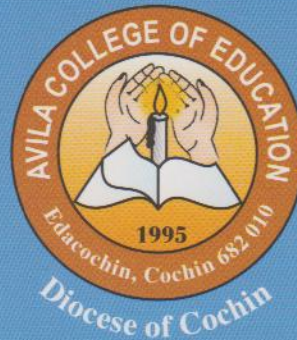


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2. Paper title, name (s) of authors and address for correspondence/e-mail address (if available) should be placed on a separate sheet.
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EDITORIAL

Education aims at transforming human beings into socially responsible and spiritually enlightened persons. It draws out the hidden potentialities of an individual and helps the harmonious development of different faculties. Education provides us knowledge and knowledge is considered as the third eye. It sharpens our attitudes, skills and values. It must provide a conducive environment for nurturing basic values like discipline, punctuality, responsibility, respect, cleanliness and national values like democracy, socialism, secularism, and equality of opportunity.

The higher education in India at present is not favourable for the achievement of national objectives due to many reasons. A major problem in our educational scenario is the lack of genuine enthusiasm on the part of learners. Another threatening problem is the quality of instruction. All our classroom activities are centered around good performance in 'examination'. The present examination system offers less scope for creativity among learners. So a scientific re-structuring of the methodology of education is very essential to transform higher education. It is high time that all those involved in the field of education sit together for a unified and coordinated action so that further deterioration can be checked. This annual Journal is a humble effort of Avila College of Education to explore the burning issues in the field of education. The aim of this Journal is to provide a medium for dissemination of educational research and exchange of experiences among teacher educators, research scholars and others who are interested in educational research.

The present issue of the Journal contains a collection of articles and research papers. The first article analyses the various aspects of in-service teachers training programmes offered through Distance Learning Mode. In the second paper an attempt has been made to investigate the reflective practices among college teachers. In the third paper the author has ascertained the effectiveness of intrinsic and extraneous load reduction technique in teaching biology and its effectiveness was tested. In the fourth article an attempt has been made to study the emotional intelligence of school students. In the next study the investigator has ascertained the effectiveness of Sharan and Sharan model of group investigation in teaching biology. In the sixth paper the author has identified the difficulties in learning mathematics among school students. In the next paper an effort has been made to study the tribal schooling at *Kozhimala*. In the eighth paper the author has prepared a strategy based on e-content for teaching physics at secondary level and has confirmed its effectiveness. In the next paper the researcher has ascertained the effectiveness of mnemonics in teaching English grammar at primary level. In the last paper professional development programmes for teachers have been examined. All the papers included in this issue are edited and modified after peer review.

Chief Editor

A Strategic Analysis of the In-service Teacher Training Programmes through Open and Distance Learning Mode

Sujata Acharya and Umesh Chandra Pandey

Background

Need of in-service teachers' training has long been at the centre stage of the policy planning; however the issue has got renewed impetus with the enactment of Right to Education. With the sincere efforts of the Government over the years, the quality of teachers has undergone positive changes but these changes are confined only to selected urban pockets. The situation in socio-economically disadvantaged areas continues to remain grim as good quality teachers aspiring for better wages and quality of life are not willing to go to such places. The fact remains that a large number of rural schools operating in socio-economically backward areas still starve for good quality teachers and substantial number of teachers in such schools are engaged without adequate training. The obvious result is poor quality of the educational delivery thereby leading to poor quality of school pass outs and huge dropout rates in rural sector. Problem is multifarious and is challenging in many ways. However one of the crucial reasons has been absence of an efficient in-service teachers training infrastructure in the country.

It is a huge challenge for the Government to train the already employed teachers in such areas without having them displaced from their workplaces. It is in this context that Open and Distance Learning systems due to their Flexible and Innovative character have come to the focus of entire planning processes. The ODL systems by virtue of their access to ICT enabled methods and flexible delivery strategies are favorably placed to reach out to large number of such teachers and train them right at their work places.

Objectives of the Study and Methodology

Indira Gandhi National Open University (IGNOU) has emerged as a major role player in the teacher education scenario in the country. The authors of the paper have been engaged in the management of the in-service teachers' training programmes of IGNOU at the delivery ends of the Students Support Services for quite some time. We present here a strategic framework for the improvement of the services at the Programme Study Centre, critically analyze the practice of the ODL systems and highlight the areas which need immediate attention.

Reflective Practices among College Teachers : An Investigation

Sibu G. Netto

“By three methods we may learn wisdom: first, by reflection, which is noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest” - Confucius.

Reflection has the meaning of thinking and thinking is a mental activity that helps to resolve doubt about what to do and what to believe. Thinking about what to do is decision making, and thinking about what to believe is part of learning. We act daily based upon our life experiences, the purpose of reflection is to uncover to ourselves habits, blockages, ways of responding, internal dialogue, mental constructs that we take advantage of for our moment to moment decisions.

Reflective thinking demands attention on both the terms ‘reflection’ and ‘thinking’; it is thought about thought. Reflection occurs naturally in all humans; making continual comparisons, to the present situations from previous, perhaps similar, to moment decisions. According to Dewey (1933), “the closer the process of reflection moves towards a resolution of the problem, the more critical it becomes to examine the past events and experiences” (p.64).

Reflective practice by its very nature is not a technique or tool to be pulled out when situations demand it. Indeed it has to be accepted into one’s professional repertoire as a natural way of thinking.

Criteria behind Selection of the Study

These days the prime motto of education has swung from ‘information transfer’ to ‘human resource development’; all teachers and students are faced with new challenges - teachers are expected to prepare for greater professionalism and students to prepare for a life in a competitive globalised world order (Nair, 2005). Teachers as facilitators and guides cannot solve problems with mechanistic ‘cook- book’ recipe. One reason – why experience alone is insufficient as a basis for development is that

Intrinsic and Extraneous Load Reduction Technique for the Development of Germane Load in Learning Biology

Nirmala Susan Alexander and Reema Anand

Introduction

Organization of content or programming of learning process is difficult for many learners. The main difficulty is related to cognitive load. Cognitive overload happens in programming due to the nature of the subject which is intrinsically over-bearing on the working memory. It happens due to the complexity of the subject itself. The problem is made worse by the poor instructional design used in the teaching and learning process which becomes the external factor. One of the key challenges that make learning tedious is the total burden on cognitive load. This is mainly due to the nature of the complexity of the material to be learned and also due to the limited ability of the working memory to process the information.

Cognitive load theory is an instructional theory that starts from the idea that our working memory is limited with respect to the amount of information it can hold and the number of operations it can perform on that information. Cognitive load theory is concerned with techniques for reducing the working memory load in order to facilitate the changes in long term memory associated with schema acquisition. That means the learner should be encouraged to use his limited working memory efficiently, which will help in the development and modification of new schema. Hence, it is the responsibility of the instructional designers to find new ways to help optimize the working memory for learning a new task while increasing the formation of new schemata (Germane load).

Significance of the Study

One of the most important qualities of a good learner is the ability to organize and arrange the known facts, concepts etc to form meaningful presentation. In the case of biology and other science subjects, unless the concepts are well understood and become a part of our schemata, the organization of ideas and its processing becomes difficult. Load theory seems to be more appropriate which would help to reduce cognitive load and

Relationship Between Emotional Intelligence and Selected Psychological Variables

Usha Parvathy and Saritha R. P.

Introduction

Emotional Intelligence (EI) is a form of social intelligence that involves the ability to monitor one's own and others' feelings and emotions to discriminate among them and use this information to guide one's thinking and actions (Salovey & Meyer 1997). Adolescents need to learn how to manage, control and tolerate their own emotionality. The foundation of emotional intelligence, self-concept and success in life are laid in childhood and adolescence. Schools must establish classroom environment that enable teachers and learners to discuss and share their feelings, beliefs, values openly and honestly. Through Emotional Intelligence both teachers and students will be benefited in the control and managing of their development and the process teaching and learning becomes more effective.

Today students face increasing amount of school work, a rapidly changing curriculum and exams and they must balance school work with sports, hobbies and social life. They have conflicts with parents, friends and siblings; have to cope with unpredictable moods and to fit in with a peer group. Stress and depression are serious problems for many teenagers. Sometimes all these conflicts result in behavior problems. Due to increase of students with learning disabilities, emotional disorders and behaviour disorders, there are more students in the classroom lacking self-control and having high frustration levels. This study tries to find out the relationship between Emotional Intelligence and other related variables like self-concept, achievement motivation, leadership quality and stress management of secondary school students.

Need and Significance

The present study addresses the importance of Emotional Intelligence and its relationship with other variables which can help the students cope with their every day problems. Children with emotional disturbances lack motivation and leadership skills, have learning difficulties and experience trouble in some interpersonal relationships and are deprived of self-control and face difficulties in stress management.

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Sharan and Sharan Model of Group Investigation: An Innovative Approach in Teaching Biology

Sreejaya K. M.

Introduction

A model of teaching is a description of learning environment. The models provide learning tools to the students; they are uniquely suited to the development of programs for students whose learning is cause for concern. Group investigation model is designed to lead students to define problems, explore various perspectives of the problems and study together to master information, ideas and skills – simultaneously developing their social competence (Stahl, Stahl and Stahl, 1995).

Sharan and Sharan model of group investigation is a co-operative learning method. It gives students control and ownership of their own learning and provides opportunities for genuine co-operative peer group interaction. Students collaborate in their investigation. They analyze data, resolve conflicts and have opportunities to develop their organizational and presentation skills. Sharan and Sharan group investigation model puts stress on understanding the content and process of science. Scientific investigations, open mindedness, independent thinking co-operative skills, problem solving skill, interest in investigation etc. can be developed through these models which are direct need of the present time. This model is a complex co-operative learning strategy which involves inquiry, communication skills, social interaction and democratic classroom. This study was conducted to check the effectiveness of Sharan and Sharan model of group investigation on biology achievement at secondary level.

Hypotheses

1. Sharan and Sharan model of group investigation is more effective than conventional method in increasing the biology achievement (total) of secondary school students.
2. Sharan and Sharan model of group investigation is more effective than conventional method in increasing the biology achievement of secondary school students at application level.
3. Sharan and Sharan model of group investigation is more effective than conventional method in increasing the biology achievement of secondary school students at analysis level.

Difficulties in Learning Mathematics among Secondary School Students

Sunitha Krishnan

Introduction

Mathematics is a quantitative subject that fosters the development of cognitive abilities such as thinking and reasoning. These are important for not only in mathematics but also in other school subjects. Mathematics is a basis for all scientific and technological studies. Additionally, it has high relevance and practical applications to many real life situations. National Curriculum Framework (NCF-2000) recommended that the study of mathematics contributes in the development of precision, rational and analytical thinking, reasoning, a positive attitude and aesthetic sense among students. Mathematics is the key to opportunity no longer just a language of science, mathematics now contributes in direct and fundamental ways to business, finance, health and defense. For students, it opens the doors to careers. For citizens, it enables informed decisions. For nations, it provides knowledge to compete in a technological economy. Mathematics curriculum has undergone various changes from time to time to fulfill the goals of mathematical education and to its social relevance; mathematics is considered as a compulsory subject of general education up to class X. According to NCERT (2010), even if India achieves the targeted universalisation goals during the next decade, it will have a substantial proportion of children exiting the school system often at class VIII. It is then fair to ask what these eight years of school mathematics offers for such children in terms of the challenges they will face afterwards. One of the prominent reasons for increasing rate of school dropouts at the secondary school level is because of the way in which teaching-learning processes are carried out at schools and at home. Among the various subjects, mathematics figures as the most troublesome for majority of students. An analysis of mathematics education in the secondary schools of Kerala will identify a range of difficulties faced by students in learning mathematics. Many students perform poorly in mathematics and find the subject very difficult to learn and apply in relevant situations.

Tribal Schooling at *Kozhimala*

Poulose K.V.

Introduction

The tribals are the native inhabitants of India. With the entry of Dravidians and subsequently the Indo-Aryans, these native tribes were pushed to the remote areas in hills and mountains. The tribes have distinct culture of their own which is both primitive and ethnic and is quite different from non-tribal people.

Education of tribals will be meaningful only if it is based on tribal demography and ecology. The introduction of modern system of education or mainstream education which had started during colonial period benefitted mostly the non tribal people by giving various incentives such as scholarships, reservation in educational institutions as well as in government services, opening up special schools and residential schools for them. In spite of all these, the tribal people have not been able to come up at par with the mainstream.

Tribal areas selected for this study consists of tribal community and tribal schools which belongs to this area. *Kozhimala* is inhabited by *Mannan* tribes. Tribals of *Kozhimala* face many educational problems which may be unknown to the general public. The researcher studied the educational problems related to transferring the ethnic knowledge of tribal's and difficulties faced by tribal students in formal education.

Need and Significance of the Study

The Idukki district has the second largest population of tribals in Kerala state. Major communities found in the district are *Mannan*, *Muthuvan*, *Malayaran*, *Ulladan*, *Urali*, *Paliyan*, *Melappuleyan*. They can be broadly categorized into three viz., agricultural labourers, marginal farmers and forest dependants. Among the tribal communities of Idukki district *Mannan* tribe of *Kozhimala* protect and preserve their distinct culture and ethnic knowledge even though they confront with many problems.

Effectiveness of e-content on Achievement in Physics of Secondary School Students

Sijimol S. and Praseela P.

Introduction

Each new wave of technology brings a burst of enthusiasm on how it can transform instruction and learning. This modern age of technology has given rise to technology of education and of teaching. In the last two decades, educational technologies have incorporated new system of instruction. Information technology comprises of the methods and technical means of capturing, storing, processing, retrieving and transmitting both data and the information thereby enhancing critical thinking and great levels of cognitive skills and provide access to world wide information resource. Now a days universities and educational institutions are emerging with new methodologies and innovative instructional strategies to provide educational experience and they are still in search of new pedagogies for better teaching and learning and one such new pedagogy is e-education and e-learning. The success of e-learning depends on the quality of e-content. The e-content is defined as the package of data in electronic form. The most important aim of using e-content is to improve the instructional effectiveness. It gives a new vision of learning.

Need and Significance

Science education empowers students so that they acquire, rehearse and master the use of current scientific knowledge, skills, perspective and attitudes. The most important objective of science instruction is to inculcate scientific attitude among students. An e-content challenges the potentials of students and it will enable them to be creative in their work. Here learners will get sufficient opportunities for making use of their potentialities. Information through e-content is long lasting and effective. Use of e-content in teaching physics is very effective as it is empowering the individual competencies. We can bring our students from outdated classroom setting to high level of information through e-content.

Hypotheses

1. There will be significant difference in the achievement (total) in physics of secondary school students taught through e-content and conventional lecture method.

Effectiveness of Mnemonics on Teaching English Grammar at Primary Level

Prabeesh M.

Introduction

Whatever may be the method we adopt for language learning the ultimate aim is to attain mastery over the language. To attain this goal, it is necessary to rely on the rules and regulations of that language. Though native speakers of English language do not learn the rules in a formal way, they follow it in its own way. As we are not native speakers only an effective method can serve the purpose of speaking and writing English in a natural way. It is a well known fact that studying the rules in a formal method is as dry as drab. Effective and interesting learning materials enhance learning of the linguistic items with ease and memory plays a prominent role in catching the rules of any language.

Mnemonics is the art of assisting the memory by using a system of artificial aids – rhymes, rules, phrases, acronyms and other devices – all to help in the recall of names, dates, facts and figures. The mnemonics techniques can be used to perform feats of memory that are quite extra ordinary on impossible to carry out using the natural memory alone. The techniques of mnemonics using rhymes can enhance the linguistic skill in English according to the requirements and aspirations of the learners. Teaching through the technique of mnemonics using rhymes uses interactive exercises, employs authentic learning materials to buff up the skills of learners. This approach stresses four stages of grammar learning namely presentation, explanation practice and test. Through the technique of mnemonics in the form of rhymes the teacher can condescend to any level to teach any language item, including grammar and structures. The present study examines the effectiveness of mnemonics on the achievement in English grammar of upper primary school pupils.

Hypotheses

1. Technique of mnemonics is more effective than the conventional method of teaching on the achievement of English grammar of upper primary school pupils.
2. There is significant difference in the achievement in English grammar of upper primary school pupils when taught through the technique of mnemonics and conventional method of teaching based on the process skills - (a) memorization and (b) application

Integration of New Technology in Foreign Language Teaching

Shekhar Suman

Computers, mobile phones, i-pods, MP4 players all have become inseparable part of human life. Students, teachers and all stake holders in education are using these hi-tech devices knowingly and unknowingly as part of their day to day activities. All these multimedia devices transcend their functions, and have turned into useful tools in foreign language learning. The upcoming of these new devices resulted in disappearance of language labs as the new generation finds minimal utility in language labs. Exploring use of these modern devices in teaching and learning has now become inevitable. The use of these audio-visual devices, films and video clips in language teaching has gained importance in this scenario. Immense scope of integrating these new technologies especially in foreign language teaching will, undoubtedly, stimulate the interest and motivation of students.

Assimilation of language in all its aspects can be accelerated by making use of these new technologies in teaching of foreign languages. New technologies need to be infused in the present day teaching learning methodologies, and have to become an integral part of every one's life. Infusing technology in classroom practices will not only help teachers absorb the eyes and ears of students but also will help to facilitate their minds. The emotional makeup created by the audio-visual devices will be helpful in creating a better teaching learning environment. Enhanced communication with the aid of modern devices will definitely help to overcome the barriers of monotonous teaching in traditional class-rooms

Debate on use of technology

Many researchers attempted to understand the role of technology in teaching and learning. Educational technology and research methods are changing in no time. There are two major approaches about this issue. These two approaches are based on the great "media debate" that has been started by Richard Clark and Robert Kozma, who took opposite positions in the debate in the early nineties. Clark (1994), a well-known professor of instructional technology, was of the view that technology itself will not influence the result of learning and teaching, and argued that media does not influence learning under any conditions. Further, "media" are mere vehicles that deliver instruction but do not influence student achievement any more than the truck that delivers our groceries causes changes in our nutrition."

A Review of Professional Development Programmes for Teachers

Elizabeth Kuruvila

“Educational change depends on what teachers do and think-it’s as simple and as complex as that.” - Fullan and Stiegelbauer, 1991

Introduction

The new millennium was ushered in by a dramatic technological revolution. We now live in an increasingly diverse, globalized, and complex, media-saturated society. This technological revolution will have a greater impact on society than the transition from an oral to a print culture. 21st Century Schools recognizes the critical need for developing 21st century skills. However, we believe that authentic education addresses the “whole child”, the “whole person”, and does not limit our professional development and curriculum design to workplace readiness. In many countries today’s students are referred to as “digital natives”, and today’s educators as “digital immigrants”. Teachers are working with students whose entire lives have been immersed in the 21st century media culture.

Professional development refers to skills and knowledge attained for both personal development and career advancement. Professional development encompasses all types of facilitated learning opportunities, ranging from college degrees to formal coursework, conferences and informal learning opportunities situated in practice. Professional staff development from 21st Century Schools is not the typical “sit and get”-lecture format usually encountered. Tony Wagner in his book, *The Global Achievement Gap* lists out the 21st century skills:

- Critical Thinking and Problem Solving
- Collaboration across Networks and Leading by Influence
- Agility and Adaptability
- Initiative and Entrepreneurialism
- Effective Oral and Written Communication
- Accessing and Analyzing Information
- Curiosity and Imagination

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