Souvenir & Abstracts

National Seminar

On

Need for Research and Innovation in Teaching Methodology

Sponsored By :

National Assessment and Accreditation Council (NAAC)

27-28 January, 2019

R.C.- 4

Organised By :

Shri Shakti Degree College

Sankhahari, Ghatampur, Kanpur Nagar-209206

Website : www.ssdckanpur.org • Email : info.ssdc@gmail.com

Vision, Mission and Value of
Shri Shakti Degree College
Sankhahari, Ghatampur Kanpur Nagar
Established in 2003

VISION

To provide excellent higher education integrating with ground realities of life.

MISSION

1) To ensure the availability of minimum basic infrastructure as per Norms and Standards fixed by Affiliating University/State Government.
2) To give first priority for the professional development of teachers and to establish co-ordination with National and International organizations relating to teaching-learning and Social Services and also to ensure optimum utilization of these organizations.
3) To develop the collaboration/link with Institutions/Industries for providing job orientation and need based knowledge exposure.
4) To develop the quality of teaching-learning by optimum use of innovative methods particularly e-technology and all available infrastructure.
5) To encourage for self-discipline, self-dependency, self-confidence, personality development, nationality and need based community oriented activities through value-added education.
6) To introduce and encourage the emotional feelings of being in "Mahavidyalaya Pariwar" through the concept of participative contribution.
7) To introduce and encourage the sense of mutual trust, mutual respect and mutual co-operation within and outside the institution.

VALUE

1) To develop the awareness among the students about the ground realities of life and also to provide job-orientation.
2) To prepare good citizens with effective and developed personality through value-added education by encouraging the feelings of social commitment and nationality on participatory basis.
3) To make competent to face the global problems like unemployment, poverty, illiteracy, terrorism and also to gain the success in global competition in the field of education through excellent education.
4) To create awareness about ecology and environment and to encourage such activities which may be an example for others.

National Seminar

on

Need for Research and Innovation in Teaching Methodology

January 27-28, 2019

Souvenir
and

Abstracts

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RC-4

Sponsored by

National Assessment and Accreditation Council

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January 02, 2019

Message

It is a matter of great pleasure that **Shri Shakti Degree College, Sankhahari, Ghatampur, Kanpur** is going to organize a **National Seminar** on **"Need for Research and Innovation in Teaching Methodology"** sponsored by the **National Assessment and Accreditation Council (NAAC)** on **27-28 January, 2019**.

Shri Shakti Degree College, is an elite institute, having history of delivering numerous stalwarts to the field of humanities, biological and physical science and computer application in rural areas since 2003. The objectives of this seminar is to prepare a platform to encourage the teachers to remove the fear from their minds about research and innovation and to innovate new teaching methodologies. It will also focus on the implications of research and innovation in improving the teaching methodology in institutions of higher education.

It is indeed a proud moment for the College and I extend my blessings and warm wishes to all who are associated with the **National Seminar.** I am confident that the event will be a grand success.

Prof. (Neelima Gupta)
Vice-Chancellor

Mr. Vinay Trivedi,
Manager/Secretary,
Shri Shakti Degree College,
Sankhahari, Ghatampur,
Kanpur-209206.

सत्यमेव जयते

प्रो. आशुतोष शर्मा
Prof. Ashutosh Sharma

स्वच्छ भारत
एक कदम स्वच्छता की ओर

सचिव
भारत सरकार
विज्ञान और प्रौद्योगिकी मंत्रालय
विज्ञान और प्रौद्योगिकी विभाग
Secretary
Government of India
Ministry of Science and Technology
Department of Science and Technology

7th January, 2019

MESSAGE

I am glad to know that the Shri Shakti Degree College, Sankhahari, Ghatampur, Kanpur Nagar, affiliated to C.S.J.M. University, Kanpur is organizing a National Seminar on " Need for Research and Innovation in Teaching Methodology" and a souvenir is being release on 27th and 28th January,2019 on this occasion.

The establishment of Shri Shakti Degree College in a village of educationally ,socially and economically backward area is a matter of great pleasure and pride. Shri Shakti Degree College has been active in providing quality education to its students particularly coming from poor class and belonging to SC/ST category, minority and OBC (below creamy layer).I understand that over the years, the reputation of the college has grown manifold, I hope the college will continue to strive harder to scale new height of success.

I am sure a concerted effort is required to provide facilities in rural area for under privileged students. This national seminar shall find students for such an endeavor. I wish the every staff of college and Shri Vinay Trivedi, Manager all success for the above national seminar.

(Ashutosh Sharma)

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Shri Kallaji Vedic University

Kamdhaj Nagar, Nimbahera, Rajasthan

Prof. Ashok Kumar
President

Message

It is indeed a matter of great pleasure that Shri Shakti Degree College, Sankhahari, Ghatampur , Kanpur Nagar (UP), an eminent degree college affiliated to CSJM University, Kanpur , is organizing a National Seminar *on "Need for Research and Innovation in Teaching Methodology"* during 27- 28 January 2019, sponsored by NAAC.

I hope that the National Seminar will provide a common platform for students, research scholars, teachers, and the eminent academicians, to interact and share their experiences in the field of Teaching Methodology.

The Seminar will highlight and focus on the recent advances taking place in this field. The topic selected for the National Seminar is indeed unique for the sustainable growth of Higher Education in this country.

I hope that the deliberations in Seminar will help crystallizing ideas and action plan for meeting the challenges of Research and Innovations in Teaching Methodology.

I wish the National Seminar a great success and hope that the participants will enrich their knowledge and foster new collaborations

Prof. Ashok Kumar
Vice Chancellor Sri Kallaji Vedic University
Former Vice Chancellor DDU Gorakhpur University
Former Vice Chancellor CSJMU University Kanpur
Former Vice Chancellor CAS, University, Kanpur

डॉ0 अनिल कुमार मिश्र

क्षेत्रीय उच्च शिक्षा अधिकारी
सी0एस0जे0एम0विश्वविद्यालय परिसर
कानपुर मण्डल कानपुर
मो0न0–9415771768

दिनांक 21 जनवरी 2019

सन्देश

यह जानकर हार्दिक प्रसन्नता हो रही है कि श्री शक्ति डिग्री कालेज,शाखाहारी,घाटमपुर कानपुर नगर अपने सेमिनार समारोह के अवसर पत्रिका **"Need for Research and Innovation in Teaching Methodology"** प्रकाशित करने जा रहा है । महाविद्यालय द्वारा प्रकाशित सेमिनार पत्रिका में छात्र/छात्राओं शिक्षकों / कर्मचारियों/बुद्धजीवी जन के विचाारों की अभिव्यक्ति होती है तथा लेखन के प्रति उनकी रूचि जाग्रत होती है साथ ही साथ उनकी शैक्षिक एवं ,सृजनात्मक क्षमता का विकास होता है । पत्रिका में प्रकाशित लेख व रचनायें एक स्वस्थ परम्परा का बीजारोपण करेगें तथा समय–समय पर छात्रों/व्यक्तियों का मार्गदर्शन करेगें ।

सेमिनार के सफल बनाये हेतु मेरी हार्दिक शुभकामनाएं ।

भवदीय

डॉ0 अनिल कुमार मिश्र

सेवा में,

श्री विनय त्रिवेदी
प्रबन्धक
श्री शक्ति डिग्री कालेज,शाखाहारी
घाटमपुर कानपुर नगर

Ramesh Chandra Trivedi
M.Com., L.L.B., C.A.I.I.B.
Founder:Shri Shakti Degree College
Ex-Director : Bank of Baroda

SHRI SHAKTI DEGREE COLLEGE

Sankhahari, Ghatampur, Kanpur Nagar - 209 206
(Affiliated to C.S.J.M. University, Kanpur)

Date. 22.01.2019

MESSAGE

Introduction of privatization, liberalization and globalization had necessitated the switch over from traditional system to innovative system almost in every sector particularly in financial and educational sector. Outflow of students from our country to other countries alluring attractive employable education had adversely affected the structure of our country foreign capital. Our national policy makers pondered and pondered and observed that unless education of our country is made well competent and effective not only to detain the outflow but also to attract and encourage for inflow from other countries, overall balanced development of the country is not possible. In this context, it was also felt that to bring effective education, element of research and shifting from traditional teaching methodology to innovative methodology is evitable.

With this backdrop, the institution is organizing two days' seminar on 27-28 Jan.,2019 on the title " Need for Research and Innovation in Teaching Methodology" financed by National Assessment and Accreditation Council (NAAC). I except two days' deliberations would meet the objective and the conclusion would enable the transformation of mind-set of the teachers to the new set of mind. I appreciate the efforts of IQAC, our mahavidyalaya parivar, management for investing their best hearty efforts for organizing this seminar. I hope this seminar would be historically a grand success.

R. C. Trivedi
Founder

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Contents

INVITED TALK

Empowering Higher Education by making it Learning Outcome Based

Avinash C Pandey
Director, IUAC, New Delhi

The world is changing faster than ever and our skill sets have a shorter life; the world is getting more connected that ever before; in this connected world, mentorship takes on new importance and meaning; challenges we face are multi-faceted requiring systems thinking & socio-technical sensibilities; and while skills are important, so are mind sets and dispositions. By exploring play, innovation, and the cultivation of the imagination as cornerstones of learning, a vision of learning has to be created for the future that is achievable, scalable and one that grows along with the technology that fosters it and the people who engage with it.

It is, therefore, necessary to develop inbuilt mechanisms to provide opportunities for teachers within the framework of knowledge society so as to keep the teachers mindful of their very existence of appreciating the facts that.:

- this job is about relationships
- this is just not a job, and when the school day is over, the work's not all done. In teaching,
- what ultimately matters are not what is taught, but what is learnt
- what we teach and how we teach, and how we assess, ought to be aligned with the intended learning outcomes, such that they are fully integrated and consistent with each other
- he/she can't handle any situation, alone.
- what he/she does outside of a class has bearing
- he/she can make a difference
- punishment is not more effective than discipline
- morality and values shouldn't only be taught at home
- there is a young person behind the act.
- time has to be spent to just sit and listen
- he/she is modeling.

Heuvelen [1, 2] emphasized that students need to practice individual skills, in isolation from other skills, till they are well learnt. The misconceptions in a student's mind have to be identified and their inadequacy exposed, before they can accept the correct concepts. Students have to be helped in organizing their knowledge around concepts. Students are encouraged to solve problems in Active Learning Problem Sheets while interacting with neighboring students. This approach, which is inconceivable in conventional education, has been found to be very effective in making students actively participate in their education. The active struggle to solve a problem is far more effective than passively receiving prescriptions for solving problems in a lecture. This instruction strategy provides opportunities for students to

(i) be active participants during lectures in constructing concepts
(ii) reason qualitatively using the concepts and in solving problems
(iii) evaluate their own thinking and that of their class-mates and
(iv) make unpenalized mistakes while getting immediate feedback from the professor. Repeated exposure to same concepts and skills in a variety of contexts over an extended time is crucial component of this instruction strategy.

Instruction strategies have not remained confined to the mechanisms for content delivery. Mc-Dermott and Shaffer [3, 4] have described in detail how curricula should be developed for improving

conceptual understanding. The design of instructional materials that meet the needs and abilities of students require a detailed knowledge about the conceptual and reasoning difficulties encountered in the study of a particular topic. For this, systematic studies of student understanding of specific topics are necessary. Interviewing students and analyzing audio-tape transcripts provide very reliable guidance about these difficulties. Monitoring students in the laboratory, during class discussions, responses in homework assignments and examinations can provide further data. Large scale testing allows one to estimate the prevalence and persistence of specific conceptual difficulties.

Zollman [5], while emphasizing the importance of active engagement of students, discussed the role of technology in development of instruction strategies. Redish et al [6] described an active-engagement microcomputer-based laboratory for improving understanding of basic concepts. Meltzer and Manivannan [7] developed a variant of Peer Instruction method which was developed in 1991 by Mazur at Harvard University. This method is regarded as an important breakthrough in addressing the problem of transporting active-learning methods to large classes. This method restructures the traditional lecture into a series of short lecture presentations punctuated by a series of "ConcepTests".

The scenario in HEI is alarming as the majority of people pass and get degree without understanding the core concepts [8]:

	Understanding		
Pass	Good understanding Failed examination: 0 %	Good understanding Passed examination: 25 %	
Fail	Poor understanding Failed examination: 25 %	Poor understanding Passed examination: **50 % !!!!**	**Exam**
	Fail	**Pass**	

The aims of UG programs in Physics should also include:

- developing proper epistemological beliefs about the nature of Physics and learning of Physics
- broad understanding of Philosophy of Science, development of scientific attitude, questioning mind, rational and critical thinking skills
- a broad exposure to the history of Physics with emphasis on the interplay between theory and experiments in Physics
- developing the ability to design experiments to answer specific questions and draw inferences from experimental observations
- developing awareness about applicability of Physics principles in daily life and encouraging students to think about using these to solve local problems
- providing authentic research experiences
- leaving enough time and opportunity for a student to pursue own curiosity and goals Assessing Student-Learning Outcomes

Some of the characteristic attributes of a graduate in physics are

- **Disciplinary knowledge and skills:** should be commensurate with the aptitude, abilities and goals of a student. Emphasis should be on basic concepts and problem-solving skills as they enable a learner to easily understand any sub-field of Physics as and when needed.
- **Skilled communicator:** This attribute cannot be acquired by taking a course or two. In many cases, the English language skills are so poor that it is a major impediment to comprehension and

expression. In these cases, it is essential to spell out a minimal English language learning program to supplement Physics education. Alternatively, Physics courses in mother tongue should be developed.

- **Critical thinker and problem solver:** To develop this attribute, it is necessary that assignments and tests emphasize critical thinking and problem solving.
- **Sense of inquiry:** Students should be encouraged to develop a questioning mind and given adequate time and opportunity to pursue their curiosity.
- **Team player/worker**: There is nothing in our curriculum to encourage this attribute. There are no group projects, no group problem solving assignments, no drawing of inferences in a group from experimental observation. This is in sharp contrast to practices in US where working in groups is emphasized.
- **Skilled project manager:** Problem solving requires breaking a problem into smaller manageable parts. As the complexity of problems increases, a skilled problem solver can naturally evolve into a skilled project manager.
- **Digitally Efficient:** Simulation should be an integral part of Physics education. They can provide a much deeper insight into concepts. Solving only problems that are analytically tractable can lead to misleadingly simplistic and limited understanding of the potential of Physics. Students should not only use simulations, but also create their own simulations. This will also enable them to develop a very useful skill in the digital era.
- **Ethical awareness/reasoning:**With increasing knowledge, social complexity and connectivity, ethical issues are also becoming increasingly contentious. It is important that subject specific ethical issues are discussed, training students how to argue about such issues from different perspectives with depth of knowledge and sound reasoning.
- **National and international perspective:** Students should discuss issues in Physics education from a national and international perspective.
- **Lifelong learners:** Students should not view examinations as the goal of their education. Education should enable students to become life-long learners capable of pursuing their curiosities in a productive manner. Therefore, Physics education programs must encourage and leave enough time for self-paced and self-directed learning.

To identify if students are learning what we intended them to learn, we must identify varied methods, or tasks, to assess change, growth, and the integration of knowledge, attitudes, or skills over time. We also need to create rubrics, scoring guides, or scales to rate students' performances on the assessment methods.

The crux of the problem is how best to assess students?

• Identify the learning objectives.

- What are students expected to gain from the module?
- What are students expecting to gain from the module?

• Evaluate which learning objectives matter more than others and tailor assessment procedures to meet these goals.

• Consider implementing innovations initially on a small scale and develop over subsequent years in the light of experience gained and mistakes made.

• Diversify assessment procedures.

- This gives much greater opportunity for students to demonstrate their particular skills.

• Best practice in assessment is co-ordinated at a departmental level.

- Departments should have an assessment strategy.

Assessment Methods

At any level, the assessment method should:

- Be meaningfully related to the student-learning outcome you are trying to assess.
- Require that students' display in observable ways the knowledge, skills, or attitudes described in the student-learning outcome.

The **formative assessment**is intimately linked with students' learning processes, helping to guide them in their studies, motivating them, providing feedback on areas of learning requiring further work, and generally promoting the desired learning outcome. In this role, assessment is to monitor student learning to provide ongoing feedback that can be used by instructors to improve their teaching and by students to improve their learning. More specifically, the purpose of formative assessments is:

- To provide feedback to students: help students identify their strengths and weaknesses and target areas that need work
- To diagnose students' strengths and weaknesses: help faculty recognize where students are struggling and address problems immediately
- To help students to develop self-awareness.
- To motivate students
- Formative assessments are generally low stakes, which means that they have low or no point value.

Examples of formative assessments include asking students to:

- draw a concept map in class to represent their understanding of a topic
- submit one or two sentences identifying the main point of a lecture
- turn in a research proposal for early feedback

Whilst most assessment is both summative and formative, generally, the summative function increasingly predominates in a way that adversely affects student learning.The **summative assessment** is to evaluate student learning at the end of an instructional unit by comparing it against some standard or benchmark. Summative assessments are often high stakes, which means that they have a high point value. Examples of summative assessments include:

- a midterm exam
- a final project
- a paper
- a senior recital

Information from summative assessments can be used formatively when students or faculty use it to guide their efforts and activities in subsequent courses. Direct summative assessment methods are most often used to measure student-learning outcomes at the program-level (e.g., portfolios, performances, thesis, comprehensive exams, licensure or certification exams) and course-level (e.g., research papers, course exams, case studies, oral presentations).

Example of a Program-Level Method for Assessing Student-Learning Outcomes

- Students give an oral presentation in which they demonstrate their mastery of key program content through a critical analysis of and a viable solution for a problem posed in case study materials.
- Students produce a portfolio containing specific artifacts evidencing students' accomplishment of each of the learning outcome.

- Faculty members use a structure, process, and rubric, scoring guide, or rating scale for assessing the portfolios.
- The individual artifacts in the portfolio are assessed in relation to specific student-learning outcomes.

The rationale for doing **systematic formative assessment is extensive**. Summative assessment, which occurs primarily through the use of periodic cumulative exams that test for information and low-level problem-solving skill, encourages rote learning on the part of students and cannot be used by teachers to shape instruction in a continuous and dynamic fashion. To effectively monitor and influence the development of students' thinking processes, inquiry skills, attitudes toward science, and learning behaviors requires continuous forms of assessment integrated into everyday learning activities:

- **Exploring Naive Concepts**
  Students come to their physics classes with a tremendous amount of experience and understanding. A great deal of this prior knowledge is in conflict with formal physics concepts and principles. Students need to become aware of their prior conceptions, have the opportunity to express their understanding, and hear what other students think. Likewise, it is essential that teachers become aware of students' pre-instructional understanding so they can better tailor learning activities to address their students' particular needs.
- **Honing and Clustering**
  When students first learn a formal physics concept, they do so in a limited context and in isolation from other closely related ideas. Over time the students are expected to generalize their understanding of a concept and integrate it with other knowledge so that they can apply the concept in a wide range of contexts.
- **Analyze and Reason Using Concepts**
  Once students understand a concept (or set of concepts), an important goal is to get them to use their understanding to analyze and reason about more complex situations. By analysis, we simply mean to break a situation down into basic parts to better understand the whole. Reasoning involves putting together the parts to draw conclusions or make judgments. Analyze and Reason assessment items require students to deal with complex situations and questions that can be addressed qualitatively, but would be extremely difficult for them to solve using an equation-centered approach.
- **Concept-Based Problem Solving**
  A goal of instruction is to improve students' ability to use their knowledge of physics concepts to solve both quantitative and qualitative problems. In most traditional courses students focus so much on the algebraic aspects of problem solving, they never learn how to use physics concepts to solve problems. In order to put in practice, the systematic formative assessment requires development of e-diagnostic modules on important topics to begin with. Conceptual understanding can be reliably ascertained only by testing the same concept in a variety of contexts. Such a test would require a lot of time in evaluating the responses. Immediate feedback cannot be given. The problem is further complicated due to language difficulties. Objective tests are easy to evaluate. But they are not reliable indicators of conceptual understanding unless a sufficiently large number of questions dealing with the same set of concepts are answered all correctly. In order to ascertain conceptual understanding a student may have to take the test several times. A fresh set of questions must be presented with each attempt. Therefore, for each set of concepts a very large set of questions must be available.

Keeping these observations in mind, there is a need to create e-diagnostic modules on important topics. For this, the following procedure is suggested:

- Divide the topic into a small number of conceptual categories. Each concept category must consist of a single concept or a combination of concepts.
- Arrange the concept categories in a hierarchical sequence. If mastery of concepts in category A are a pre-requisite for correctly answering questions in category B then category A must appear earlier than category B in this sequence.
- Prepare a very large number (about 50) of True/False questions for each category. Each question must belong uniquely to one of the concept categories. To answer a question belonging to a particular concept category correctly, it should be necessary to understand all the concepts belonging to that category.
- To test for a particular concept category, present randomly chosen 'n' True/False questions from that category. The probability of correctly answering all the questions by random choices is $(1/2)^n$, so if the value of n is large, it will be unlikely that a student will be able to answer all the questions correctly without understanding the concepts involved in the category. A good choice of n is 7 as $(1/2)^7 = 1/128$ is less than 1%.
- Present these questions one at a time and inform the student immediately whether the answer is correct. This will allow a student to think about the reasons for getting the answer wrong. A wrong answer challenges a student's conceptual framework forcing a rethink and modification of the framework.
- Ask a student who is unable to answer all the 7 questions correctly, to take remedial measures for overcoming the conceptual deficiency and take the diagnostic test again, till all 7 questions are answered correctly.
- Motivate a student to persist with a concept category till proper understanding is achieved. It can be assumed that a student who can answer all the 7 questions correctly has understood the concepts required for that category. Thereafter the student can move on to the next concept category.
- A diagnostic test has the advantage that a student has to spend time and effort on a topic only to the extent needed.

- **Organize and Interrelate Groups of Concepts**

  At the program level in particular, the desired overall outcome for students is not just the mastery of individual components but the ability to put the pieces together in an integrated whole. Students should have at least one opportunity to demonstrate such integration in an assessment that measures more than one of the program outcomes

Purpose of assessment with respect to quality assurance

- To provide feedback to lecturers on student learning.
- To evaluate a module's strengths and weaknesses.
- To improve teaching.
- To ensure the module is creditworthy.
- To monitor standards over time.

Frequency of Assessment

In general, essential learning outcomes should be assessed more than once, both in a course and a program. This practice affords students more frequent feedback and opportunities for improvement, and allows faculty to track improvement over time, rather than see an unsatisfactory performance when it is

too late to do anything about it. At the program level, multiple assessments reinforce the importance of the outcome as something attached to a program, not just a course. Please note that the product assessed and the rating method (see below) do not need to be the same each time an outcome is assessed.

The consistency of the traditional approach to assessment and identified learning goals

The traditional approach promotes a number of learning outcomes. The unseen examination requires students to respond to pressure and time constraints. They develop strategic capacity in respect of the topics studied and the questions answered, and selectivity in the material presented. In other respects, the traditional approach fares less well.

Method of assessment	Meaning and skill areas developed
Group assessment	This develops interpersonal skills and may also develop oral skills and research skills (if combined, for example, with a project).
Self-assessment	Self-assessment obliges students more actively and formally to evaluate themselves and may develop self-awareness and better understanding of learning outcomes.
Peer assessment	By overseeing and evaluating other students' work, the process of peer assessment develops heightened awareness of what is expected of students in their learning.
Unseen examination	This is the 'traditional' approach. It tests the individual knowledge base but questions are often relatively predictable and, in assessment, it is difficult to distinguish between surface learning and deep learning
Testing skills instead of knowledge	It can be useful to test students on questions relating to material with which they have no familiarity. This often involves creating hypothetical scenarios. It can test true student ability and avoids problems of rote- and surface-learning.
Coursework essays	A relatively traditional approach that allows students to explore a topic in greater depth but can be open to plagiarism. Also, it can be fairly time consuming and may detract from other areas of the module.
Oral examination	With an oral exam, it is possible to ascertain students' knowledge and skills. It obliges a much deeper and extensive learning experience, and develops oral and presentational skills.
Projects	These may develop a wide range of expertise, including research,
IT and organisational skills.	Marking can be difficult, so one should consider oral presentation.
Presentations	These test and develop important oral communication and IT skills, but can prove to be dull and unpopular with students who do not want to listen to their peers, but want instead to be taught by the tutor.
Multiple choice	These are useful for self-assessment and easy to mark. Difficulties lie in designing questions and testing depth of analytical understanding
Portfolio	This contains great potential for developing and demonstrating transferable skills as an ongoing process throughout the degree programme.
Computer-aided	Computers are usually used with multiple-choice questions. Creating questions is time consuming, but marking is very fast and accurate. The challenge is to test the depth of learning.
Literature reviews	These are popular at later levels of degree programmes, allowing students to

	explore a particular topic in considerable depth. They can also develop a wide range of useful study and research skills.

Strengths of a traditional approach to assessment

- Strategic thinking.
- Responding to pressure and time constraints.
- Encouraging a broad knowledge base.

Weaknesses of a traditional approach to assessment

- Thinking skills – identifying and solving complex problems.
- Presentation and oral skills – presenting complex problems and solutions orally in a comprehensible way, confidence building, use of PowerPoint, responding to unknown questions orally.
- Interpersonal skills – communicating with colleagues, negotiating, developing leadership skills and managing interpersonal problems.
- Research skills – finding unknown sources of information, research on the web and using libraries.
- Entrepreneurial skills – identifying personal goals and the means to achieve them.
- IT – basic skills, such as familiarity with core software and use of the internet.
- Self-motivation and assessment – understanding personal motivation and objectives, and assessing progress achieved.

There is increasing acceptance that it [assessment] is at least in part to do with preparation for later life and work beyond academia. This recognition has brought with it a gathering momentum for a shift in emphasis from the acquisition of knowledge to the acquisition of skills, from product to process, from grading to competence. To put it another way, if departments are serious about widening the range of skills students acquire from their degree programmes, the range and type of modules provided must be designed with that in mind.

Purpose of summative assessment

- To pass or fail a student.
- To grade or rank a student.
- To allow progress to further study.
- To assure suitability for work.
- To predict success in future study and work.
- To signal employability and selection for employment.

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Outcome Based Education: An Integrated Approach to Teaching Learning Process

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Abstract

Knowledge dissemination, as a result of imparting education, has always been the matter of prime concern and plays a pivotal role in the development of any nation. In this talk, we first highlight certain important issues which serve as essential tools to improve upon the traditional teaching methodologies to modern technically supported teaching skills. In order to have effective teaching learning process, the principles of effective teaching as well as effective learning are important to be well understood and applied. It is well known that teaching and learning are reciprocal and invariably go together. As such, the effective teaching can be defined as the teaching which results in effective learning, the ultimate objective of teaching. The characteristics of effective teaching have been studied in depth by several investigators. The finer skills that make for effective teaching include,

1. Personality
2. Subject matter expertise
3. Relational competence with students
4. Professional competence
5. Teaching style, and
6. Classroom management style

Apart from the above dimensions, effective teaching involves skills that can be acquired only with *intrinsic motivation* in the teacher, and can be exhibited through an *appropriate intellectual level*, *appropriate communication ability and competence*, and *the right kind of pedagogical philosophy*. The effective teaching involves all the above ingredients to be present. Thus, the essential elements of teaching and learning need to be elaborated extensively so as to devise new teaching methodologies in the light of modern perspective.

Since now the focus is shifted from *Design of Instructional objectives*, where we describe what teachers do and the content of presentation material during class room session to the *Design of Student Learning Outcomes* where we describe what students can do as a result of their learning experiences.

In view of the above, finally we focus on outcome based education, that encompasses the holistic approach to convert a student into a demanding personality based on desired outcomes and defined goals involving the aspects of *learner centric*, *outcome based competencies*, *objective assessment*, *skills/performance focus*, *integrated learning* and *performance assessment*.

Educational Research – An Overview

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Abstract

It is a well-known fact that education broadens our vision, outlook perception and at the same time offers new possibilities and opportunities to solve problems and take proper decisions.

Research is an in-depth study in to a problem which need an amicable solution. It is a systematic, scientific, objective activity, which includes the collection of relevant information and careful analysis of data, recording and reporting of valid conclusion, that may lead to creation of new knowledge and development of theories. Thus research findings identify the shortcomings, strengths and weaknesses.

As a matter of fact, research is essential to all professionals and to every human beings, who are unconsciously doing some research in one or the other way.

Educational research is the process of scientific enquiry to solve problems of educational sector of students and teachers. In case of students, research is very important as it helps them to satisfy their quest / queries which enhances their knowledge, clarifies confusion, helps in proper understanding and learning to create a balance between the collaborative and individual work. So far as teachers are concerned, educational research is of utmost importance for them not only, for career growth but quality teaching too.

It is needless to mention that knowledge generated by education research is the basis of sustainable development, which is the need of the hour for increasing the GDP of a country like ours.

Present study has been conducted in colleges of Jammu city with the main objectives to find out as to:

a) How can teachers become researchers?

b) What are the consequences of their lack of interest in research? and

c) What are the main obstacles?

The study reveals several interesting facts. It was observed that the college teachers because of heavy teaching workload, valuation and examination work etc,. to find time for research is a challenge. It has also being observed that many colleges are not at all interested in research. They simply are concerned in teaching and completion of the course and tend to do only minimal research. In some of the institutions even if teachers are interested, do not have access to adequate infrastructure required for the conduct of research. Another stumbling block in education research is laziness of teachers, their family commitment, being unfamiliar with research and lack of encouragement for the research from peers. Above all, government though lay stress on research but do not lend sufficient support and grants for carrying out research activities.

In the present paper, an attempt has also been made to come out with some important suggestions and strategies so that teachers can become good researchers. Mention may be made of proper guidance as well as the motivation to conduct the research with passion and perseverance having applied value. Their interest can also be enhanced through professional development activities and by extending special incentives and benefits. These suggestions and strategies, if properly implemented can go a long way for the promotion of educational research among the teachers. But only time can stand as a witness.

Keywords: Education, research, college teachers.

Teaching and Research: Two sides of the same coin

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Abstract

It is often assumed that the act of teaching is different from the act of research. However, evidence has shown that it is most beneficial if teachers do research and researchers teach. Indeed, most of the breakthroughs in knowledge are not from stand-alone research institutions but rather, they are from Universities where research and teaching go hand-in-hand. Additionally, it is abundantly clear that some of the best teachers are, in fact, outstanding researchers. Thus, it is clear that a researcher mindset contributes greatly towards teaching. So, the question to ask is, how can one incorporate research into teaching methodology? Further, from the standpoint of degree colleges in India, how does one build a research base that will lead to both creative science and innovative technologies. Research is generally carried out, either as a problem solving exercise or as a tool to explore new areas. Consider the case of the invention of the blue LED using gallium nitride. Here the problem was well defined and research lead to a solution of this problem. Another example of research is the synthesis of molecular switches which were discovered by accident when working on synthesis of certain molecules. Here, there was not a goal to make a molecular switch but simply explore what happens when certain functionalities are incorporated in molecular systems. Teaching has two broad goals – to enhance students knowledge, and to provoke new thoughts and ideas. However, along the way, it should also lead to empowerment and scientific growth of the teacher. The current age is the age of information. There is no shortage of information, and much of it is easy to access. However, converting that information to knowledge is the task which the teacher is entrusted. In order to do this, the student should be equipped with tools and a mental discipline so that they can independently verify the content. In other words, the student has to learn how to learn. The difficulty is that there is no prescription for this part, since each student is unique. However, a conscious effort towards this goal will go a long way. There are some simple steps that can be taken in this regard by the teachers, such as reading online course materials, research papers, identifying key concepts which can be illustrated using experiments or videos. However, a much more useful exercise is to make challenging assignments from the scratch. Such an exercise, even if not perfect, is the ultimate way to greatly increase the effectiveness. How can a teacher in a degree college establish a research career ? There are again a few practical steps that can be taken, especially in the context of the Indian education system. It is my humble opinion that every teacher should first believe that they can do research and read literature online, and make their own notes and analysis. Following this, they approach nearby institutes for help and start small projects in their own college. Slowly, more students can be involved and the level of research will naturally increase. Regular discussion meetings, presentations and reports can also encourage the researcher. Further, incorporation of the research in teaching will greatly encourage the students and teachers alike. Following this, there can be discussions with other colleges and meetings and conferences can be organized on specific themes. I believe that a small group of individuals can greatly improve the research environment in any college.

Research, Educational Research & Research in Science

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Abstract

Research is an in-depth inquiry into a problem which needs a harmonious solution. Every invention in the world happens as a result of curiosity and human nature to enquire. Research can also be termed as search for the truth or discovery of new thing or build body of knowledge regarding a phenomenon. It is a systematic, scientific objective activity which includes the collection of data, recording and reporting of valid conclusions that may lead to development of theory, principles and generalizations.

Educational Research

Education is considered as a vital tool for social as well as national development. Every nation in the world as a matter of fact gives greatest emphasis towards development of educational sector and India is not exception. Implementation of projects like District Primary Education Programme (DPEP), SarvSikshaAbhiyan (SSA), Rashtriya Madhyiamic Siksha Abhiyan (RUSA) are some of the efforts in direction of improving standard of educational sector.

The main objective of educational research is to promote the best of solutions to educational problems as well as to enhance knowledge. Educational research is mainly of three types viz;

1) Basic/ Fundamental/ Pure
2) Applied/ Experimental
3) Action Research

Research in Science

Science is a systematic and organized body of knowledge in any area of enquiry that is gained by scientific method. The broad objectives of scientific research is to discover laws and postulate theories. Logic and evidences are the only two pillars upon which scientific knowledge is based. Being "science literate" will no longer be just an advantage but an absolute necessity. We cannot escape from significance of science in this world of ours. Basically science is not the subject; it is the attitude to observe things, to question everything untilwe get the satisfying solution over it.

The present article deals with the classification of scientific research according the data collection techniques both observational and experimental.

Keywords: Research, Education, Science

Student Centered Pedagogy for Better Science Teaching and Learning

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Abstract

The traditional teaching format of most introductory science courses in our institutions these days present many challenges to both teachers and learners as it is based on whole class lecture by the teachers and rote memorization of the subject by the learner without understanding the same. Science education in our universities seems to be losing out its importance these days. Majority of the students shows their dissatisfaction with present examination system as it is the measure of memory capacity of the student at the end of the session. Science is the systematic accumulation of knowledge based on evidence. Scientific knowledge cannot be achieved without involving students in active practical research group. Effective and appropriate pedagogical tools and approaches by the teacher can help the learners for enhancing their subject understanding with active mental engagement thereby leading to academic achievement and abilility to contribute for a better society. There are several innovative modern pedagogical tools such as flipped classrooms, learning by doing science, research based pedagogy etc. The different tools involved in a research based pedagogy are a good story based context of the subject to be taught, its effective content, activity, analysis, interpretation, research, report and self reflection etc. In this presentation, research based pedagogical tools for better science teaching and learning with examples will be discussed.

Keywords: Pedagogy, Research based pedagogy

Factors responsible for inclination in Research and Innovations: My Experiences

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Abstract

Any society achieves sustained growth due to science education, Research & Devlopement and Entrepreneurship programme. Such things possible through learning, innovation, recognition for ongoing dedicated work so that love for innovation can be increases'. During my last about 15 year of my academic experiences at Ph.D. level, Master level, Under graduate level, at School education and some outreach programme I have observed some things that are essential for growth in R & D activity. During this period I have visited more than 150 academic institutions, interacted with more 15000 students and more than 1000 teachers. I observed following things that help Research and innovation based activities.

1. Regular awareness programme of seminar/symposium/workshop/ interaction session
2. Class room teaching should be connected to daily life.
3. Industry/concerned sector visit
4. Recognition and motivation to researcher/ Innovator

In this talk I will share some my observations and my experiences

Factors Affecting Quality Research Inclinations of Teachers

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Abstract

Research is a fascinating cum mandatory task among higher education teachers today. This task of research not only quenches the thirst of knowledge but also it is important to be in the higher education system. No matter how difficult it may be the teachers' aspire to do Ph.D. Course. Present situation shows there are around ten times applications for the available seats in various departments of the higher education institutions. So many Research Entrance Tests (RET) are being organized for the research aspirants who are preparing day and night for the same. This aspiration of the teachers' to do research fades away the day teacher gets registration in Doctoral Programme. There are several factors affecting this process of research. The paper probes into those factors that affect quality research inclinations of teachers viz. personal, extrinsic administrative and some ethical. There are also differentiating factors for the teacher working in government organizations and non-government organizations. The author also proposes some suggestive measures to incline teachers towards quality research.

अल्प व्ययी दृश्य श्रव्य सामग्री की सहायता से विज्ञान का आनंददायी शिक्षण

अखिलेश कुमार श्रीवास्तव
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Abstract

वर्तमान समय में विज्ञान-शिक्षण की प्राचीन व उबाऊ विधियों के कई दुष्परिणाम सामने आने से कई शिक्षाविदों ने इस ओर ध्यान दिया तथा विज्ञान शिक्षण में प्रयोग भी करवाने पर जोर दिया.इस दिशा में कई संस्थाओं तथा राज्य सरकारों ने तथा विभिन्न व्यक्तियों ने कार्य किया.जिसके सुखद परिणाम अब दिखाई देने लगे हैं.अब कई विद्यार्थी अंतर्राष्ट्रीय स्तर पर कई प्रतियोगिताओं जैसे विज्ञान ओलिंपियाड आदि में स्वर्ण पदक,रजत पदक जीतकर देश का नाम विश्व में ऊँचा उठाने में लगे हुए हैं.विभिन्न अंतर्राष्ट्रीय मंचों पर भारत देश की छाप अंकित की जा रही हैं ,जिसके पीछे भारत सरकार तथा ऐसी संस्थाओं की विशेष भूमिका हैं.

शिक्षण संस्थाओं में विज्ञान शिक्षण में सबसे बड़ी समस्या प्रयोगशाला का अभाव अथवा उसमें समुचित मात्रा में उपकरण नहीं होना अथवा प्रयोगशाला के लिये समुचित स्थान नहीं होना अथवा प्रयोगशालाओं में उपलब्ध उपकरणों का योग्य कर्मचारियों की कमी से या बजट की कमी अथवा अन्य किसी कारण सेसही रख रखाव नहीं होना हैं .कई बार तो संस्थाओं में उपकरण विद्यार्थियों के अनुपात में सही संख्या में नही होते हैं जिससे सभी विद्यार्थी लाभान्वित नहीं हो पते हैं .

इस कमी को दूर करने के लिये देश की विभिन्न संस्थाओं तथा विभिन्न व्यक्तियों ने विज्ञान के विभिन्न प्रत्ययों को स्पष्ट करने हेतु ऐसे अल्प व्ययी दृश्य श्रव्य सामिग्री का विकास किया हैं कि वे उपकरण कम स्थान पर रखे जा सकते हैं ,यहाँ तक की एकछोटे से कार्टून या प्लास्टिक के डिब्बे अथवा एक छोटे से थैले में समा सकते हैं ,जब आवश्यकता हो तब उनउपकरणों को निकाल कर दिखाया जा सकता हैं,अल्प व्ययी होने के कारण विद्यार्थियों को भी दिये जा सकते हैं तथा विद्यार्थी तथा आमजन भी उन्हें तैयार कर सकते हैं`

इस प्रकार देश के विभिन्न भागों में उत्साही व ऊर्जावान शिक्षकों की एक श्रृंखला तैयार होने लगी हैं ,जो कि दिन दूनी रात चौगुनी बढ़ती जा रही हैं,जिसके सुखद परिणाम दिखाई देने लगे हैं.

मैं भी इनमें से कुछ संस्थाओं तथा इन में से कुछ महान व्यक्तियों के संपर्क में आकर सीखा हूँ तथा समय मिलनेपर सीखने का निरंतर प्रयास करता रहा हूँ . उस ज्ञान को विद्यार्थियों तथा अन्य शिक्षकों को पहुंचाने का प्रयास किया हैं तथा मौका मिलने पर भविष्य में करता रहूँगा .उनमे से कुछ कुछ प्रयोग यहाँ प्रदर्शित हैं.

1-वजन भ्रम
2- ध्वनि भ्रम
3- पानी भरे गिलास में प्लास्टिक या लकड़ी के ढक्कन को बीचों बीच में तैराना
4-किसी प्लास्टिक बोतल के छिद्रों से निकलती धाराओं को बांधना तथा खोलना
5-जल की सतह का टूटना जिसे पाउडर से दिखाना

6- वायु के वेग व दाब में सम्बन्ध

7-स्पर्श भ्रम

8-एल्युमीनियम फॉयल के प्रयोग

9-ताश के पत्तोंसे नेत्रों को भ्रमित करने का खेल

10-कांच की बोतल का दबना

11-एक नेत्र से दूरी का सही अनुमान नहीं लगा पाना

12-किसी लकड़ी या पैमाने को 2 उँगलियों पर खिसका कर मध्य में लाना व वापस ले जाना

इसी प्रकार अन्य अल्प व्ययी दृश्य श्रव्य सामग्री का प्रयोग कर विद्यार्थियों में विज्ञान विषय का आनंददायी शिक्षण करवाया जाकर विद्यार्थियों की विज्ञान के अध्ययन के प्रति रूचि जागृत की जा सकती हैं.

Need of Research in Education

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Abstract

In this paper an attempt has been made to illulustrate as will as inculcate awareness in the mind of researhers and resesrch world. Research plays pivital role in the development of society, nation, humanity and creativee succesrive innovation. Withhout research a society is just like life without air. Research is made of eight letters which meaning is relevenecy, energetic, subjective opproach-strategy, eco-friendly, ability, roadmop, contents and historical reviews. These eight porameters are very inportant for a researecher in the growth of human being althongh there is a lot of factors. Research has different types viz, application, objective, type of information sought, pure research, applied research, descriptine research, explorating, correlational, explanatory, quantitative, qualitative. In research four P'S has key role , i.e. people, problemss, programne and phenomena. By introgating ourself as, is the problem researchable? Is the problem a new one? Is the problem is significant? Is the problem is feasible? Successive research fulfils the outcomes of our objectives. Nowadays in teaching methodology, research keeps nucleous role. Projection is seen through research. Further it has been found that a researcher learn as well as imbibe the techniques, methods, procedures, approach, limitations, delimitations, etc. Again it has been observed that a need of research gives strengthen in upliftment of development especially in medical, and education. It is said that education removes our inner darkness and innovative idea provides a new path for achieving goal.

Keywords: research, pivotal, relevency, subjective approach, research strategy, limitations, innovative

Need For Research in Education

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Abstract

At present the meaning of education is changed a lot. Students don't have curiosity to learn or know something different from their course that may be useful in their future. Students of not only India but also many countries have started thinking that only getting good marks are important in their life. There is very importance of extra-curricular activities in a student's life but most of the teachers have also forgotten that they should try their best to teach the students, to make them enjoy education. At present we don't need to find new techniques for teaching students, we need research on our ancient Indian techniques of education. If we look back to our ancient culture then we will find that we have left so much important information behind us. Our Indian civilization is one of the oldest civilizations in the world, the Indian civilization has a strong tradition of science and technology. Ancient India was a land of sages and seers as well as a land of scholars and scientists. Research has shown that from making the best steel in the world to teaching the world to count, India was actively contributing to the field of science and technology centuries long before modern laboratories were set up. Many theories and techniques discovered by the ancient Indians have created and strengthened the fundamentals of modern science and technology. While some of these groundbreaking contributions have been acknowledged, some are still unknown to most. Many discoveries and inventions that we think that the Europeans have discovered are actually discovered by the Indian ancient scholars. The idea of zero, The decimal system, Numeral notations, Binary system, Chakravala method of algorithms, Ruler measurements, Theory of atom , The heliocentric theory, Wootz steel , Smelting of zinc, Seamless metal globe, Plastic surgery, Cataract surgery, Ayurveda, Iron- cased rockets etc.

India has world's third largest higher education system and is behind only the U.S. and China in this area. Our higher educational institutions churn out around 2.5 million graduates every year. While India's nearest competitor, china is reorienting and investing in higher education to meet the challenge of the future, India continues to ignore the problem as if the absence of world class research in Indian universities is something that will rectify itself on its own. Today when India wants to become a knowledge superpower in the world, the youth of our nation is trying its best to make our nation world's strongest superpower, there are still some internal problems in India that are becoming obstacle in the way of achieving our goal. There are various ways to do any work. The methods are not important, only the aim, the goal is important but biggest problem of our country is that the private schools of our country can provide better facilities to students than government schools. The education given in the private sector at secondary level is good whereas higher education is struggling to be good. At the same time, the biggest problem in higher education is lack of quality teachers, for this reason higher education at private sector has become paralyzed. At higher level there are many national institutions like IIT, IIM, NIT, IIFM, AIMS etc. Leaving some good and esteemed government schools, Most of the government schools are in poor conditions. Due to this, even the low-income families trying to send their kids to a private institute for better future. If the government starts funding for good average and monitoring schools, the conditions of government schools can be improved. Teachers should also be dedicated to their work and they should complete their job with honesty. Cooperation of both government and teacher can only change the existing

image of **government Schools**. So, with the advancement of science and technology, we should also maintain our ancient culture, only after that we can construct the world's strongest education system.

Keywords: Curiosity, extra-curricular, ancient Indian techniques, knowledge superpower**.**

Current Status of Biological databases and Educational Resources in India

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Abstract

Recent advancements in science and technology have speed up the rate of generation of molecular data and information. Biological databases have made it possible to store these data in a systemic manner which can be accessed by the remote users through an online dynamic query system. A large number of databases related to the gene, protein, enzyme, structure, function, pathway, drug and microarray data are publically available to users. Most of these databases are maintained, curated and controlled by developed countries such as USA, UK, Switzerland, Japan, and others. These databases are not only supporting research activities but also serving as an academic resource for the college and university students. In spite of a lot of efforts, a few biological databases and data analysis tools are contributed by Indian laboratories and none of them can compete with database resources developed by institutes of USA, UK, and others. We should have our own biological database and educational resource platform with a vast amount of up to date information which can provide access to all our researchers and students without any interruptions and dependency on others. In recent years, Government has paid more attention over developing massive open online courses. MHRD, Govt. of India is supporting the development of different types of digital resources such as virtual labs, spoken tutorial, e-Shodhsindhu, NPTEL, FOSSEE, E-yantra, and others. A single national level online platform for all academic subjects can generate a better result in disseminating the subject knowledge to students and researchers.

Keywords: Biological database; Online courses; Educational resources; Knowledge; Research

The importance of research and its impact on education

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Abstract

Knowledge generated by research is the basis of sustainable growth, which requires that knowledge be placed at the service of expansion, be converted into applications, and be pooled to ensure widespread profit. Ultimately, research is essential to economic and social development of our globalised society, forming the foundations governmental policies around the world..

Educational research has become very popular recently among students. Because it helps students for connect their knowledge with practical situations. Many students don't know how to write a research paper and find it a very difficult. And which gives the ability to make real life decisions without inflicting the liability. In this paper we will discuss the importance of research and its impact on education. Research is a combination of both experience and reasoning and must be regarded as the most successful approach to the discovery of truth.

Palynotaxonomic research and its current scenario in India

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Abstract

The pollen research is always treated as an underestimated science in our country. Whilst it has been confirmed that pollen grains are not only the genome carriers but also supposed to be the fingerprints of plants, which leave the trail for their evolution and progeny identification. Now-a-days palynological study is gaining a mass in developed countries. The palynotaxonomic study refers to the analytical study of pollenapertural status (using LM, SEM, TEM), which is frequently used for differential sorting or finding similarities between the species of the same genus and their morpho-taxonomical characters resolve various taxonomic issues. Many of us know that this is an old-fashioned science, however, in recent decades this science has been proved its essential role in terms of exploring base line data for other allied research such asmelissopalynology, palaeontology,aeropalynology, forensic palynology,palaeobotanyand allergy studies. In the present paper*Palynotaxonomic status of the family Lauraceaein India* is highlighted.

Keywords: Palynotaxonomy, Transmission Electron Microscopy (TEM), Scanning Electron Microscopy(SEM).

Requirement of Research and its Issues in Indian Contexts

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Abstract

It is well known that industry follows the research ideas later and implement to increase the employability. In this regard, the academia can be upscale via increasing research quality slowly. Recently, observed that none of the Indian Institutes came across in list of 100 QS ranking. It given thrust to the government agencies to make a list of top colleges on various parameters using NIRF ranking on various parameters [1]. In this process addressed that some university maintain significant research output in some field and bad in others as shown in Table 1 [2].

Table 1: Research outputs of top Indian universities in various fields using SCOPUS (in percentage)

College	Engineering	Physics and Astronomy	Materials Science	Chemistry	Biochemistry,Genetics and Molecular Biology	Computer Science	Mathematics	Chemical Engineering	Earth and Planetary Sciences	Agricultural and Biological Sciences	Other
Indian Institute of Science,Bangalore	16.8%	15.6%	12.8%	12.3%	8.1%	7.4%	5.0%	3.5%	2.8%	2.5%	13.0%
Indian Institute of Technology,Kharagpur	21.4%	12.1%	14.7%	8.8%	3.1%	10.6%	5.4%	5.0%	3.2%	0	12.6%
Indian Institute of Technology,Delhi	22.2%	12.0%	13.6%	7.3%	3.5%	9.1%	4.8%	5.4%	0	0	12.0%
Bhabha Atomic Research Centre,Mumbai	9.0%	24.5%	13.6%	15.1%	6.1%	0	0	4.2%	0	2.8%	8.2%
Indian Institute of Technology,Madras	24.4%	14.6%	13.0%	9.0%	3.4%	9.1%	5.7%	5.7%	0	0	9.1%
All India Institute of Medical Sciences,Delhi	0	0	0	0.9%	13.0%	0	0	0	0	1.2%	5.6%
Indian Institute of Technology,Bombay	21.2%	12.7%	12.0%	10.1%	4.1%	10.1%	5.5%	5.2%	3.6%	0	12.1%
University of Delhi,Delhi	6.9%	16.0%	7.5%	6.6%	10.3%	0	5.1%	0	0	6.6%	22.2%
Banaras Hindu University,Varanasi	7.4%	11.7%	8.6%	9.5%	12.5%	0	0	0	3.3%	8.5%	16.9%
Indian Institute of Technology,Kanpur	19.9%	16.0%	13.0%	12.2%	3.6%	8.2%	7.1%	5.1%	2.3%	0	10.2%
Jadavpur University,Kolkata	15.9%	13.6%	9.7%	11.7%	5.1%	11.0%	6.0%	4.4%	3.3%	0	15.0%
Postgraduate Institute of Medical Education and Research,Chandigarh	0	0	0	0	11.4%	0	0	0	0	1.1%	4.2%
Anna University,Chennai	21.1%	9.1%	12.0%	7.3%	3.9%	13.7%	5.7%	5.4%	2.9%	0	14.1%
Tata Institute of Fundamental Research,Mumbai	5.4%	42.0%	8.2%	5.8%	6.2%	3.4%	11.4%	0	6.4%	0	7.3%
Indian Institute of Technology Roorkee	22.6%	10.7%	11.4%	8.4%	0	8.9%	4.7%	5.4%	4.8%	0	12.9%
University of Calcutta,Kolkata	8.8%	12.6%	8.4%	11.8%	11.2%	5.3%	5.3%	0	0	6.5%	19.6%
Aligarh Muslim University,Aligarh	7.4%	8.8%	5.6%	12.5%	10.7%	0	5.9%	5.3%	0	8.6%	19.7%
Panjab University,Chandigarh	5.5%	20.2%	5.8%	10.1%	11.5%	0	3.7%	3.3%	0	5.2%	17.7%
Council of Scientific and Industrial Research India,NewDelhi	9.3%	9.8%	13.4%	14.9%	11.2%	0	0	8.2%	0	5.3%	14.9%

In this regard selection of potential researchers and providing them proper funding is basic requirement to upscale the teaching and research of Indian Universities. There are several parameters to measure the quantity and quality of institutes as well as researchers one of them is h-index [3]. In this regard following points can be noted to increase the academic and research outputs [4]:

(1) A paper having citation more than average h-index of India in the given research field need to be considered as a milestone while selection of job, promotion, increment or project distribution or other facility to motivate the research.

(2) The paper published in same journal by a young institute like Shri Shakti Degree College and old institutes like IIT Kanpur cannot be considered equal while measuring the intellectual level or effort put by both scholars. The government agencies need to give attention to those scholars.

(3) The researcher having maximal h-index when compared to the given institutes need to be considered as one of the potential researchers while considering for appraisal, promotions or other facility to motivate them whenever an institute need to upscale the academic and research quality.

Keywords: *Research Output, Citation, Scopus, Academic Performance, Ranking.*

Research: Methods and Objectives

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Abstract

The present paper attempts to focus the individual to comprehend the concept of the term "Research" its meaning, definition, characteristics, types, aims and objectives, methods and tries to acquaint the reader to proceed in a systematic way to make his research successful. 'Research' is not something like copying or imitating the researches done earlier. But it is finding something new by raising a hypothetical questions and reaching to answer or solution of it by utilizing the text or knowledge available in previous research. It must have certain systematized validity, reliability, authenticity, reproducibility and verifiability..

The paper also eases the individual in selection of a suitable topic and research tools to conclude the research in a systematic way. Research is a term used generously for any type of study that is intended to reveal interesting or new facts. Research is a process of collecting, analyzing and interpreting information to answer question. But to qualify as research, the process must have certain characteristics: it must be as for as possible, empirical, cyclical, critical, accurate, controlled, logical, rigorous, systematic, valid and verifiable. The reason of research is to find out answer to questions in the course of the application of scientific procedures. The most important aim of research is to find out the truth which is hidden and has not been exposed as yet.

A Comparative Study on the Biological Parameters of Pulse Beetle, Callosobruchus maculatus Fab. in different gram varieties

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Abstract

Callosobruchus maculatus (Fab.) is cosmopolitan pest not only for gram varieties but also on other several pulses. Severe losses are noted both in the field and storage due to pulse beetle. Damage is quite variable and also depends on varieties of pulse grains. Sometimes even up to 100% loss occurs in more susceptible variety in pest attack. Experiments were carried on, to study comparative biological parameters of *Callosobruchus maculatus* on five gram varieties *viz*. KWR-108, RSG-44, KGD-1252, DCP 92-3, KPM-248. Parameters assessed were fecundity, incubation period and hatching percentage of the beetle. The variety KGD-1252 was found least resistant against *Callosobruchus maculatus* Fab. with maximum fecundity (78.67%), minimum incubation period (4.66 days) and maximum hatching percentage (67.30%). While DCP 92-3 was found most resistant with minimum fecundity (45.66%), maximum incubation period (7.33 days) and minimum hatching percentage (40.10%).

Keywords: *Callosobruchus maculatus* Fab. Fecundity, incubation period, hatching percentage

Need For Research and Innovation in Teaching Methodology

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Abstract

The quality of educational process largely depends upon the quality of teacher. Though teachingis being considered as a science and skills, basically it is a sublime art. It is the teacher, who unconsciously designs the growing plastic mind of the child entrusted to him Thus;Teaching is not a mechanical process. Teachers themselves will have to make the final choices from among many alternatives. Therefore, it is imperative for teachers to constantly revaluate their choice. This can be achieved through introducing or promotion of innovative ideas and practices in teacher education. This conceptual paper is designedto elicit discussion on new ideas and innovation practice in teacher education. The paper will focus on new ideas and innovative practice like cooperative learning, brainstorming, and constructivism, blended learning, reflective teaching etc.

Key words:- Best practice, Teacher Education Team teaching, Co-operative learning, constructivism, Blended-Learning, Reflecting Teaching Soft skill.

Issues and Challenges of Higher Education in India

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Abstract

Government of India has madedrastic changesin thehigher education sectorin recent years. University Grant Commission (UGC), the central higher education regulator, wasrechristened as the Higher Education Commission of India (HECI).The UGC has been the worst performers when it comes to regulation. The HECI comes with its own set of challenges but it certainly disrupts the current status which was required. The HECI has been tasked with setting, maintaining and improving academic standards in Indian universities.However, the funding role has been taken over by the Ministry of Human Resource Development (MHRD). The MHRD has also declared six institutes as 'Institutes of Eminence' (IoE) under the highly ambitious scheme for enhancing the quality of higher education. These changes in the higher education sector are supposed to have a long term bearing on the health of higher education.

The decline in India's higher education system can be traced back to various factors. Politicisation of academia has been one of them, which prevented our universities from becoming spaces where diverse ideas and genuine contestation can flourish. Currently, India has more than 800 universities and institutions. However, various reports have pointed out that around 80% of our engineering graduates and 95% of our graduates in other disciples are unemployable. Major central universities failed in attracting talent from all over the country and abroad. The idea that only my friends, acquaintances and students should get teaching and research positions irrespective of merit, have restricted talented youngsters from making their future in academia due to which India witnessed a gradual withdrawal of Indian middle classes from the higher education system. Patents are now willing to send their kids abroad even for undergraduate studies if they afford. Instead of questioning global rankings, it's time for looking inward and systematically strengthening our system. India needs to revamp its higher education system to match the aspirations of its youth.

Biodiesel Fuel Production from Algae as Renewable Energy

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Abstract

In recent years, biofuel production from algae has attracted the most attention among other possible products. This can be explained by the global concerns over depleting fossil fuel reserves and climate change. Furthermore, increasing energy access and energy security are seen as key actions for reducing poverty thus contributing to the Millennium Development Goals. Access to modern energy services such as electricity or liquid fuels is a basic requirement to improve living standards. One of the steps taken to increase access and reduce fossil fuel dependency is the production of biofuels, especially because they are currently the only short-term alternative to fossil fuels for transportation, and so until the advent of electromobility. The so-called first generation biofuels are produced from agricultural feedstocks that can also be used as food or feed purposes. The possible competition between food and fuel makes it impossible to produce enough first generation biofuel to offset a large percentage of the total fuel consumption for transportation. As opposed to land-based biofuels produced from agricultural feedstocks, cultivation of algae for biofuel does not

necessarily use agricultural land and requires only negligible amounts of freshwater (if any), and therefore competes less with agriculture than first generation biofuels. Combined with the promise of high productivity, direct combustion gas utilization, potential wastewater treatment, year-round production, biochemical content of algae and chemical conditions of their oil content can be influenced by changing cultivation conditions. Since they do not need herbicides and pesticides algae appear to be a high potential feedstock for biofuel production that could potentially avoid the aforementioned problems. On the other hand, microalgae, as opposed to most plants, lack heavy supporting structures and anchorage organs which pose some technical limitations to their harvesting. The real advantage of microalgae over plants lies in their metabolic flexibility, which offers the possibility of modification of their biochemical pathways (e.g. towards protein, carbohydrate or oil synthesis) and cellular composition Algae-based biofuels have an enormous market potential, can displace imports of fossil fuels from other countries (hence reduce a country's dependence), and is one of the new, sustainable technologies which can count on ever-increasing political and consumer support.

Keywords: algae, biodiesel, biofuel, microalgae, transesterification, renewable energy

The mystery of research methods and methodology in Research

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Abstract

Once a person lands in the field of research, after choosing the research problem and going through the existing literature, it is very important for the researcher to choose and design a methodology for the problem chosen. Research design is simply the framework or plan for the study that will be used as a guide to collect and analyze the data. The problem arise here is that sometimes the researcher is unable to differentiate between the research methods and methodology. These two terms are often used arbitrarily and leads to methodological scramble. One should have to know the distinction between these two (Methods and Methodology). This paper is an attempt to show the significance of research methods and research methodology and how these two things are important in doing research.

Keywords: *Research Methodology, Methods, Importance, Difference.*

To Study the relationship between gender diversity and investor preferences for investment avenues in Indian stock market

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Abstract

Investors are investing in stock market as number of investment avenues are available for them with different risk and return characterstics.Investors, acquire these securities from the stock market depending upon their requirement and needs in order to create and construct that portfolio where they are able to generate superior risk adjusted returns. Similarly, their preference for different types of stock varies according to their requirements. Moreover, investors with difference in their income, age, occupation, education and across other variables have preference for different avenues. The researcher has made attempt in the present study to define in detail demographic profile of the investors in the

study area and then to study investors across gender and their preferences for different avenues. Moreover, different investors have different investment motives for investing in volatile market. Some wish to get higher returns, some invest because of liquidity, some for tax purpose etc.The researcher has attempted to study investment objectives of the investor and in order to achieve the objectives strategy used by the investors to achieve the desired results.

Keyword. Gender, stock market, preferences

Research and Innovation in Teaching Methodology

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Abstract

The need of performing educational research starts from effective programs and teaching methods, which help the students to learn relationships between variables in educational settings to plan interventions. Research and innovation are integral parts of the academic role and a central factor in academic promotion. Now a days the field of education is not only limited with books but has broadened in various new horizons. Development and changes in education have affected teacher education necessitating review and reforms. It demands understanding with investigative minds, assimilating the required transformations, accommodating and responding to the universal needs. Worldwide accessibility to quality education has necessitated improvement in the education system to prepare quality teachers because it demands understanding with investigative minds, assimilating the required transformations, accommodating and responding to the universal needs.

Keywords: Education, Teaching methodology, Research, Innovation, E-learning

शिक्षण से सामाजिक–आर्थिक विकास में स्थायी जीवन का एक समाज शास्त्रीय अध्ययन

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सारांश (Abstract)

शिक्षा से मानव की भौगोलिक स्थिति और आर्थिक, अंधकार रूपी बादल को दूर रखने का प्रचालित होता है, अर्थात् अंधकार से प्रकाश की ओर ले जाओं यह प्रार्थना भारतीय संस्कृति का मूल स्तम्भ है। प्रकाष से व्यक्ति को सब दिखाई देता है। अंधकार मे नही प्रकाष से तात्पर्य ज्ञान से है ज्ञान से व्यक्ति का अंधकार रूपी अज्ञान नष्ट होता है, वर्तमान ओर भावी जीवन जीने योग्य बनता है। ज्ञान से उसकी दृप्त इन्द्रियों जागृत होती है इसकी कार्य क्षमता बढती है। शिक्षा से समाज के प्रत्येक पक्ष को प्रभावित करती है चाहे आर्थिक, राजनैतिक, सांस्कृतिक, और जीवन जीने का महत्व मिलने के स्वरूप है। षिक्षा ही समाज में परिवर्तन का साधन है, समाज प्राचीनकाल से आज तक निरन्तर विकासित एवं परिवर्तित होता है जैसे –जैसे षिक्षा का प्रचार–प्रसार से समाज में व्यक्ति के प्रस्थिति, दृष्टिकोण, रहन–सहन खान–पान, रीति–रिवाजों पर असर डालती है एवं सम्पूर्ण समाज का स्वरूप बदलती है।

शिक्षा मनुष्य को पशु से ऊपर उठाने वाली प्रक्रिया है पशु अज्ञानी होता है उसे सही या गलत का बहुत कम ज्ञान होता है। अषिक्षित मनुष्य भी पशुतुल्य होता है। वही सही निर्णय लेने में समर्थ होता है। शिक्षा से ज्ञानचक्षु खुल जाती है, प्रत्येक कार्य सोच–समझकर करता है उसके अन्दर जितनी उलझने होती है उन्हें दूर करने को सक्षम होता है, शिक्षा का मूल अर्थ है व्यक्ति का उचित मार्गदर्षन करे, जिस शिक्षा से व्यक्ति का सही मार्गदर्षन नही होता वह शिक्षा नही बल्कि अषिक्षा है।

शब्दकूंजी : शिक्षा और स्थायी जीवन का अध्ययन।

Mentoring as a tool to Improve Education Research among Teachers

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Abstract

As academic and corporate sector deals with the declining quality of students passing out of higher education institutes, it becomes essential to understand the role of education research and its contribution in raising the quality of education. Experts believe that the education imparted to the students must meet both their placement expectations and the requirements of employers (Hénard & Roseveare, 2012). Such needs can only be met when teachers continue to improve their learning and experience through appropriate research in their respective subjects and teaching methodologies. Though, there are many ways in which a teacher can improve the quality of teaching, education research is one of the most important, demanding and result oriented method. But many of the new or even experienced teachers lack the necessary knowledge and drive to undertake research at their own levels. Thus, this paper discusses the role of mentoring in encouraging and motivating teachers to engage in educational research and improve quality of their teaching.

Keywords: Education Research, Mentoring, Higher Education Institutes

शिक्षण पद्धति में अनुसंधान और नवाचार की आवश्यकता
"शिक्षा में शिक्षकों के मध्य शोध के प्रति झुकाव में कमी के उत्तरदायी कारक"

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शोध–सारांश

आज के अत्याधुनिक वैश्विक सामाजिक परिवेश में जिन सामाजिक, राजनीतिक, आर्थिक, सांस्कृतिक, नैतिकादि परिस्थितियों के बीच यह संपूर्ण समाजीकरण की प्रक्रिया चल रही है, उसमें वृहत्तर सामजिक परिवेश की निर्मित में सहायक सभी घटकों से संबंधित स्वस्थ व सामूहिक हित के सर्वोत्तम मानदंडों की घोर उपेक्षा हुई है। परिणामतः मानव के व्यक्तित्व का अधिकांश हिस्सा नकारात्मक/घृणास्पद हो गया है। यही कारण है कि मानव के अस्तित्व को चुनौती देती इस प्रक्रिया में सुधार की मांग तेज होने लगी है। ऐसे में अंतर्राष्ट्रीय परिवेश की परिस्थितियों के अनुरूप समस्याओं को पहचानकर उनमें आशातीत, अपेक्षित सुधार की दृष्टि से स्वस्थ व समुन्नत मानदंडों को खोजकर उनका परीक्षण करना तथा सुदीर्घकालिक स्थायित्व प्रदान करने की दिशा में प्रयास करना शिक्षक का परम कर्त्तव्य, उत्तरदायित्व है।

हम जानते हैं कि स्वस्थ और समुन्नत समाजीकरण की प्रक्रिया में शिक्षा का महत्वपूर्ण योगदान है। समाजीकरण की इस प्रक्रिया में शैक्षिक दृष्टि से शिक्षक औपचारिक शिक्षा का केंद्रीय माध्यम है। माध्यम–भूमिका की दृष्टि से शिक्षक पूरी समाजीकरण की प्रक्रिया पर सूक्ष्म और नजदीकी नजर रखते हुए उचित–अनुचित के व्यवहार की क्रियाओं पर कल्पना करता है, बुद्धि के बल पर स्वस्थ एवं समुन्नत समाजीकरण में सहायक उचित उपायों (विचारों, रीतियों, सिद्धांतों, नियमों, विधियों, मूल्यों) के परीक्षण एवं स्थापना के साथ उनके अमल हेतु सार्थक प्रयास करता है।

वर्तमान भारतीय लोकतांत्रिक व्यवस्था जिसकी अंतिम और सर्वोच्च शक्ति शासन (राजनैतिक दृष्टि से लोकमानस) में निहित है, का अधिकांश हिस्सा क्षुद्र स्वार्थों एवं भ्रष्ट पूंजीवादी गठजोड़ के कारण भारत जैसे विशाल जनसंख्या वाले लोकतंत्र की आत्मा (शिक्षा) को गहरा आघात लगाता है। राष्ट्र निर्माण की केंद्रीय धुरी शिक्षकों की भारी तादाद में कमी के बावजूद उनके एक बहुत बड़े वर्ग को लोकतांत्रिक अधिकारों से वंचित होना पड़ रहा है, यहां तक कि जीवन–निर्वाह की अनिवार्य आवश्यकताओं हेतु उसे जिन जटिल परिस्थितियों के दौर से गुजरना पड़ रहा है, उन परिस्थितियों से निर्मित परिवेश में शिक्षा को लेकर उसका उत्साह मंद पड़ता जा रहा है, उसमे उसे अरूचि उत्पन्न होती जा रही है और वह बड़ा वर्ग समाजीकरण की प्रक्रिया में अपेक्षित सहभागी सक्रियता से दूर होता जा रहा है। परिणामतः निरंतर सुधार की अपेक्षा से गतिमान समाजीकरण की प्रक्रिया में ठहराव आता जा रहा है। संपूर्ण प्रक्रिया ही उदासीनता के भंवर जाल में फंसकर निष्क्रिय होती जा रही है। यह स्थिति अविलंब विचारणीय है।

अतः स्पष्ट है कि जब तक लोकतांत्रिक व्यवस्था के अनुरूप शिक्षा में शिक्षकों के मूलभूत अधिकारों के संरक्षण एवं संवर्द्धन का शासन (लोकमानस) की ओर से ठोस प्रयास न किया जाएगा तब तक शैक्षिक योगदान की दृष्टि से शिक्षकों में सुधार की संभावनाओं से युक्त अनुसंधानात्मक प्रवृत्ति का अभाव बना रहेगा। फलस्वरूप स्वस्थ एवं समुन्नत समाजीकरण की प्रक्रिया उदासीन बनी रहेगी, उसमें अपेक्षित गति न आ सकेगी।

शब्द–कुंजी :– समाजीकरण, घटक, शिक्षा, शिक्षक, लोकतंत्र, पूंजीवाद, अनुसंधान।

Importance of Research in the Quality Learning Processes at Distinct Educational Setups

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Abstract

Quality of the learning process can be measured by the level of skills, knowledge and behavior of the students. The education providers backed up with the firm and proficient knowledge, competencies and skills are considered as the pillars of quality education. Managing the quality and efficacy of learning processes has become a vital issue of concern in the educational setups now a days. However, the effectiveness of learning process is ensured within the formal working environment accompanied with the standardized and affiliated processes and set-ups (Shernoff et al., 2011). Alongwith the inclusion of defined setups and procedures, the significance and impact of research in quality learning process at different educational institutionssuch as schools, colleges, universities, and programs offered in distance mode of education, are difficult to be ignored. The inclusion of research in quality learning processes introduces a defined approach that embraces the methodology of the education alongwith an enhanced knowledge base of the education provider (Eid, 2014). Thus the present research paper is aimed towards highlighting the importance and role of the education provider in terms of inclusion of research to enhance the quality of learning with technical and academic proficiency.

Keywords: Quality learning process, education providers, educational setups.

A study on factors Responsible for Lack of inclination for Research in Education among Teachers.

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Abstract

Education research involves a process which is formal, systematic and exhaustive.Good research helps in advancements of knowledge and improving quality of teaching and learning. (Eid, 2014)Teachers who have gone through academic research have knowledge and exposure in specific research methodology. Many teachers pursue academic research for better position, better remuneration, preparation for switching to a researchers/consultant role etc. But many of them usually, teach students how to deepen their understanding, learning on specific contents as well as teaching them how to conduct research foe future knowledge contribution. Experts agree education research always helps to improve quality of teaching/ learning process. (Burns, 2018)But, it has been observed that there is a dearth of good education research in higher education in India. Therefore, it is important to understand why the teachers do not pursue research even when so many benefits are possible. Thus,this paper aims to study the various factors responsible for lack of inclination for doing education research by teachers.

Keywords: Education Research, Quality of teaching, Teaching / learning process.

Lack of Research and Innovation in India: An Overview

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Abstract

Our Indian Civilization is one of the oldest civilizations in the world which have strongest tradition of Science and Technology. Ancient India was a land of Sages as well as Scholars and Scientists. A lot of theories and techniques were discovered by ancient Scientists of our country which have strengthened the fundamentals of modern science and technology. Some of the contributions made by our ancient Scholars and Scientist which make us to feel proud to be an Indian are as: The Idea of Zero, The Decimal System, Numeral Notations, Fibbonacci Numbers, Binary Numbers, Chakravala method of Algorithms, Ruler Measurements, A Theory of Atom, The Heliocentric Theory, Wootz Steel, Smelting of Zinc, Seamless Metal Globe, Plastic Surgery, Cataract Surgery, Ayerveda, Iron-Cased Rockets etc. But unfortunately now a days there is a lack of Research and Innovation among our Scholars, Teachers and Scientist and thus we are outsourcing technologies from different countries which is not good for our economical and social conditions. According to a survey conducted by a US-based think tank on Global Innovation, the Information Technology and Innovation Foundation (ITIF) our country ranks near bottom of a list of 56 countries which is a shameful condition. It is moral duty of our Government, Scholars, Scientists and Teachers to improve this condition and try to make our country in the top list of nations for Research and Innovations.

*Hemant Pandey, **Sandeep Tripathi and ***Rahul Shukla

Need for Research and Innovation in Teaching Methodology Methodology/Process for reliable and fruitful research in education

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Abstract

Innovation and Research are two **different** ways to respond the changes in internal and external systems (*Socio-Economic, Culture, Technology*). Adopting the external changes is most critical challenge for Leadership. Our education system creates leaders, who are solely responsible for anticipating changes and implementing them. It creates need for Research and Innovation in our internal system i.e. teaching methodologies. Research is about converting money into knowledge and Innovation is completely opposite in nature. This paper focuses on the process of innovation in education system.

Innovation can be defined as: **Creativity*Commercialization** (or value generation). Innovation: is not same as invention, is not about thought ideas only, it's about action, does not always require a superior technology, is highly contextual in nature, can be combination of existing solutions or methods in this case. Objective of education is to enhance learning, promote creative thinking, teamwork and student responsibility, which can be achieved by effective and innovative teaching methodology.

Teaching methodology includes selection of course, content, tools, methods, evaluation method, frameworks, knowledge management and most importantly teachers i.e. people part. Although, each of the mentioned component has scope of innovation, but focus is given to methods, knowledge management and people aspect to limit the scope of paper. Education system offers multiple areas ***Law, Humanity, Mathematics, Applied Sciences, Computer Science, Literature*** and many others. Also, various teaching methodologies are available in practice e.g. ***case-based pedagogy, role play, practical, experiments, laboratory, on site experiences***. Since the nature of every subject area is different, same methodology will not be effective in all the areas e.g. Law courses need to teach by role play or case-based methodology and computer science needs more focus on practical based teaching methodology.

Design Thinking approach has potential to solve problems creatively. It can also be applied to innovate teaching methodologies. It is **user-centered** and **human-centered** approach having phases Empathize, Define, Ideate, Prototype, and Test. Results can be measures in form of *knowledge creation, ecosystem success, cost reduction (time or money), individual and institute brand enhancement, organization vitality.*

Knowledge management is continuous cycle of **Internalization[1]->Socialization[2]->Externalization[3]->Combination[4]->**Internalization. Teachers as well as students must be trained in knowledge management process. Knowledge management systems might require moderate investment in technology, which has *high reuse economic value* as well as *competitive advantage*.

People play key role in innovation or any change management process. ***People shape the culture***. They should understand the vision, feel included, get social respect and must be rewarded, else innovation will be nightmare. Rationale behind choosing People in seminar theme is to ***highlight importance of Human factor in innovation*.**

[1]: Access to codified knowledge, goal-based training
[2]: Sharing experiences, Observing, imitating, brainstorming without criticism
[3]: Writing it down, creating metaphors and analogies modeling
[4]: Sorting, adding, categorizing, Methodology creation, Best practices

शोध में गुणवत्ता संवर्धन की आवश्यकता

'शक्ति दीक्षित और ''गौरव राव
'शोध छात्रा
''सहायक उपाचार्य
''शोध छात्रा
शिक्षा विभाग
छत्रपति शाहूजी महाराज वि0वि0कानपुर

भारत एक देश प्रगतिशील देश है और हमारे देश में प्रत्येक क्षेत्र में शोध एक बड़ी आवश्यकता है। यहाँ का इतिहास हमें बताता है कि हमारे ऋषि–मनीषियों का मौलिक चिन्तन सर्वश्रेष्ठ रहा है जिसे विश्व के इतिहास में अद्वितीय स्थान प्राप्त है। हमारे देश में ज्ञान भण्डार की प्रचुरता हमें विश्व में एक अलग पहचान दिलाने में सक्षम रही है। निरन्तर किए जा रहे शोधों का ही परिणाम है कि सामान्य व्यक्ति का जीवन भी आधुनिक सुविधाओं से युक्त हो सका है। अतः यदि हम आधुनिकीकरण और वैश्वीकरण के इस दौर में विश्व में बराबरी पर खड़े होने में सक्षम हो सके हैं तो वास्तव में यह शोध की ही देन है। वैज्ञानिक साधनों के विकास और उसके द्वारा निरन्तर पोषित सामाजिक विकास के साथ–साथ शोध के क्षेत्र में विकास होता रहा है और इसका विस्तार होता रहेगा। वस्तुतः विश्वविद्यालयों को शोध के क्षेत्र में निरन्तर योगदान देना चाहिए ।

Importance of Research in Education

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Abstract

It is an agreed fact that interest in educational research has vastly increased in the recent times. It is now realized that research is necessary in order to provide a basis for educational planning and thereafter to assess the effects of such planning which is an undertaking to review and improve educational practice.

Research is the systematic way of investigating and studying current data scientifically in order to collect facts and build knowledge. The paper discusses the importance of research in education for teachers as well as students. As research increases knowledge, clears confusion about the problems investigated whereas teachers can teach new findings to the students, develop independent critical thinking skills and focuses on practical knowledge. Instead of so many benefits of research, it is not taken seriously in some of the educational institutions. It should be understood that research can help the institution to grow, help the teachers and the students to develop their knowledge. Research should be made an important part of curriculum as well so that students can get upgraded knowledge of research and they can also be a part of new researches.

Thus the main purpose of research is to inform action, to prove a theory and contribute to developing knowledge in a field.

Keywords: Education, Research, knowledge.

The Importance of Research and Its Impact on Education

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Abstract

It is no secret that a good education has the power to change a life. In the current global scenario, education has become one of the biggest investments. To be more precise, in the last few decades Tertiary Education has gained so much momentum globally as well as nationally. So, the importance of research in educationhas become extremely paramount in today's time. The main purpose of research is to inform action, to prove a theory, and contribute to developing knowledge in a field or study. From an individual point of view, the advantages of research extend beyond having an impressive degree certificate. Through detailed research, students develop critical thinking expertise, effective analytical research, and communication skills that are globally sought-after and incredibly beneficial. Ultimately, research is essential to economic and social development of our globalised society, forming the foundations governmental policies around the world. Thus, the present paper is aimed towards the elaborating the significance in the field of education and highlighting its impact.

Keywords: Tertiary Education, Critical Thinking, Communication skills, Social development, Effective analytical research

Knowledge Discovery in Maternal Health Databases

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Abstract

Knowledge Discovery in Databases (KDD) and Data Mining has been used intensively by several organizations to discover hidden patterns and relationships from huge amount of data. The applications of KDD are numerous like banking, insurance, marketing, healthcare, finance and many others. Data mining techniques are becoming common in healthcare field because there is a need for identifying novel and valuable knowledge in health data for decision making. Poor health among mothers and newborns has remained a question of worry for a long time in India. In this research paper, we briefly examine the potential use of Knowledge Discovery in Databases (KDD) and data mining algorithms to enormous volume of maternal health data for extracting knowledge and patterns that shall aid healthcare professionals for the purpose of decision making in the field of maternal health.

Keywords: Data Mining, Healthcare, maternal health, KDD Decision Making.

Introduction to Scientific Research in Education

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Abstract

Educational research is anoverwhelming, dynamic innovativeness. We are not stunnedabout the knowledge which is in the field of education butare amazed about the new approaches of seeking knowledge.In the meantime, there are more tools to focus, simplify, and sort out research in the field of education. Not only knowledge is extending but also instruments and tools that encouragequest for learning are growing our ability to create learning with more noteworthy accuracy and less exertion. Among these apparatuses are PCs, the Internet, and abstracting databases.Educational research is the use of the logical way to deal with the investigation of educational issues. Educational research is anapproach by which people get trustworthy and suitable data about the educative development. Educators generally conduct research to discover an answer for some issue or to pick up knowledge into an issue they don't get it. The ultimate objective is to find general standards or elucidations of conduct that individuals can use to clarify, foresee, and controlevents in educational circumstances, to formulate scientific and logical theory.

Keywords: Educational research, new approaches, scientific and logical theory

Socio Economic Impact of Female Education

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Abstract

Failure to educate girls has a direct impact on their families and also on society. An exogenous increase in girls' access to education creates a better environment for economic growth. Increasing female secondary education and reducing gender disparities leads to economic growth. Educating girls leads to a number of social benefits, including many related to women's empowerment. Social benefits from investing in female education are far greater than those from investing in male education. Specifically, female education has powerful effects on the total fertility rate. Women's education are able to reduce poverty, they are less victims of domestic or sexual abuse. An educated female leads a healthier life and tend to have greater self esteem and self confidence.

Keywords: Socioeconomic, empowerment, Educating, mortality self confidence.

A study of Innovative Teaching Methods for Education in India

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Abstract

The rapid development of information and communication technologies (ICTs) and the move towards more knowledge -intensive, interdependent and internationalized societies create new challenges and opportunities for the design and delivery of education. ICTs open up new horizons for progress and the exchange of creativity and intercultural dialogue. Nevertheless the growing digital divide is actually leading to greater inequalities in development. This is giving rise to paradoxical situations where those who have the greatest need of them, disadvantage aged groups, rural communities, illiterate populations or even entire countries . do not have access to the tools which would enable them to become full -fledged members of the knowledge society. This paper aims at studying the various new innovative tools and methods that may be used to come at par with other education institution in the world. In today's globalized environment it is important to imbibe the techniques in education too.

Keywords: Communication, Inequalities, Environment, Institution

Meaning and Need of Reserch in Education

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Abstract

The overall purpose of the study or research in education, improving an academic body of knowledge may depict in traditional system by the enduring research. The outcomes of the research can lead to trivial changes in methods or practices (in terms of educations it could be traditional teaching approaches or techniques). This would ideally relevant education is provided to students resulting in more effective population. This study explains different senses of the concept in meaning in educational research presenting meaning as personal (the researchers quest for meaning through research),contextual (meaning in relation to linguistics and culture) and shared (through communication),offering the various types, challenges, benefits and forms of research in practice based research in educational technology.

Keywords: Education, research, technology, teacher and knowledge

Methodology Process for Reliable and Fruitful Research In Education by ICT

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Abstract

Information communication Technology in the Educational setting is the foundation for producing young minds. Capable of divergent thinking beyond that of the classroom. All learners should achieve technological proficiency. They need to have ongoing, process enhancing curriculum, building on previous knowledge that is updated continuously with instruction from teachers. In education Information technology is already changing how we teach, learn and conduct research. ICT can be used as teaching-learning tools in different ways to maintain the quality of education. Development of nation depends upon quality of human resources. Quality of human resource dxepends upon the quality of teachers. If the quality of teachers is not maintain the innovation would not be expected and as a result the quality product will not be delivered by education.This shows the importance of teacher in an educational process.Thus teachers play a vital role of the development of the nation.

Keywords- Objectives of ICT in Education, Concept of teaching learning, Resources and improvement of teaching and learning, Teacher in ICT, Professional Development of teachers:Concept and definition, Online professional development of teachers, Different tools of online professional development of teachers, Use effective technique, Impact of ICT on student, Suggestions.

शिक्षा–शोध के कार्यों के प्रति शिक्षकों में उदासीनता के उत्तरदायी कारक

राज कुमार शर्मा और अरविन्द कुमार
श्री शक्ति डिग्री कालेज

शोध–सारांश

शिक्षा तथा शोध वस्तुतः पृथक–पृथक नही है बल्कि शोध तो शिक्षा का एक विस्तृत या परिणामदायक शब्द है। हमारी पृथ्वी में मनुष्य ही एक मात्र ऐसा प्राणी है जो सोचने समझने की शक्ति रखता है। शिशु अपनी अनुसंधान प्रवृत्ति के कारण ही वह शिक्षा ग्रहण करता है। जैसे कि कोई बालक मोमबत्ती के प्रकाश की ओर आकर्षित होकर उसे छूता है और उसे गर्म का एहसास होता है तो अनुसंधान प्रवृत्ति के कारण ही वह शिक्षा ग्रहण कर लेता है कि मोमबत्ती में ताप होता है और उसे पकड़ना हानिकारक हो सकता है। अनुसंधान प्रवृत्ति के कारण ही मानव सामाजिक सांस्कृतिक तथा आर्थिक शिक्षा ग्रहण करता है। जैसे–जैसे मानव सरल समाज से जटिल समाज की ओर अग्रसर होता गया, वैसे–वैसे उसकी आवश्यकता में भी बृद्धि होती गयी। अपनी आवश्यकताओं की बृद्धि हेतु उसे नित्य नवीन अनुसंधानों की खोज की। जिसके परिणाम स्वरूप शिक्षा का भी तीव्र विकास हुआ। परन्तु आज शिक्षा के शोध में शिक्षकों की उदासीनता के कई उत्तरदायी कारण है। जिन कारणों को हम अपने शोध के द्वारा प्रस्तुत कर शोधार्थियों की अरूचि के कारणों को बताने का प्रयास कर रहे हैं। यह तो मानव का स्वाभाविक गुण है। प्रस्तुत शोध के द्वारा अध्यापकों तथा शोधार्थियों के सकारात्मक अभिवृत्ति को विकसित करने के लिये प्रयास किया गया है।

शब्द कुँजी :– अनुसंधान, शिक्षक, शिक्षा, कारक, उदासीनता, उत्तरदायित्व।

Role of Information Technology in Effective Implementation of Right to Information Act

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Abstract

During the British Raj there wasn't any transparency in working of the government, an act called official secrecy act was promulgated and it remained in force for 58 years even after independence. Government officers etc had unfettered powers to mark a document confidential arbitrarily.Any information sought by legislator concerning any government department which happened to be inconvenient to the government and its officers was refused to them on the ground of confidentiality and secrecy, and the court had no jurisdiction to adjudicate such matters and cases. Any individual had no right at all to ask from any information which doesn't concern him / her personally.

The Right to Information act passed in 2005 has changed all this, the Right to ask for information on matters of public interest has been bestowed on every citizen and made the working of government a lot more transparent.

The RTI Act provides for supply each and every sort of information to the person who has sought it on payment of prescribed fee and other charges unless the information is not connected with defence and security matters or relation with foreign country are likely to be affected adversely on divulsion of the information, more over refusal of supply of information sought is now open to adjudication by court.

Intrinsically it is comparable to the right of MPs and MLAs to ask question in the house for which the first hour ***Question Hour*** is set apart for each day of the session in parliament and provincial assembly.

The question hour in legislature helps government in ascertaining the wish / mood / demand of public and adjust itself accordingly and increase support to the government in power and now officers of the government at lower level or policy execution level of the government to read the wish / mood and demand of masses and adjust execution of policies of the government at lower level as well.

As a result of all this, transparency in the working of our democratic government is bound to strengthen our polity and make it more vibrating.

Transparency in working of indirect democracy takes it a little towards direct democracy and after hundreds and thousands of such small improvements a form of indirect democratic government may emerge in which direct and indirect democratic governments would converge.

This paper tries to investigate the problem faced by many organizations in implementing the RTI Act 2005. The organizations which are very much technology savvy i.e. where use of information technology is very high in day to day working don't find any difficult in implementing the RTI Act 2005 as compared to those organizations which are not. Information technology (IT) is a very significant tool for proper and effective implementation of RTI Act 2005.

Keyword: Right to Information act , information technology , PIO

''शिक्षण पद्धति में अनुसंधान और नवाचार की आवश्यकता''
विषय पर प्रस्तुत शोध पत्र –
उप विषय
'अध्यापकीय शिक्षा में प्रयोगात्मक आधारित विज्ञान शिक्षण की प्रभावशीलता का अध्ययन'

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शोध–सारांश

प्रस्तुत पत्रक में प्रयोगात्मक आधारित विज्ञान शिक्षण एवं परम्परागत विज्ञान शिक्षण का छात्र/छात्राओं की उपलब्धि का प्रभाव का तुलनात्मक अध्ययन किया गया है। सांख्यकीय परिणामों एवं विश्लेषण के आधार पर यह निष्कर्ष निकाला गया कि प्रयोगात्मक आधारित शिक्षण विद्याार्थियों की उपलब्धि पर साकारात्कम प्रभाव डालता है।

प्रस्तुत शोध पत्रक में नवाचार आधारित विज्ञान, शिक्षण एवं परम्परागत विज्ञान शिक्षण का होता छात्र/छात्राओं की उपलब्धि के प्रभाव का तुलनात्मक अध्ययन, शोध में किया गया है संख्यिकीय परिणामों एवं विशलेषण के आधार पर यह निष्कर्ष निकाला गया कि नवाचार आधारित विज्ञान शिक्षण विद्यार्थियों की उपलब्धि पर सकारात्मक प्रभाव डालता है कि शोध एवं नवाचार की आवश्यकता है जिसमें विज्ञान शिक्षण और प्रभावी तथा बच्चों में जिज्ञासा की भावना सृजनात्मकता, वस्तुनिष्ठ प्रश्न करने का साहस, सौन्दर्यात्मक योग्यताएँ और मूल्य व क्षमताएँ विकसित किया जा सके, साथ ही विद्यार्थियों की समस्याएँ सुलझाने, निर्णय लेने व कृषि उद्योग तथा जीवन के अन्य पहुलओं को समझ सके।

Importance of Research in Education for Socio-Economic Development

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Abstract

Education is every sense is the fundamental factor for the development of the country. Education enriches people's understanding of themselves and world. It improves the quality of their lives and leads to social benefits to individuals and society. It raises people's productivity and creativity and promotes entrepreneurship and technological advances. Thus, it plays a crucial role in securing economic and social progress and improving income distribution.

Research shows that individuals who graduate and have access to quality education throughout primary and secondary school are more likely to find gainful employment, have stable families, and be active and productive citizens. They are also less likely to commit serious crimes, less likely to place high demands on the public health care system, and less likely to be enrolled in welfare assistance programs. A good education provides substantial benefits to individuals and, as individual benefits are aggregated throughout a community, creates broad social and economic benefits. The national importance of education is based on the significant positive influence it has on individual lives and on the welfare of communities. Education is primarily a way to train children in the skills they will need as adults to find good jobs and live well. But education also has broader social and economic benefits for individuals, families, and society at large (Grossman. M., 2006). These benefits are received even by people whose relationship to the public school system does not extend beyond "taxpayer." The widespread improvement of social and economic conditions is a direct outcome of an educated population that is better able to use information to make good decisions and which is collectively better trained for work.

The Importance of research in higher education say that knowledge is enough to make productive career but nowadays competition is so tough that higher education is must to make a mark at higher level. It doesn't really matter that whether we are interested in history or science, computer or management, higher education will provide you that extra bit of ease to pick up much required speed at corporate level in beginning. But main question is how to make your higher education more productive (Brownlee, J., 2001).To conduct research, one need to study and look for references, sources and market research and carefully analyze the topic you are

researching, including evidence and theories. The need of performing educational Research will start from effective programs and teaching methods which will help students to learn what they really want to discover relationships between variables in educational settings to plan interventions. It will help them to understand cultural contexts of schools to create schools that embody justice and reduce prejudice and inequality. Thus, in terms of the conducting research, one in the field needs care, honesty, rigor, time and patience, with our methods of data collection and analysis, our interpretations and our language. These things apply equally, though with differing details, to radical post-modernist feminist researchers and to positivist statisticians. These are needed to fulfill our individual strivings for meaning through contributing to and connecting with diverse communities of researchers, teachers and learners, and with the disenfranchised. The quest for meaning is like a lamp, illuminating the passages and turning points as we make our way through complex and diverse settings, questions, methods and bodies of knowledge. Education is also an important contributor to technological capability and technical change in industry. Statistical analysis of the clothing and engineering industries in Sri Lanka, to cite just one example, showed that the skill and education levels of workers and entrepreneurs were positively related to the rate of technical change of the firm (Deraniyagala, 1995). Thus, it is widely accepted that in order to adapt to an environment of stronger competition and to a world emphasizing the role of information, knowledge and skills, advanced economies need continuously to upgrade the overall quality of their labour force.

Need for Innovation in Methods of Teaching

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Abstract

The purpose of this paper is to evaluate the traditional methods of teaching as well as multimedia teaching and to suggest other useful teaching methods that can be attempted in imparting knowledge to the students. Basically teaching must include two major components sending and receiving information. Ultimately, a teacher tries his best to impart knowledge as the way he understood it. So, any communication methods that serve this purpose without destroying the objective could be considered as innovative methods of teaching. The use of innovative methods in educational institutions has the potential not only to improve education, but also to empower people, strengthen governance and galvanize the effort to achieve the human development goal for the country.

शिक्षा में अनुसंधान का अर्थ और आवश्यकता

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व्यापक अर्थ में अनुसंधान किसी समस्या के तथ्यों अथवा निष्कर्षो कि जानकारी हेतु ख़ोज है अनुसंधान द्वारा प्राप्त पारिणाम प्रामाणिक एवं समर्थनीय होते है |

अनुसंधान क्रमबद ढंग से नवीन ज्ञान एवं तथ्य की ख़ोज करने कि एक पद्ति होती है नवीन ज्ञान कि प्राप्ति के व्यवस्थित प्रयत्न को हम अनुसंधान कहते है |

यह एक ऐसी (प्रोसेस) है जो मनुष्य के जीवन को निखारती है और उसके जीवन कि गुणवत्ता को बढाती है |

अनुसंधान वैज्ञानिक विधियो के द्वारा अपनी समस्या का समाधान करना अर्थात विज्ञान कि ख़ोज करना अनुसंधान रिसर्च कहलाता है | जिस ढंग से शिक्षक शिक्षार्थी को ज्ञान प्राप्त कराता है उसे शिक्षण विधि कहते है |

“शिक्षण विधि” पद का प्रयोग बड़े व्यापक अर्थ में होता है |

एक ओर इसके अन्तर्गत अनेक प्रणालियाँ एवं योजनाएँ सम्मिलित की जाती है दूसरी ओर शिक्षण कि बहुत सी प्रकिया भी सम्मिलित की जाती है |

शिक्षण पद्ति में प्रोजेक्ट (योजनाविधि)शिक्षण कि नवीन शिक्षण विधि मानी जाती है, इसका विकास शिक्षण में सामाजिक पद्ति के कलस्वरूप हुआ, शिक्षा इस प्रकार दी जानी चाहिए जो जीवन समर्थ बना सकें यह विधि अनुभव केन्द्रित होती है |

शिक्षा तकनीकि के आर्विभाव तथा विकास के साथ शिक्षा प्रकिया में अनेक परिवर्तन हुए तथा नए आयामो का विकास हुआ जर्मनी के प्रोफ़ेसर आर्मास्ट्रांग द्वारा शोध विधि का प्रतिपादन हुआ,

इस विधि में छात्रो को उपयुक्त वातावरण में रखकर स्वयं किसी तथ्य को ढूढंने के लिए प्रेरित किया जाता है |

शिक्षण विधि में प्रोजेक्ट विधि केस स्टडी विधि करके सीखना, प्रर्दशन विधि, कहानी विधि, ख़ेल विधि, आदि में प्रयोग की जाती है |

प्रोजेक्ट विधि में छात्रो के जीवन से सम्बन्धित समस्याओ को वास्तविक रूप से प्रस्तुत किया जाता है, छात्र समस्या कि अनुभूति करते है |

समस्या समाधान कि योजना तैयार कि जाती है इसके लिए अनेक सूचनाओ को तैयार किया जाता है, शिक्षक केवल निर्देशक सुगमकर्ता का कार्य करता है, छात्र स्वयं विषय वस्तु सामग्री का अध्ययन करके समस्या समाधान करते है |

छात्रो कि उपलब्धियो में स्थान कक्षा शिक्षण के स्वरूप प्रकिया अनुदेशन प्रकिया को प्राथमिकता दी गयी है | क्योकिं छात्रो कि उपलब्धियों इन्ही पर आश्रित होती है, बालक के द्वारा अनुभव किए योग्य अमूर्त वस्तुओं के अध्ययन के लिए प्रविधियों विकसित कि गयी है |

संक्षेप में कहा जा सकता है कि नवाचार शिक्षण पद्तियो के माध्यम से बालकों का सर्वोपरी विकास तो होगा ही साथ ही उनका सतत एवं व्यापक मूल्यांकन भी होगा |

Creating Awareness about Importance and Applications of OMICS Technologies to Under-Graduate Students of Agricultural Sciences

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Abstract

Food and nutritional security is a global concern, and a significant increase in crop yields is needed to feed the rapidly growing population. The growing demand for improved varieties of crop plants, the usefulness and quality of crop products and the major challenges facing modern agriculture are key factors forcing the scientific community to adopt innovative omics-based technology to enhance crop productivity. Omics technologies such as genomics, proteomics, transcriptomics, metabolomics, system biology, bioinformatics, and other omics-based approaches have great potential to interpret the complexity of important and complex traits linked to agricultural productivity, such as water use efficiency, photosynthetic efficiency, nitrogen efficiency, plant architecture, biotic and abiotic stress tolerance and nutritional quality. Therefore, it is beneficial for society to create awareness about these technologies to trigger young mind at under-graduate level for promoting the application of omics technologies for uplift of agri-food nutrition sector in the future. The paper will be presented to describe the importance and applications of Omics technologies in agriculture.

Keywords: Omics, Agriculture, Crop plants, Food and nutritional security

Role of Multimedia in Teaching and Learning

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Abstract

The term multimedia was introduced in 1960 and to describe the combined use of several media such as text, film, video, image and audio. Educational technologies have been receiving great attention from educators in order to enhance the student learning. One of the technique to improving the meets of student for academic needs and helps them developing language skills and providing the multimedia during the process of teaching and learning in classrooms. Multimedia teaching has been more and more widely used in school, education and institution of various educations. It has contributed a lot to higher teaching and learning quality. Chalk and talk method is not enough to teach the language effectively. A multimedia classroom provides the students chance for interacting with different texts that gives them a solid background in the tasks and content of main stream college course. Through the media teacher gives more opportunity to students to express their views and enjoy during the course. The result of study indicates that when using various multimedia combinations, the unique nature of teaching can be addressed effectively. We should enhance management and direction, correctly understand and reasonably treat multimedia teaching, avoid the blindness of multimedia construction and use to increase the quality of course, promotes teacher's professional level and classroom potent and multimedia teaching and to improve the effectiveness and multimedia teaching.

Keywords: Multimedia, Teaching and learning, Educational technology, Classroom

Nanoencapsulation: Opportunities and Challenges in Food Processing

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Abstract

The development of new functional foods requires technologies for incorporating health-promoting ingredients into food without reducing their bioavailability or functionality. Nanoencapsulation is defined as a technology to pack substances in miniature making use of techniques such as nanocomposite, nanoemulsification, and nanoestructuration. It provides final product functionality (including controlled release of the core) which is expected to be maintained during storage. Within the food engineering field, protection of bioactive compounds such as vitamins, antioxidants, proteins, and lipids as well as carbohydrates may be achieved using this technique for the production of functional foods with enhanced functionality and stability. Trends in nanocapsule and nanoemulsion construction are related to manufacture, observation, and measurement of capsules as well as to the evaluation of the distribution of the size of the particle and interaction of wall and core materials and control of coalescence. It is important to highlight that research and development on preparation of nanocapsules and its potential application in different food products to enhance the bioavailability of any compound. Nanoencapsulation will certainly play an important role in this process, although it will always make an ingredient more expensive to use and bioavailability should always be considered carefully. The current level of nanotechnology applications in the global food sector is, however, only small and most products and applications are still at R&D stage. The use of nanomaterials, especially the insoluble and biopersistent nanoparticles, in food applications must, therefore, consider safety of the products to consumer health and the environment.

Keywords: Bioavailability, Functional Foods, Nanoencapsulation, Nanomaterial

Specific Recommedations to Encourage Research in Education

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Abstract

Accepting new ideas bring society new life. There is new energies in it and it always gets the leading position. With the expected changes new consciousness comes in education. This change brings innovation in education and education lead to progress. But according to the new changes, research needs to be done to bring about innovation.

But in the present time the research work is going on, which is going to happen, there is lack of quality in it. What is the reason behind which research work has declined why are students and teachers not interested in research work. It is recommended to promote research work by highlighting these reasons in the submitted paper and removing them.

Keywords :- Changes, Innovation, Research .

Impact of Globalization on Education

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Abstract

Education is an important factor for all societies. As the foundation and essential driving force of economic, social, and human development, education is at the heart of the change that is dramatically affecting our world in the areas of science, technology, economics, and culture.The impact of globalization on culture and educational system is a major concern.

Globalization iscreatingopportunities for sharing knowledge, technology, social-values and behavioral norms and promoting developments at different levels including individuals, organizations, communities, and societies across different countries and cultures.

- Global sharing of knowledge, skills, and intellectual assets that are necessary to multiple developments at different levels;
- Mutual support, supplement and benefit to produce synergy for various developments of countries,
- Creating values and enhancing efficiency through the above global sharing and mutual support to serving
- Mutual support, supplement and benefit to produce synergy for various devel
- Creating values and enhancing efficiency through the above global sharing and mutual support to serving local needs and growth;
- Promoting international understanding, collaboration, harmony, and acceptance to cultural diversity across countries and regions.
- Facilitating communications, interactions, and encouraging multi-cultural contributions at differe

On the other hand globalization,includes negative impacts for developing andunderdeveloped countries.There are various types of political, economic and cultural colonization and overwhelming influences of advanced countries to developing countries and rapidly increasing gap between rich and poor areas in different parts of the world.

- Promoting international understanding, collaboration, harmony, and acceptance to cultural diversity acros

Keywords: Education, Globalization, Influences, Countries.

A Qualitative Study of Teaching and Learning with Smart Mobile Phone

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Abstract

This study investigates teachers and students using smart mobile phone devices for teaching and learning purposes. An explorative focus group study was conducted with teachers and students in a class that have use smort mobile phone from begning of the session 2018 - 20119. Study shows that the use of smart mobile phone in the class room setting has an impact on both teaching and learning practices. The result suggest that teachers can be divided in to two type, some of them innovative and some of them instrumental. Innovative teachers attempt to shift from a teacher- center to a learning- center approch. They have change their teaching style by transforming lessons in accordence with the advanteges smart mobile phone can offer. Instrumental teachers seem to use the device as a Book Behind Glass. The method between the two groups has consequences for both the way courses are given and how student experience them. General,the introduction of smart mobile phone entails a shift in the way students learn, as the devices orivide intractive, media rich, and exiting new methods. The results of this study indicate that policy makers should consider introducing technical and pedagogical support in order to facilitate both teachers and students understanding of this kind of technology in teaching and learning method.

''शिक्षा में नवाचार परिवर्तन''

आशीष मौर्या
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सारांश

आज भारतीय समाज में हमने शिक्षा में नवाचार के माध्यम से हमने काफी उन्नति की है।

नवाचार का अर्थ ऐसे परिवर्तन से है जो पूर्व स्थापित विधियों कार्यक्रमों एवं परम्पराओं का समावेश करता है, शैक्षिक नवाचारों की कोई सीमा नही है मूल्यांकन के क्षेत्र में भी नवाचार हुआ जैसे रहने पद्धति को खत्म करना, सेमेस्टर प्रणाली लागू करना, ग्रेडिंग प्रणाली इत्यादि।

सीखने की प्रक्रिया मनुष्यों के मनोवैज्ञानिक एवं सामाजिक विकासक्रम का एक निर्धारक तत्व है। नवाचार में सीखने की प्रक्रिया ही छात्रों में कक्ष क्यों, कहां, कैसे जैसे प्रश्नों में एक जिज्ञासा उत्पन्न होती है। 21वीं सदी में नवाचार प्रणाली ने शिक्षा के माध्यम से सामाजिक आर्थिक और राजनैतिक स्तर को काफी प्रभावित किया है।

जीवन के प्रत्येक स्तर में आज नवाचार की आवश्यकता है प्रत्येक भारतीय को नवाचार के प्रति जागरूक करना समय की मांग है। वैसे तो प्रत्येक विद्यार्थी में कुछ न कुछ नया करने की अतः प्रवृत्ति होती है। किन्तु इस प्रवृत्ति को सही दिशा देने में देश की अनुभवी अध्यापको और वैज्ञानिकों की महत्वपूर्ण भूमिका है। आज के युग में नवाचार के बिना ज्ञान का कोई महत्व नही है। नवाचार की प्रक्रिया द्वारा ही ज्ञान की धन और जनकल्याण से बदला जा सकता है। भारत एक विकसित राष्ट्र तभी बनेगा। जब प्रत्येक छात्र अपनी योग्यता और क्षमताओं के साथ योगदान देंगे एक नया समाज तभी उभरकर सामने आयेगा। जब शिक्षा व्यवस्था अपने वर्षों पुराने सांस्कृतिक व सामाजिक ढांचे से मुक्त हो बदलाव की प्रक्रिया से गुजरेगी। एक व्यक्ति में मौजूद प्रतिभा को सामने लाने में व्यक्ति को सहयोग करना शिक्षा का वास्तविक उददेश्य होना चाहिए। ज्ञान की अभिवृद्धि वैज्ञानिक एवं तकनीकी प्रगति तथा भौतिकता के संचार के कारण समाज तेजी से बदल रहा है लोगों की सोंच रहन–सहन का स्तर आवश्यकतायें बदल रही हैं समाज में सांस्कृतिक एवं राजनीतिक परिवर्तन भी तेजी से परिदृश्य को बदलते जा रहे हैं इन परिवर्तनों के अनुरूप शिक्षा प्रणाली में परिवर्तन नही हो पा रहे हैं क्योंकि शिक्षा में स्वतः परिवर्तन महत्वपूर्ण नही होते उन्हें सुविचारित ढंग से प्रयोजित किया जाता है अतैव शिक्षा को सामाजिक परिवर्तन के अनुरूप लाने एवं जन आकांक्षाओं की प्रतिपूर्ति हेतु समक्ष बनाने के लिये नये विचारों, नई तकनीकों, नई विधियों में नवाचार की आवश्यकता है।

Factors responsible for lack of Inclination for Research in education among teachers

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Abstract

Teacher has an important role to play for quality education. If we survey the present scenario we find that there is an apathy among teacher, a general feeling of disinterestedness and reluctance for research and innovation . In present era of knowledge explosion and continuous technological development, teachers need to adjust themselves to keep pace with the time and to perform their role in full swing. They have to prove themselves by acquiring new skills and by creating knowledge through research. Those unable to keep pace lag behind which adversely affect their effectiveness and the quality of education in turn. That is exactly why it is important to identify the factors which responsible for lack of inclination for research among teachers. Major factors are as follows:

- Rapid Technological development.
- Challenges of knowledge management.
- Social and economic pressure.
- Pedagogy and skill up gradation.
- Freedom for Research and Innovations.
- Availability of Research facilities.
- Lack of Motivation

Teacher should be encourages to undertake research activities. It will serve the purpose even if teachers undertake researches like action research at intuitional level. It will develop scientific attitude among teachers and prepare them towards research work.

It is recommended to promote research work by highlighting above mentioned factors in the submitted paper and removing them.

Keywords: Research, Apathy, Reluctance, Inclination.

Need for Research and Innovation in teaching methodology

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Abstract

Educational research is the process of getting dependable scientific solutions of educational problems. For quality Improvement in teaching & Education, educational research is so important because today's era teaching is so tough when the scholars are not proper understood educate subject, but teaching so easy when scholars easily understood educate subject. As per experts educational research is that , that make to easy a any subject to teach in a concatenational way, In which scholars are easily understood the subjects. Educational research to improve the quality of teaching in many ways, like that we know it the old times syllabus was very small but educator took more time to teach that, but at present we know it syllabus is too long but preceptor took limited or bounded time to teach that, this thing possibled by educational research. Educational Research also can Make The Educators More Effective In Their Work Of Promoting Teaching & Learning.

Key words: Concatenational, formulated hypotheses, advancement, widespread, civilization, propagation of education, appropriate policies, pragmatic and real facts, fact-oriented, Importance of Educational Research for quality improvement in teaching, Importance of Educational Research for learning, Importance of Educational Research for socio economic development.

Impacts of Information and Communication Technology on Higher Education Environment

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Abstract

Informationand Communication Technologyin HigherEducation is becoming much important and this importance will continue to grow and develop in 21st century. The use of ICT in education not only improves classroom teaching learning process, but also provides the facility of e-learning. The adoption and use of ICTs in education have a positive impact teaching, learning and research. The use of ICT will not only enhance learning environment but also prepare next generation for future lives and careers. Presentpaper reveals that the various impacts of ICT on higher education and explores various potential future developments.

Need for Research and Innovation in Teaching Methodology

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Abstract

Traditional teaching method inhigher education has not adapted to the information age of development needs. In the new economic background, higher collages and teachers as the teaching subject to improve the teaching effect of higher education and promote the development of subjects, finally improve the students' comprehensive quality, it is necessary to reform the traditional teaching methods. Based on the teaching practice of the training course, this research paper from the perspective of teachers and based on group behavior of students in higher education, putting forward some suggestions in the higher education of teaching methodology. Keywords: higher education, teaching method, innovative research, teaching methodology.

New Dimensions in Education Sector

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Abstract

Education system in India is need to be revised manifolds in terms of betterment. By understanding the need of the hour it should more curious, precise, entertaining and scope oriented. For the deeper understanding of the topic especially it should co-relate with the interesting background history and their conceptual theorems as well as innovation prospects. Now are the time for edutainment; education with entertainment. For instance after repeatedly mug up about the Mugal dynasty in history we forget but if we watch a movie like Jodha-Akbar or concerned TV serial by adding keen interest then all concepts, visualization permanently affix in our mind and central themes never forget easily even in sleeping time also. To understand the child psychology and ongoing effects of their surroundings should also investigate thoroughly by educationist while furnishing the curriculum modules. Dissemination of Scientific as wll as scientological knowledge is also preserves equally important to incorporate moral virtues to be a mature and complete man.

Key words: edutainment, visualization, psychology, scientology.

शैक्षिक अनुसंधान में उपयोगी स्थितियाँ

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प्रस्तावना–ब

शिक्षा मानव मात्र के लिए वो आवश्यक है, जिसके माध्यम से छात्र और उसके जीवन का समग्र विकास होता है। अशिक्षित व्यक्ति न तो स्वयं का न परिवार का और न ही राष्ट्र के विकास में अपना समुचित योगदान दे सकता है। राष्ट्र और समाज की वास्तविक निर्माण में शिक्षा का विशेष योगदान है। शिक्षा ऐसी हो जो व्यक्ति निर्माण के साथ–साथ रोजगार प्रद हो।

शब्दकुंजी– शिक्षा का दृष्टिकोण, वास्तविक शिक्षा, रोजगारपरक, अध्यापकीय जिज्ञासा।

शैक्षिक अनुसंधान का तात्पर्य शिक्षा के क्षेत्र में किये जाने वाले अनुसंधान एवं प्रयोगों से है। इस प्रकार के अनुसंधान के द्वारा शिक्षा के उद्देश्यों, नवीन आयामों, पहलुओं, प्रक्रियाओं आदि के विषय में नवीन विचारों भावों के उदय, ज्ञान का सृजन और वर्तमान समय पर जो शिक्षा का परीक्षण सम्मिलित होता है इनमें छात्रों के व्यवहारों एवं उनकी मानसिक स्थिति के विषय में भी जानना होता है क्योंकि यही वे अध्ययन है जिनके परिणाम स्वरूप छात्रों के व्यवहारों एवं विकास हेतु शिक्षण–विधियों का निर्माण किया जा सकता है।

अच्छी और गुणवत्तापूर्ण शिक्षा उपलब्ध कराना आज महत्वपूर्ण एवं अनिवार्य हो गया है। इसके लिए आवश्यक है कि शैक्षिक स्थितियों का गंभीरता पूर्वक अध्ययन किया जाए और प्रयास किया जाए। उपलब्ध शैक्षिक विधियों के अतिरिक्त शिक्षा के क्षेत्र में नवीन शोधकार्य किये जायें और तकनीक के नये–नये क्षेत्र में शैक्षिक अनुसंधान का महत्व तब और प्रभावी हो जाता है जब शिक्षा योजना बनाते समय छात्रों की आर्थिक, सामाजिक एवं मनोवैज्ञानिक आवश्यकताओं को भी जाने क्योंकि छात्र यदि अपनी रुचि, उद्देश्य एवं आवश्यकता के अनुसार शिक्षा ग्रहण करेगा तो निश्चय ही वो अपने मूल्य एवं प्रतिमानों को प्राप्त कर सकेगा। जॉन डी0वी0 के अनुसार **"विद्यालय एक सामाजिक संस्था है, शिक्षा एक सामाजिक प्रक्रिया होने के कारण विद्यालय वह स्थान है जो सामुदायिक जीवन का निर्माण करता है। जिसमें वे समस्त साधन केन्द्रित होते हैं जो बालक को अपनी शक्ति को सामाजिक उद्देश्य के लिए प्रयोग करने की योग्यता प्रदान करते हैं।"**[1]

शिक्षा आत्मनिर्भरता की कसौटी होनी चाहिए एवं शिक्षण–विधियों में छात्रों के पास सिर्फ पुस्तकीय माध्यम न होकर व्यवसाय पर आधारित है। जिससे कि छात्र आगे चलकर आर्थिक रूप से आत्मनिर्भर बन सके– **"गाँधी जी ने शिक्षा दर्शन में क्रिया प्रधान पाठ्यक्रम को महत्व दिया है। क्रफ्ट कोई भी हो कसता है कृषि, कताई, बुनाई, गत्तों का कार्य, लकड़ी का कार्य, चमड़े का कार्य आदि ये सभी क्रिया प्रधान पाठ्यक्रम में सम्मिलित हैं।"**[2]

"राष्ट्र के निर्माण में शिक्षक की महत्वपूर्ण भूमिका होती है। वह अपने ज्ञानकोश से समाज को नवीनता देता है। देखा जाए तो शिक्षण जगत संसार की एक मानसिक प्रक्रिया है, जिसमें मस्तिष्क को मस्तिष्क से सम्बन्ध स्थापित किया जाता है।"[3]

शिक्षा का उद्देश्य साधारण ज्ञानार्जन था। वाह्य रूप में सभ्य बनाना ही न होकर इसका उपयोग मनुष्य के अन्तःमन को आलोकित करने से जुड़ा होना चाहिए और इसके लिए आवश्यक है कि शिक्षक को आर्थिक और मानसिक रूप से स्वतन्त्र होना चाहिए क्योंकि तनावमुक्त अवस्था में ही सही प्रकार से शिक्षा कार्य संभव है। प्रश्न उठता है कि शिक्षक नयी शिक्षण विधियों को अपनाना नहीं चाहता अथवा वह शोध के प्रति उदासीन है। शिक्षक की इस उदासीनता का कारण सम्पूर्ण शिक्षा व्यवस्था को ही माना जा सकता है। कई बार देखने को मिलता है कि अधिक से अधिक धनार्जन की इच्छा के परिणाम स्वरूप कम वेतन में गैर अनुममोदित शिक्षकों की भर्ती, या फिर शिक्षकों की कमी, शिक्षकों को गैर शिक्षणेत्तर कार्यों में लगाना, कार्यों की अधिकता, कालेजों में निरीक्षण व्यवस्था में कमी, संसाधनों की कमी, छात्रों की उचित संख्या का न होना जिससे शिक्षक की पढ़ाने के प्रति रुचि का बिल्कुल भी न होना, इच्छाशक्ति का आभाव, आर्थिक विषमता, तनाव आदि ये सभी कारक हैं, जिनके परिणाम स्वरूप शिक्षक शिक्षण एवं शोधकार्य दोनों से ही दूरी बनाने का प्रयास करते हैं, किन्तु यह पूरी तरह सत्य नहीं कहा जा सकता है। आज भी ऐसे अनेक शिक्षण संस्थान हैं जहाँ निरन्तर शोधकार्य किये जा रहे हैं और शिक्षा जगत उनसे लाभान्वित हो रहा है। राहुल सहरावत के शब्दों में देखे तो–

''समानसमता हो जहाँ,
प्रेम सद्भाव और सृजनात्मकता हो जहाँ।
नये लक्ष्यों को पाने की संभावनाएँ हो जहाँ,
शिक्षा की राह पर चल रही नव चेतनाएँ वहाँ।।''[4]

इस प्रकार कहा जा सकता है कि शिक्षा देश, वातावरण के अनुरूप हो, शिक्षा आत्मनिर्भरता एवं स्वावलम्बन पैदा करने वाली हो। साथ शिक्षक प्रशिक्षित एवं अनुमोदित शिक्षकों पर शिक्षण कार्य की जिम्मेदारी हो, क्योंकि अच्छे और प्रशिक्षित शिक्षकों के माध्यम से ही शिक्षा को उन्नतिशील बनाया जा सकता है तभी शोध और नवाचार को बेहतर तरीके से शिक्षण में शामिल किया जा सकता है।

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A New Approach for learning

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Abstract

We very clearly know that research and innovation in teaching methodology can improve the level of education. One thing is also remarkable that research is helpful for both teachers and students. Research helps students and teachers to understand and apply more knowledge. It develops the reasonability in their minds. Educational research is a systematic attempt to go in to the depth of any problem. With the help of research a teacher can improve his teaching methods. So in this paper we will elaborate the various aspects of research and we will discuss how to improve teaching methodology with the help of research and innovation.

Keywords: Education, creativity, Innovative Teaching Methodology

Innovative teaching and learning methodologies for higher education Institutions

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Abstract

Methodologies in higher education are increasingly under the spotlight and it is uncertain in certain circles, if traditional methods are in fact as effective as they are believed to be. Since the quality of education is critical to a Conventional assessment nation's success, it is important to interrogate a number of strategies and methods. The application of innovative teaching and learning methods is critical if we are to motivate and engender a spirit of learning as well as enthusiasm on the part of students, for learning while at universities and indeed for lifelong learning. The role of education is to ensure that while academic staff do teach, what is taught should also be intelligible to students emanating from culturally and linguistically diverse backgrounds and that they rapidly become familiar with the expected standards. It is more often than not the case that students underachieve because of the fact that they have not grasped an awareness of the level of assessment or what it is that the lecturer expects from them. Lecturers should thus apply themselves to utilizing innovative methods so that the students' learning process is as free-flowing as possible and that the methodology they adopt is conducive to learning. Innovative teaching and learning methodologies such as short lecture, simulation, role-playing, portfolio development and problem-based learning (PBL) are very useful in addressing the rapid technological advances and developing workplaces that will be required in the foreseeable future. This article which is important in the broader transformation debate in higher education, focuses on skills that can strengthen language acquisition and content knowledge for students. PBL inter alia, is promoted as an innovative teaching and learning methodology that is highly relevant and meaningful and worth utilising.

Keywords: Innovative teaching and learning, short-lectures, role-play, simulation, portfolios, problem-based-learning.

Importance of Judicial Innovation and Behaviorism Approach in study of Constitutionalism in Indian Scenario.

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Abstract

The Constitutionalism is the basic concept of Political Ideology. It denotes one hand Rule of the Law i.e. a breaker against a tyranny of majority in Democratic setup while other hand persuades for practical Constitutional Studies. The methodology of the Constitutional studies is a set of identified some methodological concepts, options and applications of methods concerned with General and Social Sciences and construction of a new or innovated method which designs a specific knowledge on subject matter and enhance Teaching Aptitude. Today the study of Constitutionalism is integral part of Jurisprudence, Law, Public Administration and Political Science. This ideology is relied upon the basic notion as the State Authority is derived from the Citizens and should be determined by mechanism of the Constitution that clearly exhibit the question, what the Government must and must not do. Today increasing role of Judiciary in field of Policy Initiative, creativity in the text of Constitution, remolding in the fundamental rights and freedom of Citizens are integral aspects of the Constitutionalism in Indian scenario. The routine acceptance of Litigations belong to high level Policy determination by the Apex Court or the High Courts may be misuse to create propaganda for affect the voting behavior of the Country as pendency of writ challenged to Rafael Aircraft deal was misused in five State Assemblies elections campaigns against the ruling Political party on 2018. This Approach of Constitutionalism leads to Behaviorism Aspect. The main assumptions of Behaviorism perspective is that all behaviors are shaped and calculated by the current environment. The Behavior Perspective also expostulates to Scientific Psychology and offers very practical ways to measure the changing behavior of Citizens. However the methodology of Judicial Innovation and Behaviorism are integral part of Constitutional Studies.)

Keywords: Politics, Judiciary Constitutionalism, Innovation, Behaviorism

Innovative Approach in Teaching Methodology

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Abstract

Teacher education must create necessary awareness among teachers about their new roles and responsibilities. Education of teachers needs to strengthen and stress upon the main attributes of a profession, such as, the systematic theory, rigorous training over a specified duration, authority, community sanction, ethical code and culture, generating knowledge through research and specialization. It is acknowledged that formal professional training on continuous basis is necessary for becoming a good teacher as it caters to the development of one's personality and sharpening of communication skills and commitment to a code of conduct. In this paper we will discuss importance of teacher education and innovative approaches in teaching methodology

Keywords: Teacher Education, Innovations

Innovative Teaching Strategies in Education

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Abstract

Basically teaching must include two major components sending and receiving information. Ultimately, a teacher tries his best to impart knowledge as the way he understood it. So, any communication methods that serve this purpose without destroying the objective could be considered as innovative methods of teaching. The use of innovative methods in educational institutions has the potential not only to improve education, but also to empower people, strengthen governance to achieve the human development goal for the country.

Teacher Education is a discipline which educates the progressive generations for preparing skilled and innovative teachers to make a civilized and creative society. For teachers there is need to integrate social, emotional, intellectual and spiritual competencies, with numerous teaching skills. Innovation is one of the most important key to improvement in any area. In current time the obsolete ideologies and methods of teaching do not work therefore there is earnest need to start innovative practices in teacher education. Teachers have to be innovative in teaching, curriculum development and teaching practices.

Keywords: Innovations, Teacher Education, Constructivism, Team Teaching.

नवाचार संवर्धन : उद्योग के क्षेत्र में

राजेन्द्र कुमार
रिसर्च स्कालर
वीर बहादुर सिंह पूर्वांचल विश्वविद्याल
जौनपुर।

ABSTRACT

नवाचार और अनुसंधान एवं विकास के माध्यम से प्रौद्योगिकी का परिवर्तन उत्पादकता वृद्धि, आर्थिक विकास तथा सामाजिक परिवर्तन का मुख्य कारक है और हमारे जीवन के प्रत्येक क्षेत्र को पुनर्परिभाषित करने हेतु प्रौद्योगिकीय नेतृत्व आर्थिक रूप से वैश्विक नेतृत्व के लक्ष्य को प्राप्त करने के प्रमुख कारकों में से एक है।सूचना, संचार प्रौद्योगिकी और इलेक्ट्रॉनिकी (आईसीटीई) विश्व का सबसे बड़ी और सबसे तेजी से प्रगति करने वाला उद्योग है और यह अर्थव्यवस्था के सभी क्षेत्रों में तीव्र अनुप्रयोगों की तलाश कर रहा है। विभिन्न उद्योगों की प्रतिस्पर्धा का निर्धारण उनकी व्यापार प्रक्रियाओं में आई.सी.टी.ई. के एकीकरण की क्षमता के आधार पर किया जा रहा है। इसलिए आई.सी.टी.ई. को विकास में प्रमुख शक्ति के रूप में चिन्हित किया गया है और विश्व स्तर पर इसे "मेटा– रिसोर्स" के तौर पर स्वीकार किया गया है।

डीईआईटीवाई ने अनुसंधान एवं विकास और नवाचार के प्रोत्साहन को इलेक्ट्रॉनिकी एवं आईसीटी परितंत्र का अभिन्न अंग माना है और इसने देश में बुनियादी घटकों से लेकर परिष्कृत उत्पादों के विकास तक के लिए पूरे अनुसंधान एवं विकास गतिविधियों की श्रृंखला का समर्थन किया है। नवाचार प्रोत्साहन पर निर्मित अनुसंधान एवं विकास समूह समय– समय पर उद्योगों और शैक्षणिक संस्थानों के बीच सहयोगात्मक अनुसंधान एवं विकास को प्रोत्साहित करने के लिए अनेक कार्यक्रम और योजनाएं शुरु करता है और प्रारंभिक स्तर पर प्रौद्योगिकी उद्यमिता को भी बढ़ावा देता है।

Innovative Methods of Teaching and Learning in Higher Education

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Abstract

Advance pedagogy is the way to enhance teaching and learning performance. Traditional teaching method in higher education has not adapted to the information age of development needs. In the new economic background, it is necessary to reform the traditional teaching methods. Different innovative teaching methods are now in use across the globe. Hybrid teaching includes e - learning in addition to the face to face teaching. Use of technology and multimedia is getting more in vogue. Use of smart gadgets for different tasks like teaching, designing question papers, assessment of student, feedback and research methodology is discussed. Since the quality of education is critical to a nation's success, it is important to interrogate a number of strategies and methods. The application of innovative teaching and learning methods is critical if we are to motivate and engender a spirit of learning as well as enthusiasm on the part of students, for learning while at universities and indeed for lifelong learning. The role of education is to ensure that while academic staffs do teach, what is taught should also be intelligible to students emanating from culturally and linguistically diverse backgrounds and that they rapidly become familiar with the expected standards. It is more often than not the case that students underachieve because of the fact that they have not grasped an awareness of the level of assessment or what it is that the lecturer expects from them. Lecturers should thus apply themselves to utilizing innovative methods so that the students' learning process is as free-flowing as possible and that the methodology they adopt is conducive to learning. Innovative teaching and learning methodologies such as short lecture, simulation, roleplaying, portfolio development and problem-based learning (PBL) are very useful in addressing the rapid technological advances and developing workplaces that will be required in the foreseeable future.This article which is important in the broader transformation debates in higher education and focuses on skills that can strengthen language acquisition and content knowledge for students.

Keywords: *Innovative teaching and learning, short-lectures, role-play, simulation, portfolios, problem-based learning*

Research: Methods and Objectives

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Abstract

The present paper attempts to focus the individual to comprehend the concept of the term "Research" its meaning, definition, characteristics, types, aims and objectives, methods and tries to acquaint the reader to proceed in a systematic way to make his research successful. 'Research' is not something like copying or imitating the researches done earlier. But it is finding something new by raising a hypothetical questions and reaching to answer or solution of it by utilizing the text or knowledge available in previous research. It must have certain systematized validity, reliability, authenticity, reproducibility and verifiability..

The paper also eases the individual in selection of a suitable topic and research tools to conclude the research in a systematic way.Research is a term used generously for any type of study that is intended to reveal interesting or new facts.Research is a process of collecting, analyzing and interpreting information to answer question. But to qualify as research, the process must have certain characteristics: it must be as for as possible, empirical, cyclical, critical, accurate, controlled, logical, rigorous, systematic, valid and verifiable. The reason of research is to find out answer to questions in the course of the application of scientific procedures. The most important aim of research is to find out the truth which is hidden and has not been exposed as yet.

शिक्षा में इण्टरनेट की भूमिका

देवेन्द्र कुमार ' और दीपा पंत ''
''शोधार्थी ऑक्सफोर्ड माडल आफ एडवांस स्टडीज श्याम नगर, कानपुर।

आज के इस आधुनिक समाज में अनगिनत समस्यायें मनुष्य के चारो तरफ घूम रही हैं। उन्हीं समस्याओं में से एक ज्वलन्त समस्या है। इण्टरनेट के उपयोग के प्रभाव स्वरूप आज के छात्रों के दृष्टिकोण में परिवर्तन हो रहा है। इण्टरनेट के बढ़ते उपयोग से छात्रों की सोच में विभिन्न प्रकार के परिवर्तन होते दिख रहे हैं, साथ ही इसके प्रभावस्वरूप सम्पूर्ण शैक्षिक परिवेश में बदलाव होता लग रहा है।

इण्टरनेट के आने से सम्पूर्ण वैश्विक परिवेश सूचना क्रान्ति का आगाज हुआ तथा यह छात्रों के लिए वरदान के रूप में सामने आया। परन्तु हर वरदान कभी–कभी गलत हाथों में जाकर विनाश का कारण बनता है और यही हाल इण्टरनेट का भी हो रहा है। इण्टरनेट वरदान के साथ–साथ छात्रों के लिए अभिशाप बनता जा रहा है। उसके प्रभाव से कोई छिपा या बचा नहीं है। इसमें छात्रों की निजता तो छीन ही ली है अब राष्ट्रीय सम्प्रभुता भी दांव पर है। विश्व के आम लोग भले ही इस बात को मानते हों कि गूगल सर्च इंजन (जिस पर आप दुनिया की प्रत्येक चीज के बारे में जान सकते हैं और दूसरों के लिए अपनी जानकारी डाल सकते हैं) के अलावा कुछ नहीं है। लेकिन आई0टी0 के जानकार यह दावा कर रहे हैं कि विश्व के अनगिनत विषयों, संस्थाओं और लाखों लोगों की निजी जानकारी इस सर्च इंजन) पर मौजूद हैं, जो इण्टरनेट की दुनिया में एक नवीन खतरे का आगाज बन सकता है। इसमें वो सभी जानकारियां हैं जो बिना इजाजत किसी निजी सम्पत्ति एवं जिन्दगी का खुलासा कर सकती है।

इण्टरनेट की अगर शुद्ध हिन्दी में कहना हो तो कहेंगे अन्तरजाल यह ऐसा जाल है, जिससे सारी दुनिया को अपने अंदर समेट रखा है। जब ग्लोबल विलेज की बात होती है तो सही मायने में इण्टरनेट ही है जिसने इस पूरी सोच को दिशा प्रदान की है। जानकारी एवं सूचना के भण्डार के तौर पर इसका कोई जवाब नहीं है। इसके प्रभाव का अनुपमान इस बात से लगाया जा सकता है। एक सर्वेक्षण के अनुसार वर्तमान भारतीय समाज में छात्रों के बीच इण्टरनेट ही सूचना का सबसे प्रभावी माध्यम है। टेलीविजन एवं अखबारों को इसने काफी पीछे छोड़ दिया है। इतनी सारी सुविधाओं के साथ इण्टरनेट कई तरह की बुराइयों को भी लेकर आया है। इसीलिए बहुत जरूरी है कि इसका प्रयोग बहुत ही सावधानीपूर्वक किया जाए।

इण्टरनेट का प्रयोग विभिन्न तरह की जानकारी का आदान प्रदान करने, मनोरंजन, पत्रव्यवहार, व्यापार एवं प्रशासन में जितने प्रभावी तरीके से हो रहा है, लगभग इसी प्रभावी तरीके से अपराधी भी इसका प्रयोग अपनी गतिविधियाँ सम्पादित करने के लिए कर रहे हैं। अभी हाल ही में संयुक्त राष्ट्र की एक एजेन्सी की रिपोर्ट में कहा गया है कि अवैध मादक पदार्थों की बिक्री अब इण्टरनेट के माध्यम से भी की जा रही है एवं इसका प्रचलन बढ़ता ही जा रहा है। समझा जाता है कि आम तौर पर इस प्रकार की लेन–देन के इण्टरनेट चैट रूम का प्रयोग किया जाता है। भारत में शहरों में भी पिछले कुछ वर्षों से इण्टरनेट के प्रयोग करने वालों की संख्या में अप्रत्याशित रूप से वृद्धि हुई है।

वैश्विक स्तर पर विचारों के आदान–प्रदान के साथ ही वैश्विक स्तर तक के नये शैक्षिक सूचनाओं में जनता की शिरकत की अपार संभावनाओं को भी खोला है। वैश्वीकरण के विरुद्ध वैश्विक स्तर पर जनता एवं स्वैच्छिक संगठनों की लामबंदी को नवीन ऊँचाइयों पर पहुँचाया है। जनतंत्र के लिए नवीन अध्याय की शुरूआत की है। वैश्वीकरण विरोधी, युद्ध विरोधी, पर्यावरणवादी, नारीवादी, जनतंत्रवादी संघर्षों के पक्ष में वैश्विक स्तर पर जनता एवं संगठनों को गोलबंद करने एवं जागरूकता पैदा करने में इण्टरनेट सबसे आगे है। इण्टरनेट उस अमूर्त जनता को जागृति करता है जिसे अभी तक देखा नहीं है। उन्हें एकजुट करने का प्रयास करता है जो हाशिये पर थे। सामाजिक राजनीतिक पर्यावरण शांति के सवालों पर साधारण जनता को अपने विचार व्यक्त करने और चेतना विकसित करने का मौका देता है। आम जनमानस को ज्वलंत सवालों पर बहस में सम्मिलित होने का अवसर प्रदान करता है। यह वास्तव में डिजिटल नागरिकता है। यह राष्ट्र–राज्य की सीमाओं को तोड़ रही है।

जनवरी 1995 को भारत में प्रथम विश्वस्तरीय आकड़ा सूचना सेवा 'इण्टरनेट' के रूप में शुरू हुई। इस सेवा के अन्तर्गत 160 देशों के अन्तर्राष्ट्रीय नेटवर्क सम्बद्ध है। ज्ञातव्य है कि इसके द्वारा विश्वभर के लाखों कम्प्यूटर सूचना केन्द्रों से प्राप्त सूचनाओं व आंकड़ों को अपनी भाषा में बड़ी सरलता से प्राप्त किया जा सकता है। इस विधि को 'ट्रांसमिशन कन्ट्रोल' प्रोटोकाल या इण्टरनेट

प्रोटोकाल कहा जाता है। इण्टरनेट इण्टरनेशनल नेटवर्क का संक्षिप्त नाम है। दूरसंचार के क्षेत्र में पेजर और सेल्युलर फोन के बाद यह अनुसंधान विश्व में 20वीं सदी की अभी तक की सर्वाधिक महत्वपूर्ण उपलब्धि है। इण्टरनेट सेवा के कारण कोई व्यक्ति घर बैठे देश–विदेश के प्रत्येक प्रकार की घटनाओं को देख सकता है और उससे सम्पर्क स्थापित कर सकता है। भारत में इण्टरनेट का प्रवेश वर्ष 1987–88 में ही हो गया था, परन्तु उस समय इसकी सुविधा सीमित लोगों को ही उपलब्ध हो पायी थी। वर्तमान में विश्व के लगभग 160 देशों के प्रमुख पुस्तकालयों, अस्पतालों, अनुसंधान संस्थाओं, मनोरंजन कक्षों आदि को इण्टरनेट के अन्तर्गत लाया जा सकता है। जिससे सूचनाओं के आदान–प्रदान में अत्यधिक सुविधा होती है। दूरसंचार विभाग के पैकेट स्विच्ड पब्लिक डाटा नेटवर्क 'आइनेट' के उपभोक्ता अब 'साइबर स्पेस' की नई दुनिया का अनुभव कर सकते हैं। अहमदाबाद, बंगलुरू, मुम्बई, कोलकाता, नई दिल्ली, हैदराबाद, चेन्नई तथा पुणे में 'आइनेट' प्रथम चरण से ही चल रहा है जबकि इसके द्वितीय चरण में इसे 80 और अन्य शहरों में बढ़ाये जाने की योजना मूर्त रूप लेती दृष्टिगत हो रही है।

इण्टरनेट ऐसे कम्प्यूटरों की प्रणाली है जो सूचना लेने और उसके आदान– प्रदान के लिए आपस में जुड़े हैं। यह लाखों–करोड़ों कम्प्यूटरों को जोड़ने वाला विश्वव्यापी संजाल है। वर्ष 1998 में इण्टरनेट के विश्वभर में 10 करोड़ से अधिक उपभोक्ता थे। अब यह संख्या तेजी से बढ़ रही है। एक सौ से अधिक देश आकड़ों, समाचारों और समितियों के आदान–प्रदान के जरिये आपस में जुड़े हैं। इण्टरनेट बनावट से विकेन्द्रित है। प्रत्येक इण्टरनेट कम्प्यूटर 'होस्ट' कहलाता है और स्वतंत्र रूप से कार्य करता है। इसके संचालनकर्ता यह चयन कर सकते हैं कि इण्टरनेट सेवाओं का उपयोग किया जाए और विश्वव्यापी इण्टरनेट समुदाय को कौन सी स्थानीय सेवायें उपलब्ध कराई जायें।

पिछले तीन दशकों में काफी संख्या में कम्प्यूटर उपभोक्ता आपस में जुड़ गये हैं। डब्ल्यू डब्ल्यू डब्ल्यू (www) का आविष्कार सर्न ने किया जो स्विटजरलैण्ड के कण–भौतिकी के संस्थान से जुड़े हुए थे। आरम्भ में ली ऑफ सर्न, टिम बर्नर्स ने उच्च ऊर्जा भौतिकी के क्षेत्र में केवल विश्वव्यापी संचार के लिए www का विकास किया, लेकिन इस कम्प्यूटर नेटवर्क के साथ अति सम्पर्कों की अवधारणा ने विश्वव्यापी वेब को लोकप्रिय बना दिया क्योंकि उपयोगकर्ता जटिल कम्प्यूटर कमानों के बिना एक पेज से दूसरे पर जा सकते हैं।

ई–मेल द्वारा संचार करने के लिए इण्टरनेट में आवश्यक यंत्रों के साथ ई–मेल पते की आवश्यकता होती है। इसके अतिरिक्त आवश्यक यंत्रों साफ्टवेयर जो ब्रिटेन के एशुपुल टेलीकॉम द्वारा बनाया गया है की आवश्यकता होती है। जिस प्रकार साधारण संदेश भेजने के लिए संदेश प्राप्त करने वाले का नाम, पता, आदि की आवश्यकता होती है। ई–मेल सुविधा को प्राप्त करने के लिए जब सन्देश को ई–मेल पते के साथ इण्टरनेट आधारित कम्प्यूटर पर डाला जाता है तो पहले कम्प्यूटर के साथ जुड़ा मोडेम कम्प्यूटर में भण्डारित संदेश को डिजिटल रूप में परिवर्तत करके दिये गये पते पर सम्प्रेषित कर देता है। वह कम्प्यूटर जिस पर संदेश भेजा गया है से जुड़ा मोडेम उसे दोबारा एनालॉग रूप से डिजिटल रूप में बदलकर सूचना संग्रहीत कर लेता है।

इण्टरनेट की सहायता से पूरी दुनिया एक ग्लोबल समाज में बदल सकी है जहाँ प्रत्येक व्यक्ति दुनिया के किसी कोने में बैठे व्यक्ति के साथ बात और काम कर सकता है। इण्टरनेट रिमोट क्लास आयोजित करने की सुविधा उपलब्ध करता है। साथ ही विभिन्न प्रकार की सूचना सामग्री उपलब्ध कराता है और एक ऐसा माहौल बनाता है जहाँ छात्रों को साझा शिक्षा का अनुभव मिलता है। इस प्रकार इण्टरनेट समाज के विकास में शक्तिशाली ताकत के रूप में सेवा प्रदान कर सकता है तथा सूचना प्राप्त करने वालों की संचार सम्बन्धी छोटी–बड़ी सभी समस्याओं के निराकरण में मदद करता है। 1988 से इण्टरनेट की सदस्यता प्राप्त करने वालों की संख्या हर साल लगभग दो गुनी होती जा रही है। इण्टरनेट के मुख्य गुण सूचना इकट्ठा करना, ट्रांसलेशन करना तथा सूचना वितरण आदि हैं।

इण्टरनेट के सामाजिक उपयोगों में शिक्षा एवं चिकित्सा का क्षेत्र मुख्य रूप से शामिल है। शिक्षा के क्षेत्र में नामांकन से लेकर पठन–पाठन, परीक्षा देने एवं परिणाम प्राप्त करने तक के सभी कार्य इण्टरनेट के द्वारा संचालित हो रहे हैं। इसके माध्यम से देश एवं विदेश के बड़े से बड़े पुस्तकालयों में उपलब्ध पुस्तकों को पढ़ा जा सकता है। साथ ही आवश्यकतानुसार उनका प्रिन्ट आउट (मुद्रित प्रति) भी लिया जा सकता है। इण्टरनेट के माध्यम से देश–विदेश के बड़े से बड़े डाक्टर एवं विद्वान एक दूसरे से अपने विचारों का आदान प्रदान कर सकते हैं। इण्टरनेट के माध्यम से वीडियो कान्फ्रेन्सिग संभव है। जिसके द्वारा दूर–दराज के क्षेत्रों के रोगियों का उपचार टेली–चिकित्सा के द्वारा किया जा सकता है।

अतः स्पष्ट है कि इण्टरनेट ने समाज में अनेक तरह के सामाजिक परिवर्तन कराये हैं। समाज का लगभग प्रत्येक व्यक्ति किसी न किसी तरह से इण्टरनेट से जुड़ा है। आधुनिक युग का व्यक्ति इण्टरनेट के बिना अपना अस्तित्व नहीं गढ़ सकता। अतः इण्टरनेट ने समाज में अनेक सकारात्मक सामाजिक परिवर्तन किए हैं।

शिक्षा में अनुसंधान की भूमिका

प्रवीणा अवस्थी ' और आदित्य कुमार सक्सेना ''
'शोधकर्त्री ''शोधार्थी

शोध को अंग्रेजी में 'Research' कहते हैं जो दो शब्दों से मिलकर बना है– 'Re + search= Research' 'Re' का अर्थ होता है बार–बार, 'search' का अर्थ है– खोजना। अंग्रेजी का यह शब्द शोध की प्रक्रिया को प्रकट करता है तथा शोधकर्ता किसी तथ्य को बार–बार देखता है तथा उनके विश्लेषण के आधार पर निष्कर्ष निकालता है। शोध में किसी समस्या का वैज्ञानिक अन्वेषण किया जाता है।

जॉन डब्लू0 बेस्ट के अनुसार– अनुसंधान या शोध अधिक औपचारिक व्यवस्थित तथा गहन प्रक्रिया है जिसमें वैज्ञानिक विधि विश्लेषण को प्रयुक्त किया जाता है और उनका औपचारिक आलेख तैयार किया जाता है।

इस प्रकार कहा जा सकता है कि शोध एक प्रक्रिया है, जिसके द्वारा समस्या का समाधान कर ज्ञान में वृद्धि की जाती है। सुनियोजित तथ्यों अथवा सिद्धान्तों की ढंग से सूचनाओं को संकलित करके उनका विश्लेषण करके नवीन खोज करना ही अनुसंधान में वैज्ञानिक विधि का अनुसरण करके प्रश्नों का उत्तर प्राप्त किया जाता है।

अनुसंधान के प्रकार (Type of Research)

योगदान की दृष्टि से	शोध आयाम की दृष्टि से	शोध निष्कर्षों की शुद्धता की दृष्टि से
1. मौलिक अनुसंधान • प्रयोगात्मक शोध • दार्शनिक शोध • ऐतिहासिक शोध 2. क्रियात्मक अनुसंधान	1. अनुदैर्ध्य आयाम • ऐतिहासिक विधि • आनुवांशिक विधि • एक अध्ययन विधि 2. अनुप्रस्थ आयाम • सर्वेक्षण विधि • प्रयोगात्मक विधि • घटनोत्तर विधि	1. प्रयोगात्मक अनुसंधान 2. अप्रयोगात्मक अनुसंधान

अनुसंधानकर्ता जिस ढंग से शोध कार्य पूर्ण करने की योजना बनाकर कार्य पूर्ण करता है उसे शोध विधि कहते हैं। शोध की विधियों में प्रमुख ऐतिहासिक, वर्णनात्मक, प्रयोगात्मक, क्रियात्मक और तुलनात्मक आदि हैं। समान शिक्षा सम्बन्धी घटनाओं, विषय के सम्बन्ध को स्पष्ट करने के लिए वर्णनात्मक एवं प्रयोगात्मक शोध विधियों का प्रयोग किया जाता है।

शोध कार्य में छात्र निर्देशित आत्म–शिक्षण से जुड़े होते हैं। इन कार्यक्रमों को अनिवार्य रूप से बुद्धि को बढ़ाने, विश्लेषण तथा समस्या सुलझाने के कौशल विकसित करने और छात्रों को कैरियर के लिए तैयार करने हेतु डिजाइन किया जाता है। इसके द्वारा किये

गये शोध कार्य में आमतौर पर एक खुला परिणाम आता है यह शोध संचालन और विधियों, सटीक प्रश्न बनाने और प्रसंस्करण और अनुसंधान प्रक्रिया की निगरानी जैसे कौशल को आंतरिक बनाने और अभ्यास करने में मदद करता है। छात्र, अनिश्चितता का सामना, आजादी, टीम वर्क और संगठनात्मक कौशल में क्षमता प्राप्त करते हैं।

अनुसंधान में एस0टी0ई0एम0 शिक्षा का नवाचार है जो एक विशिष्ट पाठ्यक्रम है जिसमें विज्ञान, प्रौद्योगिकी, अभियांत्रिकी और गणित में छात्रों को शिक्षित करने में मदद करती है। शोधार्थी शैक्षिक शिक्षा के साथ साथ कार्यस्थल शिक्षा के साथ जोड़ने, संचार, समूह कार्य, बातचीत और सार्वजनिक जुड़ाव जैसे हस्तान्तरणीय कौशल विकसित करने में सक्षम है।

शोध आधारित शिक्षण के सम्बन्ध में विचारों के आदान प्रदान और पारस्परिक विकास के लिए एक ढांचा तैयार करने हेतु फोकस समूह स्थापित किये गये हैं। यहाँ माह में एक बार व्याख्याता ठोस उदाहरणों का उपयोग करके इस शिक्षण तकनीकी की संभावनाओं और कठिनाइयों पर चर्चा करते हैं। नये शोधार्थी जो अपने अनुसंधान के तत्वों को शामिल करने में रुचि रखते हैं या पहले से ही ऐसा करते हैं वे इसमें भाग लेने के लिए स्वतंत्र हैं।

विश्व भर में शिक्षा केवल कक्षा में सीखने से प्रासंगिक शिक्षा की ओर बढ़ रही है। अनुसंधान आधारित शिक्षा स्नातक और स्नातकोत्तर स्तर पर प्रासंगिक शिक्षा का अगला कदम है। यह इस प्रक्रिया में शामिल शिक्षक के लिए भी फायदेमंद साबित हो रहा है। शिक्षण और शिक्षा का यह रूप व्याख्याताओं और छात्रों द्वारा नये ज्ञान के संयुक्त अधिग्रहण पर केन्द्रित हैं। यह व्याख्याता को, शिक्षक और शिक्षार्थियों दोनों के रूप में उनकी भूमिका पर प्रतिबिम्बित करने में सक्षम हैं। सीखने का यह रूप, शिक्षा के लिए जिज्ञासा से प्रेरित दृष्टिकोण को प्रोत्साहित करने में मदद कर रहा है। छात्रों से प्रश्न पूछने के लिए कहा जायेगा और शिक्षकों को उत्तर देने में उतना ही अधिक प्रेरित और शामिल होना होगा।

इस तरह अनुसंधान एक सीखने का मंच, नवाचारों, नए विकास और पुरानी समस्याओं का समाधान बनकर उभरा है। विदेश में कई विश्वविद्यालय इसे लागू करने के लिए तैयार हैं और इस तरह के शिक्षाओं को उनके पाठ्यक्रम में भी शामिल करते हैं और इस तरह के नवाचार का स्वागत करते हैं।

शैक्षिक परिप्रेक्ष्य में अनुसंधान की आवश्यकता एवं महत्त्व

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आज 'अनुसंधान' शब्द का प्रयोग ज्ञान की प्रत्येक शाखा के गहन अध्ययन के निमित्त होने लगा है। वर्तमान में शैक्षिक जगत तथा मनोविज्ञान के क्षेत्र में भी 'अनुसंधान' शब्द लोगों के लिए अब अपरिचित नहीं हैं। इस शब्द का प्रयोग किसी संशोधन या वस्तु की खोज के लिए नहीं किया जा रहा है। यह उस क्रिया तथा प्रक्रिया का द्योतक है जिसमें विभिन्न प्रकार के तथ्यों का एकीकरण और अनेक आधारों पर व्यापक निष्कर्ष निकालना सम्मिलित है। इस शब्द में प्रकृति के अनुसार पूछताछ, जाँच, गहन निरीक्षण, व्यापक परीक्षण, योजनाबद्ध अध्ययन, सोद्देश्य एवं तत्परता–युक्त सामान्य निर्धारण आदि की प्रक्रियाएं महत्त्वपूर्ण हैं। अनुसंधान कोई ऐसी प्रक्रिया नहीं है जो मात्र धरातल पर ही खोज करे। इसमें गहन निरीक्षण का मुख्य प्रत्यय है। दूसरा मुख्य विचार समस्या का विशिष्टीकरण है। इस प्रकार यह कहा जा सकता है कि अनुसंधान एक सुसीमित क्षेत्र में किसी समस्या का सर्वांगीण विश्लेषण है। किसी भी समस्या का प्रारम्भ जिज्ञासा से होता है। जो व्यक्ति जिज्ञासु प्रवृत्ति का होता है वही अनुसंधान कार्य सफलतातापूर्वक कर सकता है। जो व्यक्ति जिज्ञासु प्रवृत्ति का नहीं है उसके लिए यह कार्य असम्भव है।

शैक्षिक अनुसंधान की प्रकृति

- अनुसंधान एक उद्देश्यपूर्ण सुव्यवस्थित बौद्धिक प्रक्रिया है। इसके द्वारा किसी सैद्धांतिक अथवा व्यावहारिक समस्या के समाधान का प्रयास किया जाता है।
- अनुसंधान के माध्यम से या तो किसी नये तथ्य, सिद्धांत, विधि या वस्तु की खोज की जाती है अथवा प्राचीन तथ्य, सिद्धांत, विधि या वस्तु में परिवर्तन किया जाता है।
- यह एक वस्तुनिष्ठ एवं तर्कपूर्ण प्रक्रिया है। इसके द्वारा प्राप्त निष्कर्ष वास्तविक आँकड़ों पर आधारित एवं तर्कपूर्ण होते हैं तथा व्यक्तिगत पक्षपात से मुक्त होते हैं।
- अनुसंधान चिंतन की एक सुव्यवस्थित एवं परिष्कृत विधि है जिसके अन्तर्गत किसी समस्या के समाधान के लिए विशिष्ट उपकरणों एवं प्रक्रियाओं का प्रयोग किया जाता है।
- इसके अन्तर्गत जटिल घटनाक्रम को समझने के लिए विश्लेषण विधि का प्रयोग किया जात है।

- अनुसंधान द्वारा प्राप्त ज्ञान को सत्यापित किया जा सकता है क्योंकि इसके अन्तर्गत किया गया निरीक्षण नियन्त्रित एवं वस्तुनिष्ठ होता है।
- अनुसंधान एक अनोखी प्रक्रिया है जिसके द्वारा ज्ञान के प्रकाश एवं प्रसार के लिए सुव्यवस्थित प्रयास होता है।
- इस कार्य को सफलापूर्वाक करने के लिए वैज्ञानिक अभिकल्पों का प्रयोग किया जाता है।
- आँकड़ों की प्राप्ति हेतु विश्वसनीय एवं वैद्य उपकरणों का उपयोग किया जाता है।
- सभी प्रकार के अनुसंधानों में अभिलेखन एवं प्रतिवेदन सावधानी से किया जाता है।

शैक्षिक अनुसंधान के क्षेत्र

शैक्षिक अनुसंधान के क्षेत्र में प्राणी की आन्तरिक तथा बाह्य व्यवस्था एवं उनको प्रभावित करने सभी घटक आते है। जैसे– प्राणी का व्यवहार वातावरण में स्थित उद्दीपकों के प्रति उसकी प्रतिक्रिया है। यह प्राणी की शारीरिक स्थिति, उसकी समताओं, संवेदनशीलता, उत्तेजना की प्रकृति एवं उसकी प्रबलता, वातावरण की स्थिति तथा उनकी अन्तःक्रिया पर निर्भर होगा। शैक्षिक अनुसंधान के क्षेत्र में शिक्षा–दर्शन, शिक्षा के उद्देश्यों का निर्धारण, इन उद्देश्यों की प्राप्ति के लिए नियोजन, व्यवस्थापन, संचालन, समायोजन, धन व्यवस्था, शिक्षण–विधि, सीखना तथ उसे प्रभावित करने वाले तत्त्व, प्रशासन, पर्यवेक्षण, मूल्यांकन आदि सभी आते हैं। विगत कुछ वर्षो में मापन तथा मूल्यांकन के क्षेत्र में पर्याप्त खोज की गयी है तथा उसके आधार पर शिक्षा के क्षेत्र में मापन तथा मूल्यांकन के क्षेत्र में पर्याप्त खोज की गयी है तथा उसके आधार पर शिक्षा के क्षेत्र में पर्याप्तप्रगति हुई है। सीखने की नयी–नयी विधियों का आविष्कार, सीखने को प्रभावित करने वाले विभिन्न तत्त्वों की तुलनात्मक महत्ता, छात्रों तथा शिक्षकों के पारस्परिक सम्बन्ध, उनमें अन्तःक्रिया, पाठ्यक्रम, पाठ्य–पुस्तक, सहायक सामग्री और उसका उपयोग आदि सभी क्षेत्रों में अनुसंधान हो रहें हैं लेकिन अभी बहुत कुछ करना और शेष है।

शैक्षिक अनुसंधान की आवश्यकता एवं महत्त्व

अनुसंधान का तात्पर्य किसी नवीन वस्तु या ज्ञान का कुछ नवीन सिद्धांतों के आधार पर अन्वेषण करना है। इसका उद्देश्य सरल सुव्यवस्थित विधियों द्वारा किसी क्षेत्र की प्रमुख समस्याओं का समाधान प्रस्तुत करना है। इस दृष्टि से अनुसंधान एक सोद्देश्य एवं सविचार प्रक्रिया है, जिसका उद्देश्य मानव–समाज के ज्ञान को विकसित एवं परिमार्जित कर उपयोगी बनाना है। इसके महत्त्व के बारे में विद्यालय शिक्षा आयोग का मत है कि अनुसंधान के बिना अध्ययन मृतप्राय हो जाएगा। अतः ज्ञान के विकास के हेतु अनुसंधान अत्यावश्यक है, और यह ज्ञान का विकास जीवन के विकास के लिए अत्यन्त आवश्यक है। अनुसंधान शिक्षकों, छात्रों, अभिभावकों तथा प्रशासकों एवं पर्यवेक्षकों को स्वयं के ज्ञान, परस्पर एक–दूसरे के ज्ञान एवं मनोवैज्ञानिक तथा शैक्षिक समस्याओं का सुनियोजित समाधान प्रस्तुत करने के कारण अत्यन्त महत्त्वपूर्ण है।

निष्कर्ष

शैक्षिक अनुसंधान किसी अर्थपूर्ण व मौलिक समस्या का समाधान खेजने का एक ऐसा व्यवस्थित, वस्तुनिष्ठ, सोद्देश्य,तर्कसंगत तथा इन्द्रियानुभाविक प्रयास है जिसमें वैज्ञानिक विधि का प्रयोग किया जाता है, निःसंदेह यह प्रक्रिया स्वसंशोधनीय, पुनरावृत्ति योग्य तथा सारभौमिक प्रकृति की होती है एवं इससे प्राप्त परिणाम संचरण योग्य होते हैं।

संदर्भ

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Using Group Work as a Teaching Strategy in Teaching Methodology

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Organising students to work in small groups is a teaching strategy which is strongly recommended by many educators. Like discussion, group work relies on input from students. Sometimes, group work does not produce the learning outcomes that the teacher hoped for, but this could be because of inadequate preparation by the teacher. When using small group work, we have to create the learning situation and then let the students complete the tasks. In this situation our role becomes one of monitoring, rather than directing the learning.

शिक्षा में नवाचार की भूमिका

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कानपुर नगर।

ABSTRACT

भूमण्डलीकरण ने दुनिया को बदल कर रख दिया है। यह परिवर्तन का दौर है। इन दिनों एक शब्द बड़ा ही प्रचलन में है। नवाचार इसका अर्थ किसी उत्पाद, प्रक्रिया या सेवा में थोड़ा या बहुत बड़ा परिवर्तन लाने से है। नवाचर के अन्तर्गत कुछ नया और उपयोगी तरीका अपनाया जाता है। यही कारण है कि सीखने सिखाने के नवाचारी तरीकों का विकास हो रहा है, वही यह भी माना जाता है कि नवाचार कोई नया कार्य करना मात्र ही नही है वरन किसी भी कार्य को नये तरीके से करना भी नवाचार है। शिक्षा का क्षेत्र भी इससे अछूता नही है। शिक्षा के क्षेत्र में भी नित नये परिवर्तन हो रहे हैं। किसी के चलते अब शिक्षा में भी नवाचार की बात चलने लगी है।

पिछले कई वर्षो में शिक्षा के क्षेत्र में जो बदलाव आयें है वह शिक्षा में नवाचार का ही परिणाम हैं। शिक्षा की गुणवत्ता में सुधार तथा युवा पीढी में शिक्षा को लेकर एक नई जन जाग्रति आयी है। विचारकों की माने तो ''शैक्षिक नवाचारों'' को उदभव स्वतः नही होता वरन इन्हे खोजना पड़ता है तथा सुनियोजित ढंग से इन्हे प्रयोग में लाना होता है ताकि शैक्षिक कार्यक्रमों को परिवर्तित परिवेश में गति मिल सके और परिवर्तन के साथ गहरी तारतम्य बनाये रख सके।

"Need for Research and Innovation in Teaching Methodology"

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Abstract

In the time duration of research in this topic, I have found that why our traditional methods of teaching needs to be upgrade to fill the gap between sending and receiving the information and the way of learning and understanding the concepts which creates the new thoughts and make the brain creative.

In this paper I have focused on many case studies of people and organizations (ancient time as well as present time both), who makes a new threshold in the field of learning and technology by which we can learn and inspire and through that inspiration we can focus more and do the better effort by the research and new innovations in the field of learning and teaching both. Present time, I have discussed on some facts given by the Ministry of HRD, Govt. of India in the field of education condition in India.

Finally from all the research and analysis which I had done in this topic, I have given some methods by which we can improve our teaching methodology.

Key Words-

- Innovative Teaching and Learning
- Short –lectures
- Role-play
- Simulation
- Problem- based Learning
- Practical Approach
- Assessments

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आधुनिक युग विज्ञान का युग है, विज्ञान एवं अनुसंधान को मानव सभ्यता के प्रगतिरूपी रथ के दो पहियों के समान कहा जा सकता है। मानव स्वभावतः जिज्ञासु प्राणी है। उसमें हमेशा से नई वस्तु या नये ज्ञान के प्रति उत्कण्ठा रही है। अपनी इस जिज्ञासा को शान्त करने के लिए वह हमेशा नई खोजों एवं अनुसंधानों के लगा रहता है। भारतीय समाज में सदियों से कई अन्ध विश्वासों का साम्राज्य रहा है। समाज में जैसे–जैसे शैक्षिक प्रगति हुई है वैसे–वैसे लोगों की जागरूकता में भी वृद्धि हुई है। सामाजिक जीवन का वैज्ञानिक अध्ययन सामाजिक अनुसंधान के द्वारा ही सम्भव है। वास्तविकता यह है कि सामाजिक अनुसंधान सामाजिक जीवन की वैज्ञानिक पद्धतियों एवं प्रविधियों को समझने की एक विधि है। इसका मुख्य लक्ष्य सामाजिक जीवन, सामाजिक घटनाओं तथा तथ्यों के सम्बन्ध में व्यवस्थित एवं वैज्ञानिक ज्ञान प्राप्त करना होता है। इससे प्राप्त ज्ञान का व्यावहारिक रूप से सामाजिक समस्याओं के निदान तथा सामाजिक विकास के लिए सामाजिक नियोजन से भी किया जाता है। समाज सुधारकों, प्रशासकों, समाजसेवियों एवं कार्यकर्ताओं के लिए भी यह ज्ञान उपयोग होता है। अनुसंधानकर्ताओं के लिए तो यह ज्ञान और भी उपयोगी होता है।