപ്പിക്കുന്നതിന്റെ പ്രാധാന്യം. ഗണിതവർഷാചരണം പാലക്കാട് ജില്ലയിലെ ഗണിതാധ്യാപകരുടെ ആശയവിനിമയശേഷിയെ ഗുണപരമായി സ്വാധീനിച്ചതെങ്ങനെ എന്ന അന്വേഷണമാണ് ഇവിടെ നടത്തുന്നത്. ഉള്ളടക്കത്തെ കുറിച്ചുള്ള കൃത്യമായ ധാരണ, കുട്ടികളോടൊത്തുള്ള സമർത്ഥവും ആയാസരഹിതവുമായ ആശയവിനിമയത്തിനുവേണ്ട ഉപാധികളിൽ ഒന്നുമാത്രമാണ്. പ്രമുഖ വിദ്യാഭ്യാസ ചിന്തകനായ ഷൾമാൻ (1987) ചൂണ്ടിക്കാണിച്ചതുപോലെ ഉള്ളടക്കത്തിന്റെ ചരിത്രപരമായ പശ്ചാത്തലം, സർഗ്ഗാത്മകമായ വ്യാഖ്യാനങ്ങൾ, അനുയോജ്യമായ അവതരണസന്ദർഭങ്ങളും ഉദാഹരണങ്ങളും, പഠന-മൂല്യനിർണ്ണയ സാമഗ്രികളെക്കുറിച്ചുള്ള വ്യക്തത തുടങ്ങി ആശയവിനിമയത്തിൽ ടീച്ചർക്കു സഹായകരമായ ഏറെ ഘടകങ്ങളുണ്ട്. ഇതിലൂടെ കടന്നുപോകാൻ അവസരമൊരുക്കുന്ന രീതിയിലാണ് ജില്ലയിലെ ദേശീയഗണിതവർഷാചരണ പരിപാടികൾ വിഭാവനം ചെയ്തത്. ഗണിതത്തിന്റെ ശക്തിയും സൗന്ദര്യവും വിളിച്ചോതുന്ന ജില്ലാതലത്തിലും സബ് ജില്ലാതലത്തിലും സംഘടിപ്പിക്കപ്പെട്ട ഗണിത സെമിനാറുകൾ, മറ്റുള്ളവരോടൊപ്പം പ്രവർത്തിക്കാൻ അധ്യാപകർക്കും കുട്ടികൾക്കും അവസരം നൽകിയ ഗണിതപരീക്ഷണശാലകൾ, നിർമ്മാണത്തിനും അഭിനയത്തിനും അതിലൂടെ പ്രശ്നപരിഹാരത്തിനും അവസരമൊരുക്കിയ കുട്ടികളുടെ സഹവാസകുടുംബങ്ങൾ, ചിന്താരസത്തിന്റെ അനന്തസാധ്യതകളൊരുക്കി മിടുക്കരായ കുട്ടികൾക്കു ദിവിന ജില്ലാതല

പഠനക്യാമ്പ് എന്നിങ്ങനെ വ്യത്യസ്ത പരിപാടികളാണ് ജില്ലയിൽ സംഘടിപ്പിച്ചത്.

ഉദ്ദേശ്യങ്ങൾ

1. പെതു അവതരണങ്ങൾക്കായി ഗണിതാശയങ്ങളെ ഫലപ്രദമായി വ്യാഖ്യാനിക്കുന്ന രീതികളെടുത്തുക.
2. ഒന്നിച്ചു പ്രവർത്തിക്കുന്നതിനും സംവദിക്കുന്നതിനും ഗണിതപരീക്ഷണശാലകൾ എങ്ങനെയാണ് സഹായകരമാകുന്നത് എന്നു തിരിച്ചറിയുക.
3. ആശയങ്ങൾ ഗ്രഹിക്കുന്നതിലും വിശദീകരിക്കുന്നതിലും നാടകസങ്കേതങ്ങൾ ഫലപ്രദമാണോ എന്നു പരിശോധിക്കുക.
4. പ്രശ്നപരിഹരണത്തിൽ (Problem Solving) ഊന്നിയ സവിശേഷ അനുഭവങ്ങൾ കൂട്ടികളുടെ പ്രകടനത്തെ സ്വാധീനിക്കുന്നതെങ്ങനെ എന്നു മനസ്സിലാക്കുക.

പ്രവർത്തനങ്ങളും അവയുടെ വിശകലനവും

സെമിനാറുകൾക്കായി എങ്ങനെ ഒരുങ്ങണം എന്നതായിരുന്നു പ്രഥമപരിഗണനാവിഷയം. ചർച്ചക്കായി എന്തെല്ലാം തിരഞ്ഞെടുക്കണം, അതിന്റെ അവതരണം എങ്ങനെയാക്കിരിക്കണം എന്നിങ്ങനെ ധാരണകൾ കൃത്യമാക്കി. ഹെപേഷ്യയിൽനിന്നായിരുന്ന തുടക്കം. യൂക്ലിഡിന്റെയും വിമർശനാത്മക ബോധത്തിന്റെയും പ്രായോഗികരൂപം, യഥാസ്ഥിതിക നേതൃത്വത്തോടുള്ള ശക്തമായ ചെറുത്തു നില്പ്, സ്വയം നഷ്ടപ്പെടുത്തിക്കൊണ്ടുള്ള സമർപ്പണം എന്നിങ്ങനെ ഏറെ മൂല്യങ്ങളുണ്ട് പ്രഥമഗണിതജ്ഞയുമായി ബന്ധപ്പെട്ടു പങ്കുവെക്കാൻ. ഹെപേഷ്യയുടെ മരണശേഷം മാലിയിലേക്കു നാടുവിടേണ്ടി വന്ന അവരുടെ സുഹൃത്ത് ഒരേ സ്ത്രീ അവരുടെ ഗവേഷണ ഫലങ്ങളും കയ്യിൽ വെച്ചു. അവിടുത്തെ തിബൂക്കു സർവ്വകലാശാല ഹെപേഷ്യൻ ഗണിതചിന്തകൾ പാഠ്യ പദ്ധതിയുടെ ഭാഗമാക്കിയതും അറബികൾ അത് ലോകത്താകമാനം പ്രചരിപ്പിച്ചതും ശ്രദ്ധേയമാണ്. അൾജീരിയയിൽനിന്നും കേരളത്തിലെത്തിയ ഹെപേഷ്യൻ ചിന്തകളെ കേരളാ സ്കൂൾ ഓഫ് മാത്തമറ്റിക്സിലെ പണ്ഡിതർ വികസിപ്പിച്ചതും ലോകഗണിതത്തിനു തിരിച്ചു നല്കിയതും ഗണിതശാസ്ത്രത്തിന്റെ സാർവ്വലൗകികഭാവം മനസ്സിലാക്കാൻ സഹായകരമാണ്. വ്യത്യസ്തമായ ഈ വിശകലനരീതി ഏറെ ആകർഷകവും.

മറ്റൊന്നു ഫെർമയുടെ അവസാനസിദ്ധാന്തവുമായി ബന്ധപ്പെട്ട ചർച്ചയാണ്. ഒരുവർഗ്ഗസംഖ്യയെ മറ്റു രണ്ടു വർഗ്ഗസംഖ്യകളുടെ തുകയായി എഴുതാൻ കഴിയുന്നതുപോലെ കൂതി മുന്നോ അതിൽ കൂടുതലോ ആയാൽ സാധ്യമല്ല എന്ന സിദ്ധാന്തത്തിന്റെ തെളിവു തേടിയുള്ള അന്വേഷണം ഏവർക്കും താല്പര്യ ജനകമാണ്. മൂന്നര നൂറ്റാണ്ടിലധികം തുടർന്ന ഈ

അന്വേഷണം ഇരുപതാം നൂറ്റാണ്ടിന്റെ അവസാനത്തിൽ ആൻഡ്രൂവെൽസിലൂടെ തൃപ്തികരമായി ഉത്തരത്തിലെത്തുമ്പോൾ ഗണിത പഠനത്തിനായുള്ള സമർപ്പണത്തിന്റെ ആവശ്യകതയാണ് പങ്കുവെക്കപ്പെടുന്നത്.

ജനാധിപത്യത്തിന്റെ സാർത്ഥകതയെ ത്രികോണിന്റെ പശ്ചാത്തലത്തിൽ വിശകലനം ചെയ്യുന്ന സി. രാധാകൃഷ്ണൻ (മുൻപെ പറക്കുന്ന പക്ഷികൾ) സാഹിത്യത്തിലെ ഗണിത സാധ്യതകളാണ് തുറന്നു കാണിച്ചത്. ജനങ്ങളും, രാഷ്ട്രീയ പാർട്ടികളും, അധികാരവും ഒരു ത്രികോണത്തിന്റെ മൂന്നുശീർഷങ്ങളായിരിക്കുന്ന ഇന്നത്തെ അവസ്ഥയിൽനിന്ന് ഒരേ രേഖയിലെ മൂന്നു ബിന്ദുക്കളാകുന്ന സാഹചര്യത്തിലാണ് ജനാധിപത്യം പൂർണ്ണമാകുന്നത് എന്ന അദ്ദേഹത്തിന്റെ നിരീക്ഷണം ആസ്വാദ്യകരമാണ്. വട്ട വിട്ടങ്ങളുടെ പകുതികളുടെ ഗുണനഫലത്തെ വൃത്തത്തിന്റെ പരപ്പളവുമായി ബന്ധിപ്പിക്കുന്ന പെരുന്തച്ചനിൽ വ്യതിരിക്തമായ വ്യാഖ്യാനരീതി കാണാനുമാകുന്നു ആഹ്ലാദകരമാണ്. ചുരുക്കത്തിൽ ചരിത്രപരമായി, ചിന്താപരമായി പ്രായോഗികമായി ഗണിതത്തെ കാണാനും വ്യാഖ്യാനിക്കാനും അവസരം നല്കി കൊണ്ടാണ് ഗണിതസെമിനാറുകളിലൂടെ അദ്ധ്യാപകരെ കടത്തിവിട്ടത്.

മറ്റുള്ളവരോടൊത്തു പ്രവർത്തിക്കാൻ ഗണിതത്തെ എങ്ങനെ ഉപയോഗപ്പെടുത്താനാകും എന്ന അന്വേഷണമാണ് ഗണിതപരീക്ഷണശാലകൾ, ജില്ലയിലെ അഞ്ഞൂറിലധികം അദ്ധ്യാപകരെയാണ് ഈ പ്രായോഗിക അനുഭവ പരിപാടിയിൽ ഉൾപ്പെടുത്തിയത്. ലാബിനായി സ്വന്തം മുറിയില്ലാത്തവർ അതിനായി കാത്തുനില്ക്കാതെ ക്ലാസ് മുറിയിലോ, വരാന്തയിലോ, ഒരു പെട്ടിയിൽ തന്നെയോ ലാബ് സജ്ജീകരിക്കാൻ കാണിച്ച ഔത്സുക്യം സവിശേഷ ശ്രദ്ധയാകർഷിച്ചു. കേവലം സംഖ്യാവിശകലനത്തിലൂടെ മാത്രം പരിചിതമായ ഭിന്നസംഖ്യയെ അളവിന്റെ പശ്ചാത്തലത്തിൽ, ഉപകരണങ്ങളുടെ സഹായത്തോടെ മറ്റുള്ളവരോടൊത്ത് എങ്ങനെ വിശദീകരിക്കാം എന്നത് പ്രധാനമാണ്. അമൂർത്തമായബീജഗണിത വ്യാഖ്യാനത്തിലൂടെ പരിചയപ്പെട്ടിരുന്ന ചരിവിനെ (Slope) ദൃശ്യവത്കരിക്കാനും സാദൃശ്യത്തിന്റെ സൗന്ദര്യത്തിലൂടെ വിശദീകരിക്കാനും കഴിയുന്നത് രസകരമാണ്. ഇപ്രകാരം മറ്റുള്ളവരോടൊത്തുള്ള ഗണിത പ്രവർത്തനങ്ങൾ ധാരണാപരമായും മനോഭാവപരമായും അദ്ധ്യാപകരെ ഏറെ മാറ്റത്തിനു വിധേയമാക്കി. പാലക്കാട് ജില്ലയിലെ തെരഞ്ഞെടുക്കപ്പെട്ട സ്കൂളുകളിൽ ഡയറ്റ് നടത്തിയ അന്വേഷണത്തിൽനിന്നും വ്യക്തമായത് പോയവർഷം ഏറ്റവും നന്നായി സ്കൂളുകൾ ഏറ്റെടുത്തത് ഗണിതവുമായി ബന്ധപ്പെട്ട പ്രവർത്തനങ്ങളും അതിനായുള്ള ലാബ് സജ്ജീകരണവുമാണ്.

നിർമ്മാണത്തിന്റെയും അഭിനയത്തിന്റെയും സാധ്യതകൾ സമന്വയിപ്പിച്ചു നാനൂറിലധികം സ്കൂളുകളിൽ

സംഘടിപ്പിക്കപ്പെട്ട കുട്ടികളുടെ അവധിക്കാല സഹവാസകൃത്യങ്ങൾ മറ്റൊരു അനുഭവമായിരുന്നു. ആയിരക്കണക്കിനു കുട്ടികൾ പങ്കെടുത്ത ഗണിത ഉത്സവങ്ങളായി ഈ കൃത്യങ്ങൾ മാറി. ചാത്തന്നൂർ, എലപ്പള്ളി, ബിഗ്ബ സാർ തുടങ്ങിയ ഗവൺമെന്റ് സ്കൂളുകൾ പത്താം ക്ലാസ്സ് റിസൽട്ടിൽ വ്യക്തമായ മുന്നേറ്റം ഉണ്ടാക്കിക്കൊണ്ടാണ് ഇതിന്റെ ഗുണഫലം വിളിച്ചു പറഞ്ഞത്. ക്യാമ്പിനായി ഒരുക്കിയ ഗണിതാത്മരീക്ഷത്തെ ഗണിതപരീക്ഷണശാലയായി നിലനിർത്താനുള്ള മനോഭാവം ശുഭസൂചകമാണ്. ഒരു ഗണിതാശയത്തെ മറ്റുള്ളവർക്കായി ദൃശ്യവൽക്കരിക്കുമ്പോൾ വേണ്ട മുന്നൊരുക്കങ്ങൾ പ്രധാനമാണ്. അമൂർത്തതയിൽനിന്നും പ്രായോഗികതയിലേക്കുള്ള ഈ മാറ്റത്തിൽ ഉള്ളടക്കത്തെ എങ്ങനെ പുനരാവിഷ്കരിക്കണം? അനുയോജ്യമായ അവതരണ സന്ദർഭം ഏത്? ദൃശ്യവതരണത്തിന് ഉപയോഗിക്കാവുന്ന നൂതന സങ്കേതങ്ങൾ ഏവ? ഇപ്രകാരം സൂക്ഷ്മ തലത്തിലുള്ള അന്വേഷണം ഇവിടെ അനിവാര്യമാണ്. അവതരണത്തിനുശേഷമുള്ള ചർച്ച കുറവുകൾ പരിഹരിച്ചു കൂടുതൽ ആത്മവിശ്വാസത്തോടെ മുന്നോട്ടുപോകാൻ സഹായിക്കും. കിണർ കുഴിക്കുമ്പോൾ താഴോട്ടു പോകുന്നോറും മണ്ണു കട്ടി കൂടുന്നതിനെയും അധ്വാനഭാരം വർദ്ധിക്കുന്നതിനെയും കൂലിയുമായി ബന്ധപ്പെടുത്താനും, ഇവിടെ നടക്കുന്ന മാറ്റത്തിന് ഒരു ക്രമം നിശ്ചയിക്കാനും, അതിനെ സംഖ്യാശ്രേണിയിലേക്കു വിവർത്തനം ചെയ്യാനും കഴിഞ്ഞാൽ അതു പ്രശ്നപരിഹാര പ്രവർത്തനങ്ങൾക്കുള്ള ചില സാധ്യതകളാണ് തുറന്നുതരുന്നത്. പ്രായോഗികമായി ഈ സാധ്യത ശക്തമായ ആശയവിനിമയ ഉപാധിയുമാണ്.

വേറിട്ട ചിന്തകളിലൂടെ, പ്രശ്നസന്ദർഭത്തിന്റെ ചിത്രീകരണത്തിലൂടെ, അതിലെ സംഖ്യാബന്ധങ്ങൾ കണ്ടെത്തുന്നതിലൂടെ സംഖ്യാശ്രേണികൾ വ്യാഖ്യാനിക്കുന്നതിലൂടെ പ്രശ്നപരിഹാരണത്തിന്റെ വൈവിധ്യമാർന്ന സാധ്യതകൾ ഒരുക്കിയ കുട്ടികളുടെ പഠനക്യാമ്പും പ്രധാനമാണ്. വിവരസാങ്കേതിക വിദ്യയുടെ സാധ്യതകൾകൂടി ഉപയോഗപ്പെടുത്തിയ ഈ ക്യാമ്പിൽ മിടുക്കരായ നൂറിലധികം കുട്ടികൾ താല്പര്യപൂർവ്വം രണ്ടു ദിവസവും പങ്കെടുത്തു. തുടർന്ന് നടന്ന സംസ്ഥാന തല പ്രതിഭാനിർണ്ണയ പരീക്ഷയിലെ പ്രകടനം ഈ ഇടപെടലിന്റെ ഗുണവശം വെളിവാക്കുന്നു. ജനറൽ വിഭാഗത്തിൽ തെരഞ്ഞെടുക്കപ്പെട്ട രണ്ടു കുട്ടികളും സംസ്ഥാനത്തെ ഏറ്റവും ഉയർന്ന രണ്ടാമത്തെ സ്കോറാണ് കരസ്ഥമാക്കിയത്.

നിഗമനങ്ങൾ

1. ഗണിതാശയത്തെ ചരിത്രപരമായി വിശകലനം ചെയ്യുന്നത് അതിന്റെ പൊതുവായ അവതരണത്തിനു കൂടുതൽ സഹായകരമാണ്.
2. ഒരു ഗണിതാശയത്തിന്റെ വ്യത്യസ്തങ്ങളായ വ്യാഖ്യാനങ്ങൾ ഏറെ സംവേദനക്ഷമമാണ്.
3. സാഹിത്യം, സംസ്കാരം, തൊഴിൽ തുടങ്ങി ഗണിതത്തിന്റെ പ്രയോഗസന്ദർഭങ്ങൾ ആശയവിനിമയത്തിന് അനുകൂലമാണ്.

4. ഒന്നിച്ചു പ്രവർത്തിക്കുന്നതിനും സംവദിക്കുന്നതിനും ഗണിതപരീക്ഷണശാലകളെ നല്ല രീതിയിൽ പ്രയോജനപ്പെടുത്താൻ കഴിയും.
5. താല്പര്യപൂർവ്വം പഠനപ്രവർത്തനങ്ങളിലേക്കു നയിക്കുന്നതിനും, ശ്രദ്ധയോടെ ആശയവിശകലനം നടത്തുന്നതിനും, നിഗമനങ്ങൾ മറ്റുള്ളവരുമായി പങ്കുവെക്കുന്നതിനും നാടകസങ്കേതങ്ങൾ ഗണിതപഠനത്തിൽ ഫലപ്രദമാണ്.
6. പ്രശ്നപരിഹാരണത്തിൽ ഊന്നിയ സവിശേഷ പഠനാനുഭവങ്ങൾ ഉയർന്ന ഗണിത സമസ്യകളെ അഭിമുഖീകരിക്കാനും ആത്മവിശ്വാസത്തോടെ പരിഹരിക്കാനും കുട്ടികൾക്കു സഹായകരമാണ്.

ഉപസംഹാരം

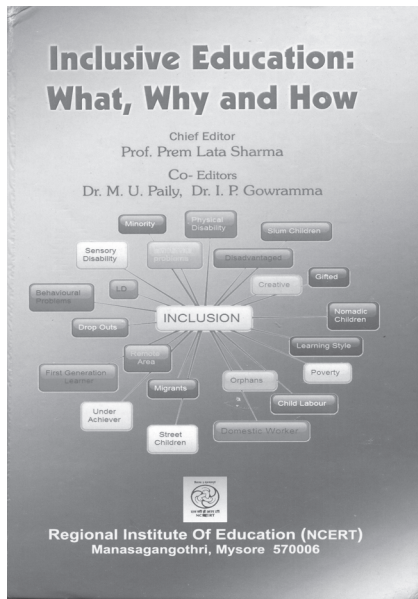
അധ്യാപികയുടെ അറിവുരൂപം ധാരണയുടെയും പ്രയോഗത്തിന്റെയും ഒരു തനതു ചേരുവയാണ്. ഇതിൽ അവരുടേതായ സർഗ്ഗാത്മക വ്യാഖ്യാനങ്ങളുണ്ട്, അനുയോജ്യ ഉദാഹരണങ്ങളും പറയൽ സങ്കേതങ്ങളും ഉണ്ട്. ചരിത്രപരമായ വ്യാഖ്യാനങ്ങളിലൂടെ, ബുദ്ധിപരമായ അന്വേഷണങ്ങളിലൂടെ മറ്റുള്ളവരോടു സമർത്ഥമായി ഗണിതം പറയാൻ അധ്യാപകരെ ഏറെ സഹായിക്കാനായി എന്നതാണ് ദേശീയഗണിതവർഷാചരണ പരിപാടിയുടെ ബാക്കിപത്രം. മറ്റുള്ളവരോടൊത്ത് സംവദിക്കാനും പ്രവർത്തിക്കാനും അവസരമൊരുക്കുകയാണ് ഗണിതപരീക്ഷണശാലയും സഹവാസക്യാമ്പും ചെയ്തത്. ജില്ലയിലെ അഞ്ഞൂറിലധികം സ്കൂളുകളിൽ നടന്ന ദേശീയഗണിത വർഷാചരണ പരിപാടിയിലെ അധ്യാപകരുടെ സജീവപങ്കാളിത്തവും അവരുടെ ഗുണപരമായ മനോഭാവമാറ്റവും ഇതിന്റെ ദൃഷ്ടാന്തങ്ങളാണ്.

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Book Review**Inclusive Education: What, Why and How**

Reviewed by: Lohidhasan, M. K
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This work reflects an advanced conceptual framework practices on inclusive education. It has four sections. The first section includes inclusive education-issues and concerns. The second section discusses 'how' of managing children with diverse needs. The third section is on teaching different subjects in inclusive classrooms, and the last section is on support for children in inclusive classrooms.

The status of inclusive education-issues and concerns clearly describes the concept of inclusive education through four chapters. They are Importance and need of inclusive education, the concept of inclusive education, national and international initiatives towards inclusive education and challenges and issues in implementation of inclusive

education respectively. They provide a clear picture about how a democratic country like India has travelled a long distance to implement the policy of inclusion to the readers through a historical excursion of the context of inclusive education, its various interventions, various initiatives at national and international levels, and challenges and issues in implementation at systematic level (Macro level) and actual practice (Micro level). The author explains the concept of inclusive education as the education of all children with various disabilities and/or diversities in the overall general educational structure by adapting the complex educational system to include the school structure, infrastructure, methodology, curriculum, and classroom management. He mentions the interventions since 1974, PIED (1987), NCERT (1998), MHRD (2003), SSA, DPEP (2003), IEDC and IEDSS, NSSO (2004), NCFSE (2005), and RTE (2009) briefly to stress the need and importance of inclusive education.

The initiatives towards national level are described briefly in terms of Mental Health Act (1987), Person with Disabilities Act (1995), National Trust Act (1999), RCI Act (2000), National Policy for Persons with Disabilities (2000), and The Right to Free and Compulsory Education Act (2009). The Universal Declaration of Human Rights (1948) and its implementation at various countries are also described briefly to discuss the international level initiatives for inclusive education.

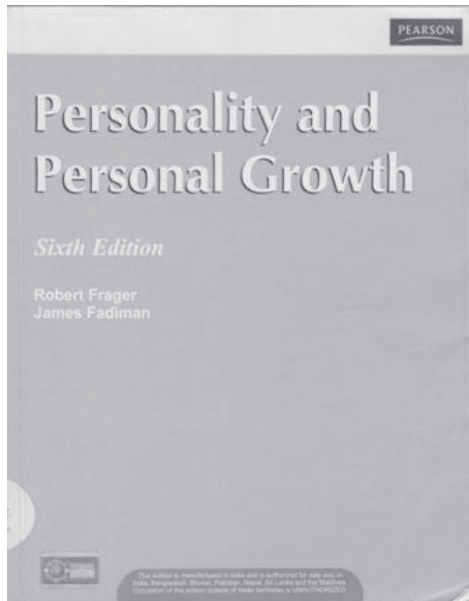
The section two (Managing children with diverse needs) describes the various problems and challenges related to children with hearing , speech , vision , intelligence, learning , physique, emotion, superior intellectual ability, creativity and children with multiple challenges. Each chapter (6-13) is devoted to describe in detail various categories, their identification, devices and strategies to help them, assessment, role of teacher educators, roles of teachers to adapt peers, parents, classroom, community, and schemes for pedagogic analysis.

The section three, teaching different subjects in inclusive classrooms, describes curriculum adaptation, and teaching learning strategies suited to various subjects and categories of challenged students through chapters 14-19. Advanced level constructivist learning strategies are illustrated to equip the stakeholders of inclusive education. They are questions to comprehend, knowing to known, interpreting visuals, problems to ponder, question pool, my dictionary, knowing to unknown, round table, collage making, pictures worth, exploring experiences, team word webbing, science word board, jigsaw, building cross, word puzzles, advertising the self, listing for sharing, ideas anonymous, life connections, junior poets, making jigsaw puzzles, concept maps, building flow charts, and think pair share. The concluding section, section four, support for children in inclusive classrooms, is critical as it describes academic supports, guidance and counselling, and prevocational skills for students with various categories of disabilities. Three chapters (20-22) are devoted for this section.

The cover page of this book itself reflects a clear notion of inclusive education as it diagrammatically represents the essence and depth of inclusion. It stands for addressing all factors of exclusion by locating children facing problems related with migrants, street children, orphans, child labour, poverty, domestic worker, remote area, under achiever, drop outs, behaviour problems, first generation learner, learning style, nomadic children, creative, gifted, disadvantaged, slum children, emotional children, minority, physical disabilities, learning disabilities, and sensory disabilities. The expository style makes heavy demands on the readers to know and practice the current trends of inclusion. Overall this book is quite useful for research scholars, resource teachers, practising teachers, teacher educators, student teachers and all stakeholders to clear the misunderstanding about the concept of inclusive education, the need and importance of inclusive education in schools, and how to implement this practice as a school wide programme.

Book Review**Personality and Personal Growth**

**Reviewed by: Dr. T.S . Ramachandran,
Lecturer ,DIET , Palakkad**



Robert Frager is a scholar in Social Psychology and is the founder and first president of the institute for Transpersonal Psychology. He has the privilege of working as an associate of Erik Erikson in Harvard University from where he received his PhD in social psychology. James Fadiman has the credit of teaching psychology in many leading Universities such as Stanford , San Francisco State University and Brandeis University .Personality and personal growth is designed in 15 chapters each of which has a unique chapter structure .It comprises sections such as Personal history , Intellectual Anecdotes, Major Concepts ,Dynamics, Structure, Evaluation, The theory first hand ,Chapter highlights , Key concepts , Annotated bibliography, Web sites and References. The sections are rich with discussions and illustrations at micro level.

The sixth edition maintains its cross cultural ,global and gender balanced perspectives while emphasizing the positive aspects of major personality theorists. It also encourages and supports students in using themselves as the primary touch stone for each theory.Each of the chapters provides opportunities to validate their insights through direct experience and by observing their own reaction to come to their own conclusions about the utility and value of each theory.

The very chapter ‘Sigmund Freud and psychoanalysis’ draws the conscious and unconscious impulses and unique mechanisms of human mind.In addition to his views on Psycho sexual stages of development , the book depicts Freudian views about women in a wider theoretical perspective. Freud, after acknowledging that he didn’t fully understand women , proposed a biological reason for the feelings of inferiority reported by woman undergoing psychoanalysis. According to Freud, early childhood experiences greatly influence teenage, young adults pattern of interacting and relating.

The second chapter is Carl Guster Jung and analytic psychology .The confession ‘my life is a story of the self realization of the unconscious’ is widely discussed here. The chapter argues that establishing and encouraging the relationship between the conscious and unconscious process is essential to achieving individual wholeness. To the authors ,Jung’s most important contributions to psychology are his recognition of the psychosocial importance of symbols and his detailed analysis of their interpretations . Discussion about active imagination archetypes , individuation and shadow is the speciality of the chapter.

Alfred Adler and individual psychology is the pith of the third chapter . The observation ‘The hardest things for human beings to do is to know themselves and change themselves’ is widely analysed with proper illustrations. The important thing is not what one is born with , but what use one makes of that equipment. The chapter also deals the observation of Adler regarding superiority ,inferiority and creativity.

The fourth chapter entitled “Karsen Horney and Humanistic Psychoanalysis unveils his mature theory. According to Horney, people have a real self that requires favourable condition to be actualised. The concept of real self is also discussed with a psychological interpretation which is familiar to all. The book attests that Horney tried to account for contradicting actions, attributes and beliefs by seeing them as part of a structure of inner conflicts and to explain behaviour in terms of its function within the individual's current defenses.

Feminism and its contributions to personality theory are the content of the fifth chapter. Contribution of Jean Baker Miller, Irene Pierce Stiver, Judith V. Jordan, Janet L. Surry, Christine Brooks and Jennifer Clement are portrayed in a wider canvas. In addition to the discussion regarding relational cultural theory, implications of personality development are also presented. The chapter will provide a brief history and contribution as feminist psychology.

Erickson's eight stages of human development is the theme discussed in chapter six. To Erickson, the development of a sense of identity has both psychological and social aspects. His model of the human life cycle integrates human growth and development from birth to old age, in the eight stages. Each stage holds a dynamic ratio between two poles—eg: trust versus mistrust. Being a teacher, William James puts a clear sketch of the role of teacher in the instructional process. To him, children are innately interested in and capable of learning. The task of the teacher therefore is less a matter of content and more a matter of intent. Hence one can read out the social constructivist approach in the observation of James.

The eighth chapter is stuffed with discussions and references related to B.F. Skinner and radical behaviourism. Skinner strongly believed that humans are essentially no different from other animals. This atmosphere is the heart of Skinner's application of animal research to an understanding of human beings. The chapter also discusses the views of Watson and Pavlov in terms of conditioning and reinforcement. Analysis and interpretation of cognitive psychology is the content of ninth chapter. The book observes that cognitive psychologists look for principles that may be common to all human cognitive processes, rather than the variations and uniqueness of human personality.

The book provided adequate slots for listening and quoting George Kell's Personal Construct Psychology, Carl Roger's Idea of Self and Transpersonal Psychology of Abraham Maslow with a wider critical perspective.

The last three chapters are completely left for critical analysis of Yoga and the Hindu tradition, Zen and Buddhist tradition and; Sufism and the Islamic tradition. The authors keep vigilance to quote the spiritual leaders of past and present for justifying the observations. “Man's inability to control and discipline his mind is responsible for all his problems” is the highlight of the presentation. Psychological growth is beautifully depicted with the help of a series of pictures in which the Ox is a symbol. Graphic illustrations of Zen thinking are made possible in terms of the Ox-herding pictures.

The book provides all readers a detailed analytical structure of human behaviour in association with body, mind, biological aspects, social atmosphere, experiential orbit and individual difference. The references and the comments of authors claim authenticity too. Thus the book becomes a reference material published by Pearson Education, Inc. and Dorling Kindersley Publishing, Inc. in the year 2009.

DIET Palakkad – An Overview



District Institutes of Education and Training (DIETs) are established in India after the recommendations of NPE (1986). DIETs are envisaged to overhaul education, especially in quality dimension. The main functions that entrusted to each DIET are:

1. Organising quality based Teacher Education programmes (both in preservice and inservice)
2. Conducting research and innovative activities to ensure the quality of education in the district.
3. Developing and disseminating various materials on education.
4. Organising field visits and planning various activities to tackle local issues in different fields of education.
5. Support and extension activities to different educational agencies.

DIET Palakkad, Kerala was established in 1992 by upgrading Swaminatha Vidyalaya Teacher Training Institute and is located in Anakkara Grama Panchayath, at the western border of the district. Anakkara is highly graceful and elegant in its natural dispositions and claims to have a rich cultural heritage as it is the birth place of eminent personalities like Ammu Swaminathan, Captain Lakshmi and Artist Mrinalini Sarabhai. Since its establishment, DIET Palakkad has undertaken different innovative activities in the district which could provide real fuel for the functioning of various educational institutions and projects. In the context of educational advancements, the institute held the responsibility of providing academic leadership and support to various educational projects like MLL, DPEP, SSA and RMSA. Apart from the routine responsibilities, DIET Palakkad has been carrying out various research oriented tasks in the district performing either as a leading component or as a catalyst. They are:

1. STEP – School and Teachers Empowerment Programme – a project undertaken to give wholesome support to 100 primary schools in the district.
2. HEEP – Head masters and Educational Officers Empowerment Programme, for ensuring time based planning and implementation of various educational programmes in the district.
3. TEEP – Teacher Educators Empowerment Programme, under which the fullest support is given to all Teacher Education Institutions in the district.
4. Distance Mode Training – “Bhashyam” for teachers dealing Malayalam at UP and HS level, ‘ESTEEM’ for teachers dealing Social Science at HS level and ‘Matrix’ for Mathematics teachers at HS level. In all the above, e-materials are developed and uploaded into separate blogs where the teachers can make use of it effectively through proper interaction. The institute holds key roles in the implementation of special educational projects led by District Panchayath and MLAs of various Assembly Constituencies in the district.

Having designated as the Apex Educational and Training Institute in the district, the institute is striving hard to realise the educational aspirations of the district as well as the state.