Report of
Kerala University Curriculum Fair 2016

Internal Quality Assurance Cell (IQAC)
University of Kerala
2016

"Kerala University Curiculum Fair 2016" was organized for the first time in 2016 under the joint auspices of Centre for Curriculum Development, University of Kerala, Department of Education, University of Kerala, IQAC, University of Kerala and FLAIR, Government of Kerala. 28 posters depicting curriculum innovation were presented in the Fair. Dr. Asha J.V was the Co-ordinator of the programme. This report compiles the proceedings, participants list and the posters. It is expected that the report would trigger wider participation in coming year.

A Report of the Proceedings of the 'Kerala University Curriculum Fair-2016'

Jointly organized by Curriculum Development Centre, UoK
Department of Education, UoK ,
IQAC, UoK &
FLAIR, Govt. of Kerala
on MARCH 1, 2016

The basic educative agent, irrespective of age and community is the very society within which individual human being is brought up. Each and every child of today is nurtured in a knowledge society and as a result endorsed to the windfall and nuisance of the knowledge explosion. The capability and potentiality of the knowledge society are fashioned in our classrooms. That is to say, education is too important a matter to be left to the vagaries of mercenaries masquerading as educators. Hence the relevance of exploring the present rhetoric of learning as distinct from earlier concepts of education, facilitating the successful practices in Curriculum and its transaction which was realised in the form of a Curriculum Fair. The Fair intended to depict the Innovation in the classroom, in the curriculum, innovative application and execution skills for continuous improvement. It also was instrumental in bringing out the genuine learning environment prevalent in learner-centred approach which triggers continuous learning process as well as learning in real-life situations. The presenters were asked to showcase students' academic engagement aimed at self-development, development of the affective domain, enhancement of thinking skills and dissemination of knowledge.

The Curriculum Development Centre, Department of Education of the University of Kerala is a study centre of the University functioning at the Department of Education to carry out innovative measures in the lines of enhancing scholarship, progressing research and encouraging extension activities in the field of Curricular interventions. The Centre, along with the Department of Education, IQAC and FLAIR put their resources together in organizing this maiden venture in the form of Curriculum Fair-2016 for teachers and students of colleges with the intention of

providing basic awareness curricular innovations. It is presumed that a Fair like this would be a sincere effort to familiarize and equip teachers and student teachers to think of novel ways and put forward fresh ideas to refresh our curriculum, its transaction and knowledge generation.

The Curriculum Fair was designed for one day. Posters representing innovative ideas were invited from Teachers of Universities, Colleges and teacher education institutions sufficiently early. Twenty eight entries in the form of Posters were received for the Fair. All the posters were arranged in the corridor of the Department of Education in a systematic way.

The Fair began with the welcome address delivered by Dr. Asha J.V. the Hon. Director of the Curriculum Development Centre, Dept. of Education, Unversity of Kerala. It was followed by a key note address by Prof. Achuthsankar S. Nair, Director, IQAC & HoD, Dept. of Bioinformatics and Computational Biology, University of Kerala. Dr. Theresa Susan, Head, Dept. of Education formally inaugurated the Fair and the team along with the research scholars in Education and invited experts and principals, faculty and students from teacher education colleges viewed the posters and interacted with the presenters. One hundred and sixty participants comprising of Teacher Educators, Research Scholars, school teachers and students from different city schools, Arts and Science Colleges, Training Colleges and University Departments visited the Fair and viewed the exhibited posters. The exhibition lasted till 5.00 pm in the evening.

All of the participants appreciated the conduct of the Fair. They expressed their delight in joining the Fair and gave the feedback that they got more awareness than they expected from the Fair. The hospitality of the organizing team and the explanations given by the poster presenters were also highly appreciated by the viewers.

Dr Asha J.V., Hon. Director,
Curriculum Development Centre, Department of Education,
University of Kerala.

PHOTOS FROM THE FAIR


A Unique Project Management & Monitoring System

Participant list

Sl. No.	Name & Designation	Topic
1	Dr. Issac Paul Asst. Professor, GCTE, Thycaud issacpaulchenal@rediffmail.com	Problem Based Learning as a means for effective Curriculum Transaction
2	Jyothi S Nair Asst. Professor of Sociology KNM Govt. Arts and Science College Kaniramkulam jyothinair05@gmail.com	FLAIR FORESIGHT- Facilitating Social Engagement as a Co-curricular Activity
3	Dr. Sithara Balan V Asst. Professor of Home Sciene Govt. College for Women, Thiruvananthapuram dr.sitharasushen@gmail.com	New Initiatives in Classroom Management
4	Rajeswari V.S M.Ed Student, Department of Education, Thycaud rajeswariprasad27@gmail.com	Second Language Curriculum- Moral Values for ESL Learners
5	Rakesh Sharma R & Shihas S B.Ed Students, Department of Natural Science MTTC, Nlanchira	Eco-friendly Campus
6	Shiney Jacob Asst. Professor Department of Natural Science, MTTC, Nalanchira	Eco-friendly Campus
7	Dr. K.Y. Benedict Principal, MTTC, Nalanchira & Fathima S B.Ed Student Department of Physical Science, MTTC, Nalanchira	My Dream Classroom project
8	Dr. Giby Geevarghese Asst Professor, MTTC, Nalanchira	Faculty of Educational Psychology Life map of a student

9	Mohammed Ansar K.T M.Phil Student, Department of Education	Life of a Flower
10	Mrs. Deepthi Elizabeth Mathew Asst. Professor and Members of Media Club, MTTC, Nalanchira	THEO RADIO – Sound of the Campus
11	Mrs. Deepthi Elizabeth Mathew Asst. Professor and Members of Media Club, MTTC, Nalanchira	The Mathematical World Around Us – Bringing Nature to the Classroom
12	Dr. Joju John Asst. Professor, MTTC, Nalanchira	Human Resource Empowerment Diary (HRED)
13	Dr. Joju John Asst. Professor, MTTC, Nalanchira	Right Brain Orientation Through Short Films and Videos
14	Devika S Asst. Professor, N.V.K.S.D College of Education, Attoor, Kanyakumari Dist, Tamil Nadu	Brain Storming Technique for Creative Process – An Innovative Learning Strategy
15	Dr. Mini K S Head of the Department, M.Ed Department, Fathima Memorial Training college, Pallimukku, Kollam	Study Circle – Innovative Learning Strategy
16	Biji C L & Dr. Achuth Sankar S Nair Department of Computational Biology and Bioinformatics, UoK bijijomy@gmail.com	Learning by Doing Teaching Research Methodology through a Toy Experiment Fruit Electricity
17	Sunitha P & Dr. Achuth sankar S Nair	A Unique Project Management and Monitoring System
18	Dr. Uday Sankar S Nair & Dr. Divya C Senan Department of Atmospheric Science University of Alabama, USA	Crowd Sourcing Applications as Tools for Research and Experimental Learning in Environmental Science
19	Archana G Raj M.Ed Student, Department of Education, Thycaud archanagraj1989@gmail.com	Transacting Research Embedded Curriculum – Social Science Curriculum (Year of Wonder)
20.	Dr. Smitha S Asst. Professor, SNTC Neduganda, Varkala	Indian Intellectual Tradition of Vedic Mathematics for Super Computation
21	Mridu C Nair M.Ed Student Department of Eduation, Thycaud mriducnair@gmail.com	Enhancing divergent thinking in Economics through the teaching of Rain water harvesting.
22	Athira C G Ph.D Research Scholar, Kerala University Library Research	Prior-Designing Classroom Instruction to Lgnite Child-Specific Opus Mangum and Teacher – Specific

	Centre, UoK krishnagopaloct30@gmail.com & Prof. (Dr.) A. Sudharma Former Dean & Director M.G University Kottayam (Head of M.Ed Department Budha College of Teacher Education, Muthukulam, Alappuzha	
23	Sreekutty S. S & K.S Resmi, M.Ed Students Department of Education	Learning Model in Biology Using an Adaptive Software (Cool-Edit Pro) for Visually Impaired
24	Subhaprabha S. Research Scholar, Department of Education & Dr. Theresa Susan A Head, Department of Education, University of Kerala	Awareness of Socio-Scientific Issues Among Students
25	Ramalekshmi P PhD Research Scholar, Department of Education, University of Kerala	Suggestopedia – as a method of teaching
26	Dr. Asha J. V Asst. Professor & Hon. Director Curriculum Development Centre. University of Kerala	. Cognitive Neuro Science – New Pathways to Pedagogy
27	Sajini K M.Ed Student. Department of Education, University of Kerala	Video Card Games for Science Education
28	Dr. K. Rajeswari Asst. Professor, GCTE, Thiruvananthapuram	Educational Technology Curriculum
29	Vijayakumar Administrative Officer IQAC, University of Kerala	Second Language Curriculum – Feedback and Metaacognition for teaching a Communicative English

Kerala University

Curriculum Fair 2016

A Platform to show-case innovations in curricular practices

Organized jointly by
Department of Education
Curriculum Development Centre
Internal Quality Assurance Cell,
University of Kerala
& FLAIR, Govt of Kerala

Date: ***1 March 2016***
Venue: ***Dept. of Education, Thycaud***
Thiruvananthapuram

Organizing Committee:
Patron: ***Prof P.K. Radhakrishnan,***
Vice-Chancellor, University of Kerala.
Chair-person: ***Dr. P.J. Jacob,***
Dean, Faculty of Education, UoK
Members
Dr. Theresa Susan.A,
HoD, Dept. of Education, UoK
Dr. Asha J .V,
Hon. Director, Curriculum Dev. Centre, UoK
Dr. Achuthsankar S. Nair,
Director, IQAC, UoK

This one-day event provides opportunity for teachers of University and affiliated colleges to showcase their curricular practices that are unique. Those who are interested to partake may prepare posters of maximum size 90cm x 90cm depicting the unique curricular practices along with pictures. Pins for mounting the poster will be provided at the site. The posters should be printed in a single sheet and it should have good printing quality. The posters can be printed in photo-paper / cloth etc.(Posters printed on flex are not allowed.). The title should be Arial / 80pt / Bold with the names of the authors and affiliations in Arial / 48pt / Bold-Italic. The subheadings should be bold with 48pt character size and all text including figure/ photo legends in 28pt character size. The posters may depict following aspects of curriculum:

Innovation (in the classroom , in the curriculum, innovative application and execution skills, Continuous improvement)

Learning (Genuine learning environment/Learner-centered approach/ Continuous learning process/Learning in real-life situations)

Engagement (Students' academic engagement/self-development and development of the affective domain/enhancement of thinking skills/Faculty engagement and dissemination of knowledge)

The posters shall be put up at the fair venue and non-competitive evaluation will be done by an expert team. Teachers and Teacher Education students shall be invited to view the posters and interact with the teachers. Certificate of participation shall be issued to all participants.

For submission and enquiries:
utydeptedn@gmail.com
Mobile: 9447043489
Dept. of Education, Thycaud
Thiruvananthapuram

Research Methodology: Learning by doing

Biji C.L. , Dr Achuthsankar S. Nair

Department of Computational Biology and Bioinformatics, University of Kerala

Email: bijijomy@gmail.com, sankar.achuth@gmail.com

Course MBI611 CREATIVITY, RESEARCH & KNOWLEDGE MANAGEMENT is a 3 Credit Course offered to Mphil Students. Module II includes teaching Research and Research Reporting: Philosophy of science; the scientific method, the research process –creative question – hypothesis – planning and designing of experiments – critical analysis – sources of errors and minimization. Publishing Science: Formats of a science research paper – the IMRAD format – objectives of each section – reference citing styles; Proof reading & editing

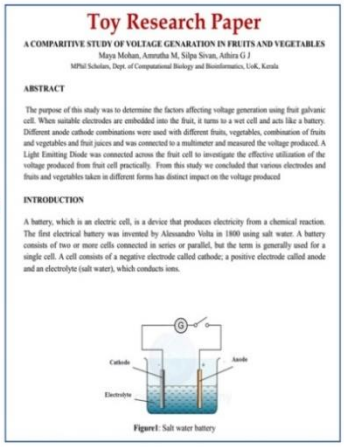
LEARNING BY DOING THROUGH A TOY EXPERIMENT- FRUIT ELECTRICITY

Brain Storming Questions ★ Selecting 10 Questions ★ Design Experiments to Answer Them ★ Do Experiment Articulate Findings as a Research ★ Paper Peer Review

Questions:

- Among banana, apple and tomato which produce more electricity?
- Among lemon, orange and musumbi (all citrus fruits) does the electricity produced vary? If so by how much?
- Does the penetration levels of electrodes effect electricity production?
- Does the distance between the electrodes effect the electricity production?
- Does injecting water into citrus fruits and other acid into apple/tomato effects electricity production?
- Does a mixture of lemon, orange and musumbi juice give a considerably high amount of electricity (due to higher concentration of acids)?
- Does crushing of peels with juice accounts for a difference in electricity in citrus fruits?

Toy Research Paper



A COMPARITIVE STUDY OF VOLTAGE GENARATION IN FRUITS AND VEGETABLES

Maya Mohan, Amrutha M, Silpa Sivan, Athira G J

MPhil Scholars, Dept. of Computational Biology and Bioinformatics, UoK, Kerala

ABSTRACT

The purpose of this study was to determine the factors affecting voltage generation using fruit galvanic cell. When suitable electrodes are embedded into the fruit, it turns to a wet cell and acts like a battery. Different anode cathode combinations were used with different fruits, vegetables, combination of fruits and vegetables and fruit juices and was connected to a multimeter and measured the voltage produced. A Light Emitting Diode was connected across the fruit cell to investigate the effective utilization of the voltage produced from fruit cell practically. From this study we concluded that various electrodes and fruits and vegetables taken in different forms has distinct impact on the voltage produced

INTRODUCTION

A battery, which is an electric cell, is a device that produces electricity from a chemical reaction. The first electrical battery was invented by Alessandro Volta in 1800 using salt water. A battery consists of two or more cells connected in series or parallel, but the term is generally used for a single cell. A cell consists of a negative electrode called cathode; a positive electrode called anode and an electrolyte (salt water), which conducts ions.

Cathode Anode Electrolyte

Figure1: Salt water battery

Peer Review by Students

Chief Editor,
Bioinformatica Indica Journal
C/o Department of Computational Biology & Bioinformatics,
University of Kerala.

Dear Naiju Thomas,

Greetings from the Journal of Bioinformatica Indica
Article entitled "**Fruit-fuel experiment: an auxiliary method for bioelectricity production**"
I believe that you would serve as an excellent reviewer of the manuscript. The article has been submitted to be considered for publication in the Journal of Bioinformatica Indica (JBI). We would be pleased to receive advice on the suitability and quality of the article for publication in the journal based on the following points:
1. Is the question posed by the authors well defined?
2.Are the methods appropriate and well described?

Feedback by Students

Athira C.R.

"Doing fruit fuel experiment was a novel and exciting experience for all of us, as it helped to live through the process of experimentation, paper writing and peer reviewing and thus dwell more into the art of research, This is surely going to be engraved in our mind"

"Breaking the classroom barrier and brainstorming was the intention of doing fruit fuel experiment. Even though this was one of the most basic science experiment, it cultivated lot of skill like team work, thinking out of the box and giving a good feel about how to conduct and write a research paper and the best thing was whole class was involved in the experiment utilizing this opportunity till the horizon"

Naiju Thomas

Rashmi Sukumaran

"We were taught different aspects of creativity and research in a very different and innovative way. To illustrate the scientific method of conducting research, we were asked to conduct an experiment to test if fruits can generate electricity. We reported our findings as research paper complete with peer review by our classmates."

Curriculum Fair 2016

Department of Education, Curriculum Development Centre,

Internal Quality Assurance Cell, University of Kerala & FLAIR, Govt of Kerala.

DEPARTMENT OF COMPUTATIONAL BIOLOGY AND BIOINFORMATICS

Crowdsourcing Applications as Tools for Research and Experiential Learning in Environmental Science

Dr.Uday Sankar S.Nair & Dr.Divya C.Senan
Department of Atmospheric Science, University of Alabama in Huntsville, USA

Introduction

Environmental education and literacy are now a critical part of the STEM skill set and are particularly important for building a 21st-century workforce. Environmental education can provide students with opportunities to engage in meaningful and exciting scientific studies that can spark their interest in STEM and empower them to take part in solutions to local environmental challenges. Achieving the broad range of goals of environmental education requires an inter-disciplinary approach, blending education with the learning, social, behavioral, and economic sciences as well as earth systems science. Environmental Education is a multidisciplinary, interdisciplinary, and Trans disciplinary field (Krasny &Dillon 2012; UNESCO 1997).

Preparing our youth for a future of environmental instability begins by helping them understand the workings of the earth, why and how environment change (past and present) takes place, and what consequences it is likely to have on various ecosystems, including their own. It should make students understand how energy consumption in one place affects living conditions of people on the other side of the world and how we all depend on the same atmosphere for life. Also it requires students understanding of current and future climate solutions and should learn to weigh their potential against their risks. Well prepared individuals will be able to investigate climate change sources and impacts: framing local problems for study, collecting and interpreting data, building informed arguments.

We propose that new technologies (crowdsourcing apps) that are being used in research settings to solve interdisciplinary problems may also be used in STEM education for experiential learning of environmental science

Motivation

Environmental science is especially suited to experiential learning models because of the strong links between environmental change and human activity.

Technological advances makes it possible to implement hands-on approach for environmental science learning in K-12, using tools that were accessible only to laboratories and universities until the last few years.

All important aspects identified by experiential learning theories can be effectively incorporated through the proposed hands-on approach to environmental science education.

PEERA: Public Environmental Education and Research App

A mobile application (Android platform), based on the Open Data Kit (ODK), for populating a Google Earth Engine based Land Use Land Cover ground truth database is developed. The Open Data Kit (ODK) based application is intended for crowdsourcing of ground truth information regarding the nature of Land Use and Land Cover (LULC). The ODK (Open Data Kit) is a set of tools that allows data collection using mobile devices and data submission to an online server, even without an internet connection or mobile carrier service at the time of data collection. The data collected will be used for classification of unprecedented amount of satellite imagery being collected and archived by the different space agencies. The ODK LULC application will also be utilized for educational purposes, to provide hands-on experience con earth science concepts. The tool is used to collect first-hand information upon which the students can reflect and for concepts to solve environmental issues.

Kolb's Experiential Learning Model

According to Kolb, concrete experience provides the information that serves as a basis for reflection. From these reflections, we assimilate the information and form abstract concepts. We then use these concepts to develop new theories about the world, which we then actively test. Through the testing of our ideas, we once again gather information through experience, cycling back to the beginning of the process. In the experiential model, Kolb described two different ways of grasping experience: Concrete Experience and Abstract Conceptualization. He also identified two ways of transforming experience: Reflective Observation and Active Experimentation. These four modes of learning are often portrayed as a cycle.

Using Crowdsourcing Application, PEERA as tool for experiential learning

Changing of land cover and land use (deforestation, urbanization etc.) is one of the major influence that humans have on the environment. Understanding and predicting how human settlements change land cover is important and is often related to socioeconomics. Experiential learning model could be utilized to understand drivers of land cover change.

The proposed model tries to incorporate the use of mobile apps into the various phases of experiential learning cycle. The proposed experiential learning model includes four specific steps:

Concrete experience:
Students identify changes in land cover and utilization that they have experienced in their neighborhoods. Students use Android mobile application to collect a sample of geo locations for different land cover types and upload it to the server. Students collect and aggregate three ground truth observations using USGS_LULC form by configuring with ODK Collect app

Reflective observations:

Students upload the collected data to the server and visualize the collected data in a fusion table and will discuss their experiences as a group. Discussions will focus on their thoughts and will provide differing views on the topic.

Abstract conceptualization:
Students analyze the Multispectral ASTER imagery classified using GEE and just three ground truth observations and construct conceptual understanding that integrates one's observations into logically sound theories

Active experimentation:

Students classify satellite imagery and understand how their neighborhood have changed over the years. They can visually see how urban regions grow, crop lands shrink and forests disappear
Students generate new knowledge or theories to make decisions or to solve real life problems.

Conclusions

We propose that crowdsourcing applications and other associated technologies may be utilized to implement experiential learning in school and university curriculum
The information generated by the students can also be utilized by the researchers. Thus students will be both recipient and generator of knowledge
We are developing a series of dual purpose crowdsourcing apps and associated curricular implementation for use in schools and colleges within US and India

UAH's Dr. Udaysankar Nair, left, worked with Dr. Divya Senan from Sree Narayana Training College in Kerala to develop Public Environmental Education and Research App (PEERA) curriculum

SUGGESTOPEDIA

as a method of teaching

Presented by

RAMALAKSHMY. P
PhD Research Scholar
Department of Education
University of Kerala

Suggestopedia is a method of teaching method developed by a Bulgarian psychologist ***Georgi Lozanov***. Particularly, this article explains the method's goal & characteristics, and provides sample activities for teaching. This method is commonly used in English language teaching.

Georgi Lozanov
Bulgarian educator and psychiatrist

THE GOAL :

To learn a foreign language at an accelerated pace for everyday communication by tapping mental powers and overcoming psychological barriers.

CHARACTERISTICS OF SUGGESTOPEDIA AS A METHOD OF TEACHING

According to Villamin et al. (1994), the nine characteristics of Suggestopedia are the following:

1. It uses the power of suggestion to help students eliminate the feeling that they cannot succeed.
2. There should be a relaxed, comfortable environment with dim lights and soft music to facilitate learning.
3. Students' imagination is used. They can assume new names, and new identities and respond to the teacher accordingly using the target language.
4. Present and explain grammar and vocabulary words, but not discuss at length or thoroughly.
5. Native language translation is used in order to get the clear meanings of words in the target language.
6. Communication takes place in the conscious and subconscious of the learners. The former is about the linguistic message. It is where the students pay attention to a dialogue that is being read, while the latter is where the music is played as a background. Music suggests that learning is easy.
7. Teaching is done by integrating music, song, and drama.
8. The emphasis of teaching is more on content. Errors made by students are tolerated at the beginning of the lesson but in the later part, the correct forms are used by the teachers.
9. No formal tests are given, but the evaluation is done during the normal in-class performance.

SAMPLE OF CLASSROOM ACTIVITIES USING SUGGESTOPEDIA

If you are a teacher or mentor, you may use the following activities using the Suggestopedia method.

- 1. Choose a background music that will give an impression or feeling that you are in a forest. For example, the music may be punctuated by the chirping of the birds or the sounds of the leaves as they dance in the wind, or any sound indicating that the location is in the forest.
- In the classroom, turn off the lights and play the background music. Then, group the students into three, and ask them to close their eyes, and let them imagine, for one minute, that they are animals, birds, trees, or flowers.
- After that, ask them to create their own dialogues on how people should take care of the environment. But in their dialogues they have to remember their roles. If one assumes to be a bird, his/her point of view and dialogues should be like a bird, and not as a human being.
- 2. Choose a story. Practice reading the story with emotions or feeling. Then, choose appropriate background music for the story. It would be best if you prepare it in advance.
- In the classroom, ask the students to relax and make themselves comfortable. Allow them to sit on the floor or lie down, and to be with their classmates or listen by themselves while seated at their desk. Then, turn off the lights, play the music and start reading the story. You may ask questions in between to check that they are listening intently to you and to keep their motivation high. In answering your questions, don't correct the students' grammatical errors immediately. Focus first on the content. Before you end the lesson, at the later part, you may give the correct form by repetition.
- Don't you think these are good ideas to start the ball rolling in class? If you believe so, then try Suggestopedia as a method of teaching !

Curriculum Fair 2016
Curriculum Development Centre, Department of Education
University of Kerala

ENHANCING DIVERGENT THINKING IN ECONOMICS THROUGH THE TEACHING OF 'RAINWATER HARVESTING'

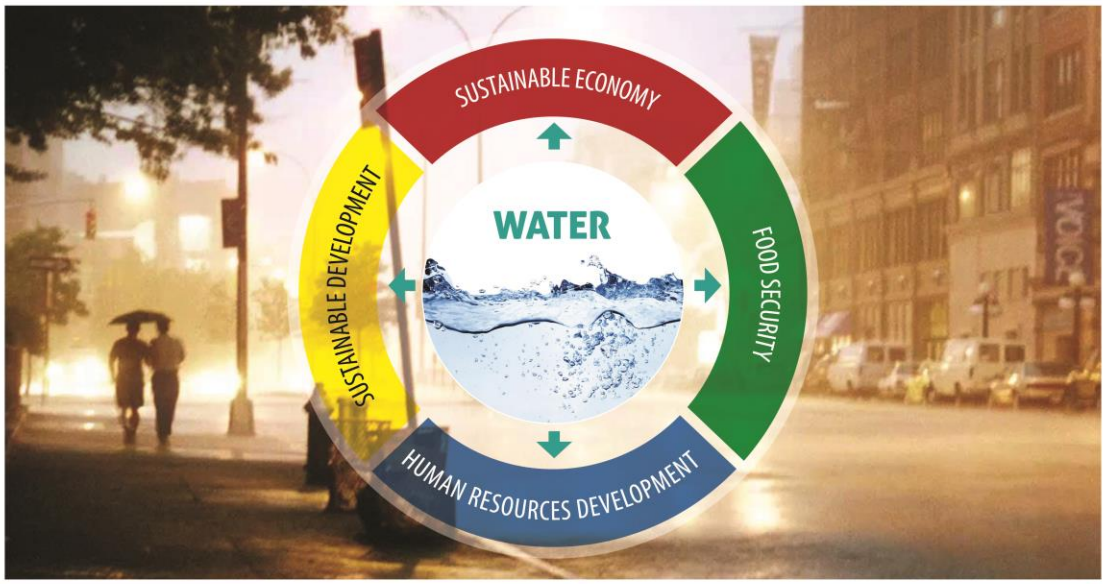
MRIDU C NAIR
M.Ed,
Dept.of Education,
University of Kerala

QUESTIONS

Is there any relation between water and economy ?

Can you mention some concepts in Economics which can be related to water ?

What is the importance of environment on the economy ?



Class room activities

- Poster on water pollution
- Community services related to water consumption awareness
- Script writing
- Documentary on consequences of water scarcity

Learning outcomes

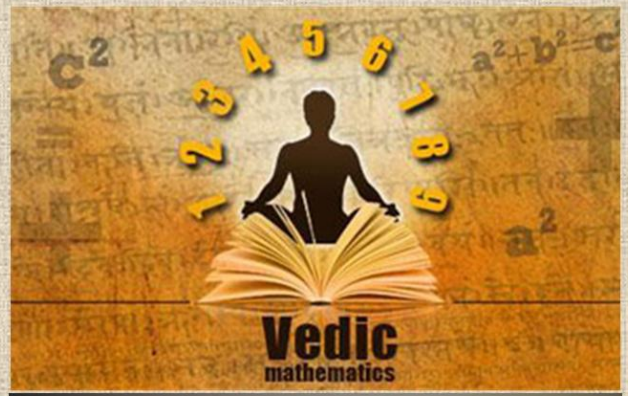
- Increase in the achievement in Economics of secondary school students
- Increase in environmental awareness of secondary school students
- Enhancing divergent thinking of students

Curriculum Fair 2016
Curriculum Development Centre, Department of Education
University of Kerala

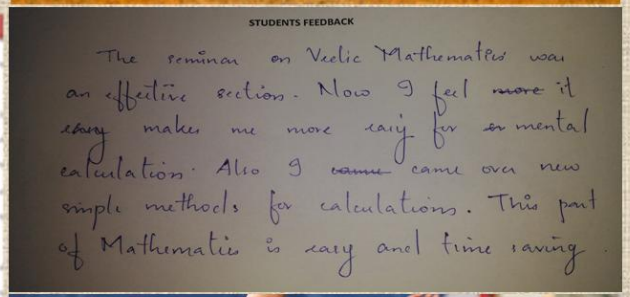
INDIAN INTELLECTUAL TRADITION OF VEDIC MATHEMATICS FOR SUPER COMPUTATION

Salient Features

*** Coherence * Flexibility * Mental Computation *Improves memory *Promotes Creativity *Efficient and Fast *Appeals to everyone *Increase mental agility *Easy *Superfast Computation *Applicable to all branches of Mathematics**



#	Name	Corollory
1	Ekadhikena Purvena	Anurupyena
2	Nikhilam Navatashcaramam Dashatah	Sisyate Sesasamjnah
3	Urdhva-Tiryagbyham	Adyamadyenantyamantyena
4	Paraavartya Yojayet	Kevalaih Saptakam Gunyat
5	Shunyam Saamyasamuccaye	Vestanam
6	(Anurupye Shunyamanyat	Yavadunam Tavadunam
7	Sankalana-vyavakalanabhyam	Yavadunam Tavadunikritya Varga Yojayet
8	Puranapuranabyham	Antyayordashake'pi
9	Chalana-Kalanabyham	Antyayoreva
10	Yaavadunam	Samuccayagunitah
11	Vyashtisamanstih	Lopanasthapanabhyam
12	Shesanyankena Charamena	Vilokanam
13	Sopaantyadvayamantyam	Gunitasamuccayah Samuccayagunitah
14	Ekanyunena Purvena	Dhvajanka
15	Gunitasamuchyah	Dwandwa Yoga
16	Gunakasamuchyah	Adyam Antyam Madhyam


STUDENTS FEEDBACK

The seminar on Vedic Mathematics was an effective section. Now I feel more it easy makes me more easy for on mental calculations. Also I ~~came~~ came over new simple methods for calculations. This part of Mathematics is easy and time saving.

Dr. Smitha S, Assistant Professor, Sree Narayana Training Collage Neduganda, Varkala , Thiruvananthapuram

VIDEO CARD GAMES FOR SCIENCE EDUCATION

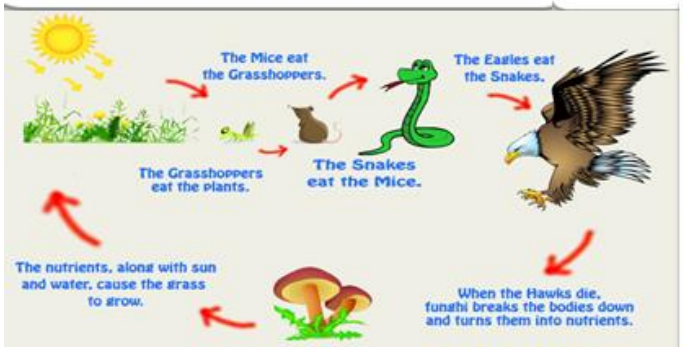
Aim: To develop memory power

Teacher prepares many cards related to the topic 'food chain' (video game). Each card contains information about the animal's habitat, size, adaptation, diet and predator(s), which may be appealing to children.

SANDGROUSE ~ Water Carrier
Habitat: deserts **Size:** 23-41cm long; 235-300gm **Adaptation:** flies to drink at water-hole every 2-3 days; the male sandgrouse soaks its soft breast feathers with water & carries it back to its young **Diet:** seeds of desert plants **Predator(s):** fox, snake & mongoose

JAGUAR ~ The Cruncher
Habitat: rainforests **Size:** 1.6-1.8m body; 45-75cm tail; 67-76cm high; 56-151kg **Adaptation:** Strong jaws and canines for piercing & crunching the skull of their prey **Diet:** fish, frogs, caiman, mice, tapirs, deer, capybaras & other rodents **Predator(s):** man hunting them for their skin **Extra:** worship as god by some cultures

ARCTIC FOX ~ Jump & Break
Habitat: Arctic (tundra) **Size:** 50-70cm body; 28-40cm tail; 2.5-8kg **Adaptation:** locates its prey under the snow by hearing then leaps so that it can break through the snow to catch it **Diet:** lemming, vole, birds & leftovers from seals killed by polar bears **Predator(s):** man hunting them for their fur



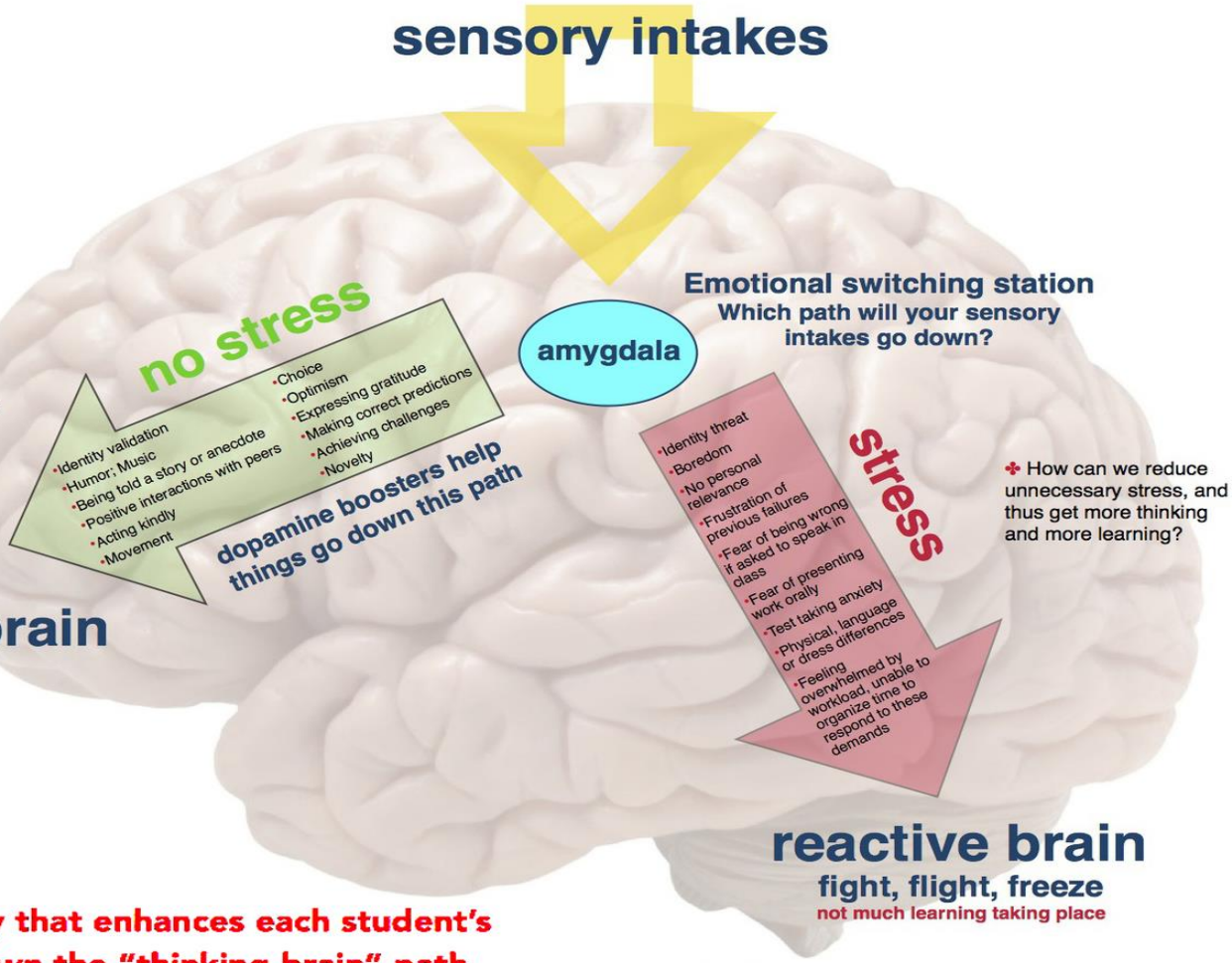
Pupil grasp the idea very quickly and understand the concept 'food chain'

Improvement in the memory power of students

In-depth knowledge about animals(habitat, size, adaptation, diet, predators etc.)

COGNITIVE NEUROSCIENCE- New pathways to pedagogy

Great Teachers Know the Amygdala is the Gateway to Learning



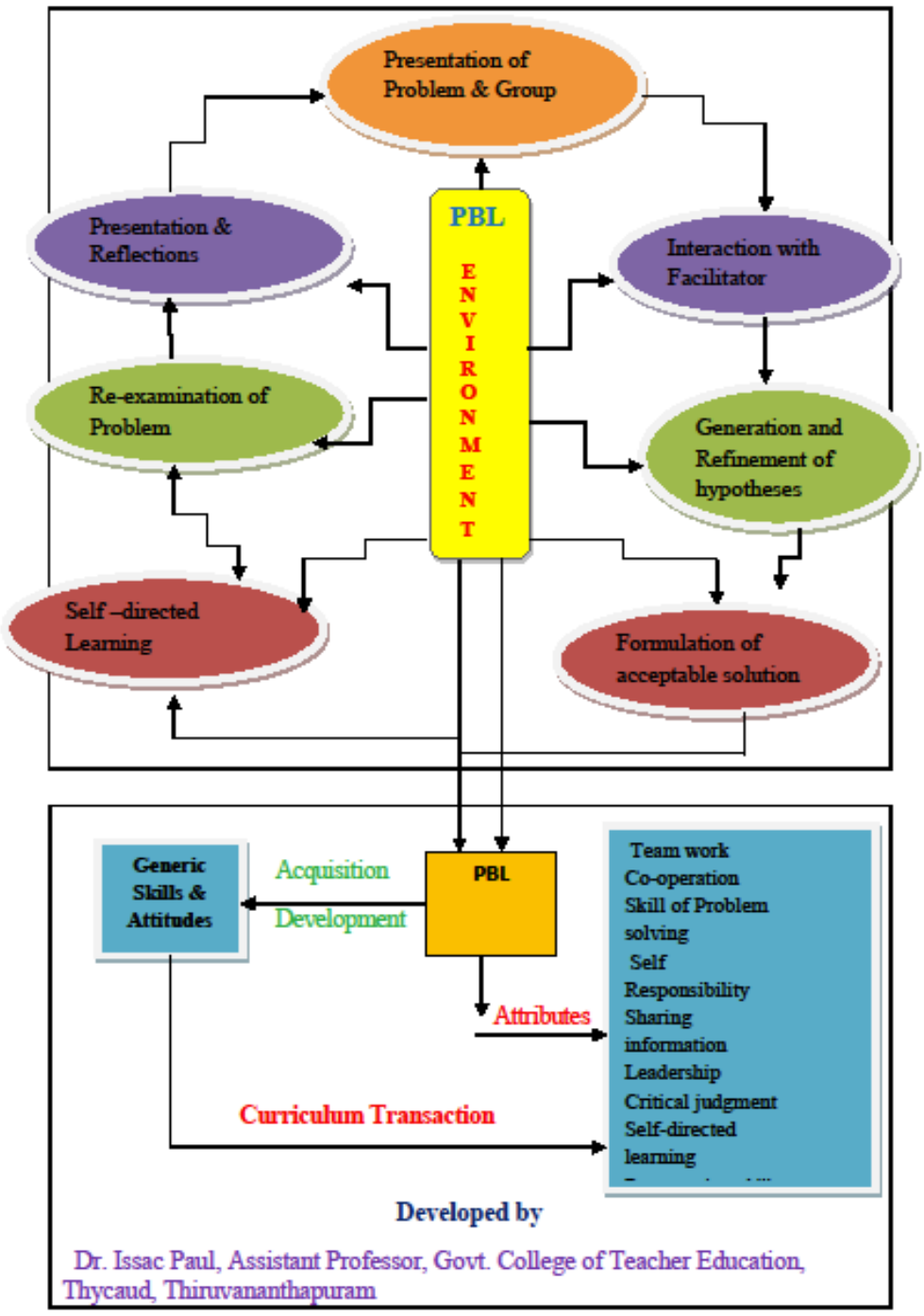
- The *pull* a student feels is powered by dopamine
- Dopamine is the source of intrinsic satisfaction
- When dopamine boosts are a regular part of teaching, it helps train student's brains to **go down the thinking brain path - *even when stress is present***

- How can we reduce unnecessary stress, and thus get more thinking and more learning?

- **Effort really matters**
  Students who recognize that effort influences their success apply greater effort - this is supported by research

Teaching in a way that enhances each student's ability to go down the "thinking brain" path doesn't lower the bar, it lowers the barriers

PROBLEM BASED LEARNING AS A MAENS FOR EFFECTIVE CURRICULUM TRANSACTION



A Unique Project Management & Monitoring System

Sunitha P., Dr. Achuthsankar S. Nair

Department of Computational Biology & Bioinformatics, University of Kerala

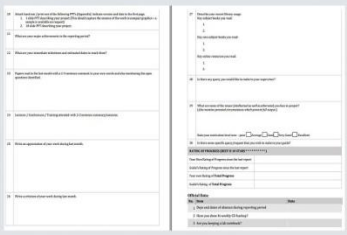
About

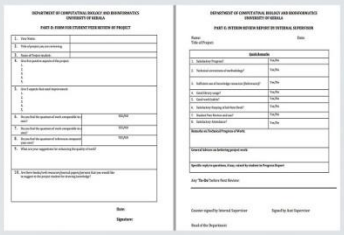
COB 401 PROJECT AND VIVA VOCE is a 15 credit course offered to the MSc Computational Biology students to impart hands on experience in developing a solution to real life bioinformatics problems in a professional manner.

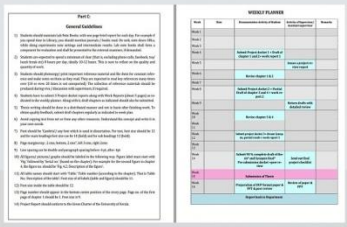
DEPARTMENT OF COMPUTATIONAL BIOLOGY AND BIOINFORMATICS

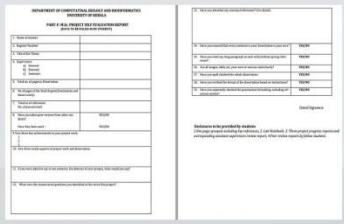
Requirements & Features of the monitoring system

Students are required to carry out a four month individual project and submit a dissertation embodying the findings of the same Project should be selected at least 6 months prior to commencement. Planning Docket (Part A) designed to help the students to do the same. Students have to submit 3 Project Progress Reporting dockets (Part B) along with Work Reports as indicated in the weekly planner (Part C). For Student Peer Review - (Part D), Interim Review (Part E), Self Evaluation Report (Part F) has been designed. For Final External Evaluation an evaluation rubrics has been designed which forms the Part G of the Project management docket.









Feedback by Students

Jiffy John (MSc 2012- 2014 Batch)

I had done my MSc. final semester main project from one of the best Bioinformatics Institutes in India, IGIB, New Delhi. My main project experience was the most memorable one. I think our department's "project monitoring system" had liberalized the difficulties of the work. The documents consist of a project docket, weekly planner, completed chapters, work report, 1 slide ppt, 10 slide ppt. Last working day of every month, students should send this document to the internal guide. So our project is continuously evaluated by both internal and external guides. It helped to assess our current project status and help us to plan for the next month work. For my project I had strictly followed this monitoring system. It helped me a lot, to complete my project within the duration. And after 4 months I came up with a masterpiece work.

Arya S A (MSc 2013- 2015 Batch)

The project docket, as an enhancement to the project work predominantly deals with the progress and gradual development of a project work. It is an indirect key to the growth and regrowth of a project which updates on a monthly basis. Instead of a perplexing and monotonous whole sum summary, the partial and detailed synopsis through a project docket will brief the recent aspects and development of a project. Literally the project docket is a best method of self-criticism, assessment and appreciation of a project work, in which our own rating and concerned guide's rating is eventually evaluated. As far as concerned to my project and from my experience I recommend the project docket as an essential means of evaluation of project work.

INNOVATIVE STRATEGY FOR HIGHER EDUCATION CURRICULUM

sreekala A.S., Liby Cherian
Research Scholars, Departmennt of Education University of Kerala..

"The greatest thing in this world is not so much where we stand as in what direction we are moving."
Johann Wolfgang von Goethe

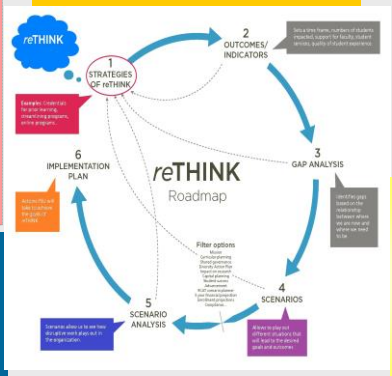
INTRODUCTION

Higher education faces increasing challenges, including: changing models of educational delivery, alternative credentialing, demographic shifts in student populations, questions concerning the relevancy of the curriculum, increased cost, and increasing legislative scrutiny. Re THINK, is an effort to deliver an education that serves more students with better outcomes, while containing costs through curricular innovation, community engagement and effective use of technology.

It is an adapted version of Portland State university programme. They use , it as a campus–wide effort to deliver an education that serves more students with better outcomes, while containing costs through curricular innovation, community engagement and effective use of technology.

GOALS

- Review, clarify and establish policies and practices that encourage degree completion.
- Use analytics and technology to improve student success.
- Promote experiential learning and internships as part of career preparedness.



DISCUSSION

The particular design gives Memorable experiences… rich opportunities for high quality learning… may be at the forefront of successful, customized to changing needs of individuals and groups… highly tailored programmers… highly coherent and relevant… promoting outstanding outcomes to all learners.

CONCLUSIONS

Educators, in the challenging and cooperating settings encourage their learners to construct their understanding of the world and become creators in the educational environment.

REFERENCES

https://www.pdx.edu/oai/rethink-psu

http://www.2revolutions.net/CultureofInnovation_HigherEd_4.15.15_FINAL.pdf

NEW INITIATIVES IN CLASS ROOM MANAGEMENT

DR.SITHARA BALAN V

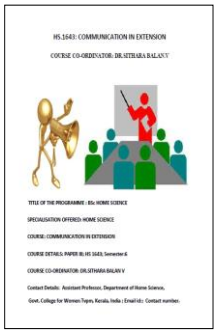
ASSISTANT PROFESSOR OF HOME SCIENCE; GOVT COLLEGE FOR WOMEN, TVPM, KERALA

Learning Manuals

Learning manuals play a fundamental part in teaching-learning. It gives a better insight for both the teacher and the student on the areas to be taught and the aspects to be considered , in order to accomplish the learning objectives of a particular course of study. They are instructional strategies to maximize the learning ability of the students. They also help to cope with the demands of students of all levels- average learners, struggling learners, students with learning disabilities, gifted and talented students etc

Module Handbook

Module Hand Books comprises of a set of directions given to students for the preparation of behavioural objectives and for the selection of appropriate instructional methodologies to meet the widely varying needs of the teachers in a class. Each component of the lesson plan is discussed and an outline for a lesson plan is given. Using the module outlines, one can have a clear understanding in advance what one want to teach, and will enable the students to know "up front" what they are expected to learn, and they will also guide in the methods of instruction and evaluation that the teacher uses in his/ her course.


HS.1643: COMMUNICATION IN EXTENSION

COURSE CO-ORDINATOR: DR.SITHARA BALAN V

TITLE OF THE PROGRAMME : BSc HOME SCIENCE

SPECIALISATION OFFERED: HOME SCIENCE

COURSE: COMMUNICATION IN EXTENSION

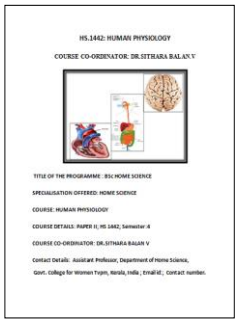
COURSE DETAILS: PAPER III, HS 1643, Semester 6

COURSE CO-ORDINATOR: DR.SITHARA BALAN V

Contact Details: Assistant Professor, Department of Home Science,

Govt. College for Women Tvpm, Kerala, India ; Email id:; Contact number.

Module Handbook


HS.1442: HUMAN PHYSIOLOGY

COURSE CO-ORDINATOR: DR.SITHARA BALAN V

TITLE OF THE PROGRAMME : BSc HOME SCIENCE

SPECIALISATION OFFERED: HOME SCIENCE

COURSE: HUMAN PHYSIOLOGY

COURSE DETAILS: PAPER II, HS 1442, Semester 4

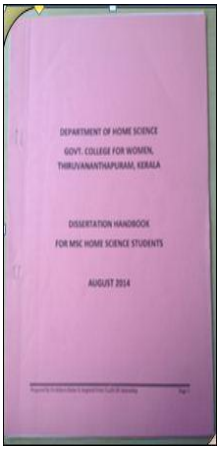
COURSE CO-ORDINATOR: DR.SITHARA BALAN V

Contact Details: Assistant Professor, Department of Home Science,

Govt. College for Women Tvpm, Kerala, India ; Email id:; Contact number.

Dissertation Handbook

Dissertation Handbook is designed to bring together the key information that students in a particular programme, need to know about the process of conducting a final year dissertation. It sets out the basic rules and regulations, as well as some more general advice that will be helpful to the students in undertaking their dissertation. The developed handbook comprises of a detailed report on the choice of the topic, key skills to be developed by the researcher, details regarding reviewing the literature and note taking, formats to be followed for bibliography, chapter wise detailing and the details of collaborating agencies for student project funding. Students were also asked to update the details regarding the progress of their work and the minutes of their interaction with the concerned supervisor.



Dissertation Handbook

L3- LAB FOR LEARNING & LIFE SKILLS

A learning hub is a technology-rich learning environment with both physical and virtual components that provide formal and informal opportunities for learners to come together with peers, teachers, and other experts in their field. Here, individuals can access relevant knowledge and information, enlist support from educators and other learners, and, in so doing, develop new opportunities to improve their livelihoods. L^3 – Lab for learning and life skills serves as a space for temporary or prearranged meetings and discussions with peers—perhaps to work on a project or group assignment, or to provide mentoring and support through the sharing of experiences and expertise. In short, $L^3$is a room designed and created for students, especially the post graduate students and research scholars to sit, relax and work in a relaxed environment, with all the infra structural and technological facilities.

Acknowledgements:

FLAIR, Kerala

University of Southampton, United Kingdom.

ECO FRIENDLY CAMPUS

Mar Theophilus Training College

Mar Ivanios Vidya Nagar, Nalanchira, Thiruvananthapuram-15

AFFILIATED TO UNIVERSITY OF KERALA

RECOGNIZED BY NCTE, RE-ACCREDITED BY NAAC WITH 'GRADE A'

Rakesh Sharma R.
Dept. of Natural Science
rakeshsharmarv@hotmail.com

Shihas S.
Dept. of Natural Science
shihasstar@gmail.com

INTRODUCTION

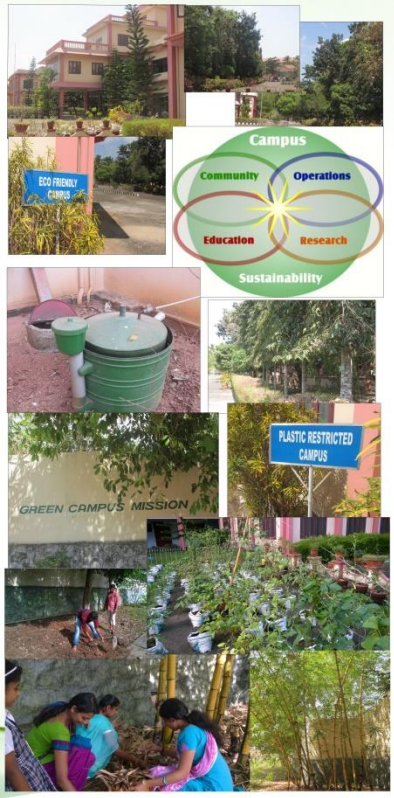
Eco friendly Campus is a initiative within the campus premises of Mar Theophilus Training college. Colleges and universities are the most viable forces for change in today's society. Their commitment to sustainability is critical to establishing new standards, developing ground breaking approaches and preparing future global citizens.

Aim

Green Campus aim to make environmental awareness and action an intrinsic part of the life and ethos of our college. This includes the students, lecturers, non-teaching staff, and parents, as well as the Local Authority. The eco friendly Campus initiative mirrors the principles of Green campus and endeavours to extend learning beyond the classroom and develop responsible attitudes and commitment, both at home and in the wider community. It aims to make MTTC a sustainable and environmentally friendly institution.

Objectives of eco friendly campus

1. To sensitize student community on Environment Protection and Sustainability.
2. Providing a platform for students to participate in nature friendly activities
3. Promote sustainability by creating awareness
4. Deploy eco-friendly technologies for greening and cleaning our campuses
5. Encourage active research in technology that promote pollution free environment.
6. Educate the Campus Community
7. Bringing about Behavioural Changes in student teachers to environment.



Achievements

Landscaping and tree planting has helped transform our MTTC campus into a lush green campus. trees were planted at this campus during the last 13 years, since the development of the new campus in 2013, in addition to already existing plant flora and fauna. Cultivation of organic vegetable garden is an initiative started by the present B.Ed student community.

Established biogas plant in the campus for energy conservation

Natural science association, EUREKA took the initiative of green campus clean campus and cleaned the college premises with the help of student teachers from other departments for one week starting from 5/10/2015 – 9/10/2015. This helped create awareness amongst the student teachers about nature friendly activities.

Future prospects

1. Implementing green cleaning policies
2. Establishing recycling programs
3. Host an event or forum that brings campus stakeholders together to exchange ideas and build relationships.
4. Implementing pisci-culture and waste management by vermi-composting
5. Organizing student and staff awareness programs to reduce energy and water consumption.
6. Sharing knowledge & expertise(Expert talks about environmental problems and possible solutions)

Dominus Mea Illuminatio

MAR THEOPHILUS TRAINING COLLEGE

MAR IVANIOS VIDYA NAGAR, NALANCHIRA, THIRUVANANTHAPURAM, KERALA-695015

AFFILIATED TO UNIVERSITY OF KERALA, RECOGNIZED BY NCTE, RE-ACCREDITED BY NAAC WITH 'GRADE A'

Faculty of Physical Science 2014 - 15

My Dream Classroom Project

As part of the Optional Practicum for Second Semester B.Ed. Curriculum

Done as an initiative of the Think – Pair – Share (TPS) Groups

OBJECTIVES

- To Visualize Futuristic Science Class Rooms for 21st Century Learners
- To integrate Essential modern Pedagogical Theories into Practicable forms
- To Faster Creative and Constructive thinking ability of Student-Teachers
- To Train prospective teachers to generate the attitude for future problem solving

Designed by Fathima S. & Rohini R. M.

Designed by Priya & Neha Kumari

PARTICIPANTS' COMMENTS

- "We tried to minimise the limitation we felt during our school days. This project enabled us to think in a different angle. Also we thought innovatively" (Fathima S.)
- "My Dream Class room was an innovative venture which helped us to dream for a better learning environment for next generation. It also paved way for familirisation with latest trends in architecture of classrooms. This initiative became a stepping stone to restructure the predominantly static and uni-dimentional learning environment. It also enabled us to think out of the box and share our creativity with the college community" (Priya K. Nair)

OUTCOME

13 Designs with structural details and financial projections were formulated in 13 T-P-S groups, which were publically exhibited and evaluated, two samples are shown above.

RIGHT BRAIN ORIENTATION
THROUGH SHORTFILMS AND VIDEOS

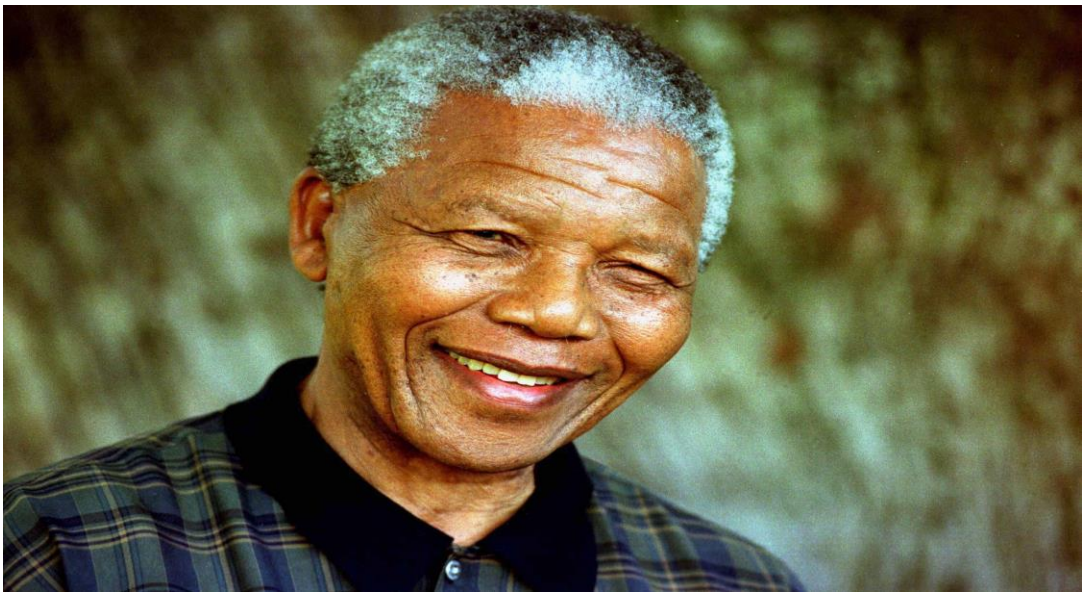
Dr. Joju John, Asst. Professor ,Mar Theophilus Training College

Objective- **to motivate the student teachers and raise self esteem**

Procedure- **Videos connected with the topic are presented to make the class lively and to develop right brain**

History-This best practice commenced in 2004

Output- **Reduction of fatigue, right brain orientation, value inculcation**



THE MATHEMATICAL WORLD AROUND US

BRINGING NATURE TO THE CLASSROOM

Mrs. Deepthi Elizabeth Mathew,
Assistant Professor, Mar Theophilus Training College, Nalanchira,Thiruvananthapuram
e mail:deepthiaz@yahoo.co.in

About the work

This piece of work is a part of the curriculum transaction providing hands on experience to the student teachers in Mathematics with Nature.

Objectives of the work

- To find out *Mathematical Beauty around us*
- To identify *Mathematical Shapes in the environment*
- To recognize *Symmetry in nature*
- To see *Mathematical Patterns*
- To confront *Optical Illusions*

(These pictures are from the prepared album)

Instructional Effect

- to understand the need and importance of environment based resources in the present scenario
- to realize correlation of mathematics with nature
- to understand mathematical concepts in nature
- to identify the role of environment in teaching mathematics
- to find out the natural resources in teaching mathematics
- to compose mathematics teaching naturally
- to craft mathematics teaching creatively, realistically and pragmatically

Nurturant Effect

- to develop a love towards Mathematics
- to expand the ability to correlate mathematics and environment
- to build up an eye to see mathematics in nature
- to widen a enviro-mathematical vision
- to enlarge a natural thinking

Feedback from peers and teachers

- Brought nature into the classroom
- Bracketed together the Nature and Mathematics
- Visual treat
- Eye opening work
- Excellent job

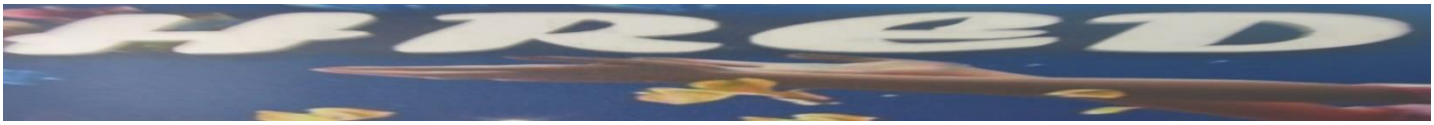
Procedure of the work

- Individual **Reading**
- Personal **Observation of Nature**
- **Anthology of Photographs**
- **Surfing Videos** from youtube and **downloading**
- **Exhibition** based on the topic *Mathematical World around us*
- **Compilation of photos** in the form of an album

Mar Theophilus Training College, Nalanchira, Tvpm-15

HUMAN RESOURCE EMPOWERMENT DIARY (HRED)

Dr. Joju John, Asst. Professor ,Mar Theophilus Training College

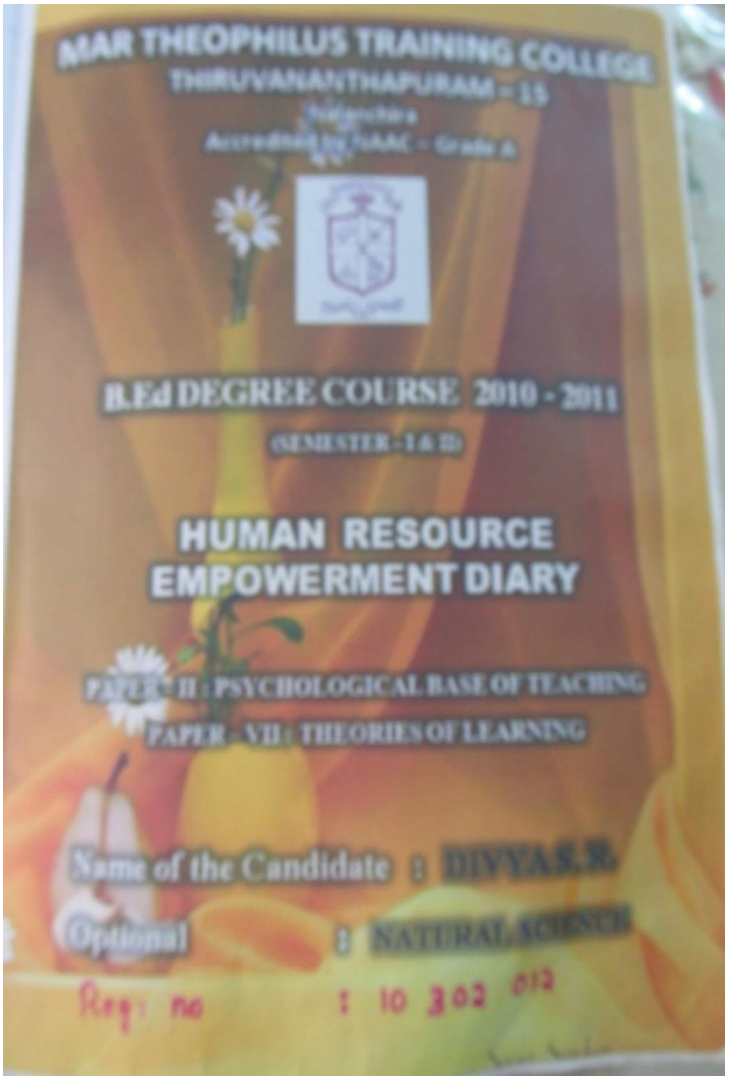


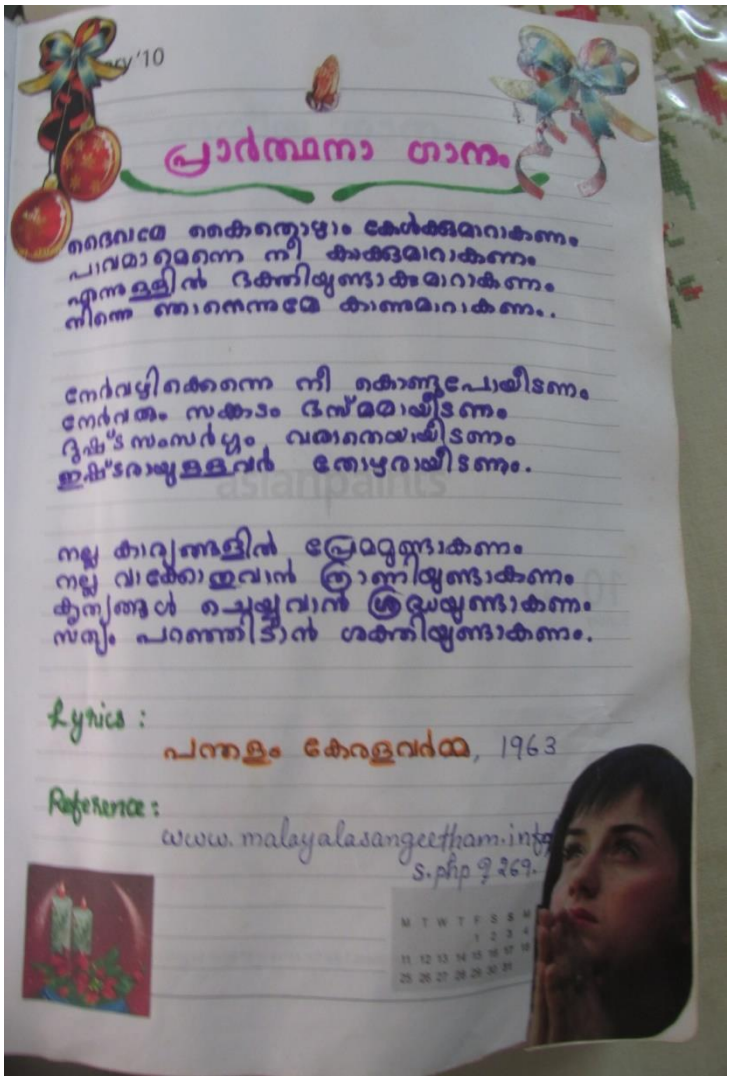
Objective- to learn and propagate what is best known and taught in the world

Procedure- Each child writes a diary with teacher tips, teacher experiments and anecdotes

History-This best practice commenced in 2008

Output- Getting a connection with great minds, inner transformation, teacher personality development





THEO RADIO
SOUND OF THE CAMPUS

Mrs. Deepthi Elizabeth Mathew, Assistant Professor
&
Members of Media Club
Mar Theophilus Training College, Nalanchira,Thiruvananthapuram
e mail:deepthiaz@yahoo.co.in

Background

Media club of the college started the new venture of *the campus radio* in the academic year 2011-2012. *A theme music was launched. Each year the radio has a special name and a logo. In the year 2014-'15 media club had achieved the Best Club Award.*

Objectives

- to motivate student teachers to showcase their talents
- to inspire student teachers to excel in the field of media
- to empower the caliber of communication
- to nurture fluency in using language
- to set a stage for expressing their ideas and talents

How?

- Radio works every day from 1 to 1.15 pm.
- Using the public announcement system of the college
- The club contains at least one student teacher from each of the six optional classes.
- Open to all- all the interested candidates can join the programme.

Through the air

- campus news
- educational news
- world around us today-NEWS
- importance of the day
- inventions in the field of science
- literature
- quotations of great personalities
- inspirational thoughts
- don't you know-informative tips
- health and beauty tips
- dedication of songs . . . . . .

Capacities needed: focused approach, creativity, communication skill, fluency in speech, good sense of humour, confidence, flexibility, presence of mind, modulation of voice, accuracy, punctuality, openness to admit mistake, MAGIC IN SPEECH

The club ensures these qualities to be developed and flourished

Name and Logo of the radio 2015-'16:

Radio Park 96.3 FM 'Manasu Thurannu Aswadhikku'

Mar Theophilus Training College, Nalanchira, Tvpm-15