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Retirement Transitions and Social Support among Teachers

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ABSTRACT

The purpose of the present study was to assess the level of social support among Pre-Retiree and Retiree Teachers at different stages of retirement among 200 teachers (100 Pre-Retiree and 100 Retired) from government educational institutions. The Social Support Inventory for the Elderly (SSI) by Ramamurti and Jamuna (1991) was administered to assess 'social support' among these teachers. The analysis showed no significant difference between Pre-Retiree and Retired teachers in the perception of social support. There was no significant difference in the perception of social support among the two groups of Pre-Retiree (6 months and 3 years) and Retired (6 months and 3 years) teachers. Implications were discussed.

Keywords: Social support, Retirement, Teachers

"Like many of the world's nations, India's aged population is growing both in absolute numbers as well as in proportion to the general population" (Kalavar and Jamuna, 2008). The proportion of India's elderly population aged 60 and above is expected to nearly triple from 2015 to 2050, increasing to 317 million (Biswas, 2018). The forecast of the above figures along with the growing number of

Retirement Transitions and Anxiety among Bank Employees

Deepthi Saligram and Prof. C. G. Venkatesha Murthy

ABSTRACT

The purpose of the present study is to assess the level of anxiety among Pre-retiree and Retired Bank employees at different stages of retirement among of 200 bank employees (100 Pre-Retiree and 100 Retired) from public sector banks. The State Trait Anxiety Test (STAT) by Sanjay Vohra (1993) was used to assess 'anxiety' among these employees. The analysis showed a significant difference between Pre-retiree and Retired employees with higher level of anxiety among Pre-retiree employees. There was a significant difference in the level of anxiety among the two groups of Pre-retiree (6 months & 3 years) employees in certain dimensions and no significant difference among the groups of retired (6 months & 3 years) employees within. Implications are discussed.

Keywords: Anxiety, Retirement, Bank employees

INTRODUCTION

With the gradual increase in the global proportion of elderly and the growing number of Indians currently retired, the factors related to psychological dimensions of health has received special attention. Literature suggests that anxiety is a common major health problem in elderly with a prevalence of anxiety disorders being around 10 to 11 per cent (Subramanyam *et al.*, 2018). In the above backdrop, the present study has attempted to understand the level of anxiety among bank employees at different stages of retirement.

Retirement is an evolving social construct which is often associated with the end of one's formal work life. The notion of retirement was non-existent until the industrial revolution, industrialization brought about the pension plans and the social security benefits, where the official retirement age was agreed upon. With this foundation laid many business corporations promoted the concept of retirement as a time for

Intelligence among the Students of Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas

Kiran N.C.* and C.G.Venkatesh Murthy**

Abstract

In the present study, the researchers have attempted to assess the intelligence among 770 Class VIII students in all. Of these, 329 are from Jawahar Navodaya Vidyalayas (JNVs) and 450 from Kendriya Vidyalayas (KV). There was a significant difference between the students of JNVs and KV on intelligence in favour of JNV students. Among the students of JNVs and KV, the boys and girls do not differ significantly on intelligence.

Introduction

The Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas are managed by the Government of India. The former is a residential school while the latter is a non-residential setup. The Navodaya Vidyalayas were started during the year 1985-1986 and it is managed by the Navodaya Vidyalaya Samiti which is fully financed by the Government of India. These schools were started to identify and nurture the rural talent of the country. The Kendriya Vidyalayas, which are predominantly located in urban centres, aim to cater to the educational needs of the children of central government employees. There are 596 Navodaya Vidyalayas and 978 Kendriya Vidyalayas all over the country. The admission process for JNV is through a selection test at the district level, where only 80 students are selected for Class VI. However, in Kendriya,

only the children of Central Government employees are given admission. Students are selected based on the computerised lottery system. Getting admission to either a JNV or KV is a matter of prestige for children as is generally considered by the public. Both institutions are affiliated to the Central Board of Secondary Education (CBSE). The

Elementary Education in India A Review of Research

C.G. VENKATESHA MURTHY*

MYTHILI RAMCHAND**

ABSTRACT

Elementary education in India has faced the challenges of access, retention, equity and providing quality education to children. Research in elementary education in India has focused on these aspects. The paper first highlights the international perspectives on elementary education. It then reviews Indian studies conducted after 2000 under 10 sections: Access and enrolment, retention and dropout, teaching-learning process, learning achievement, Education of the socially disadvantaged, availability of teachers, their dispositions and training, learning resources including textual materials and ICT, community participation, infrastructure, resources and grants, and policies and their implementation. Each section summarises the research trends, gaps and offers suggestions for future research. It also describes in detail an empirical analysis of more than 400 researches conducted for award of various degrees as well as research papers or reports. The review recommends that future research should prominently focus on in-depth study of various issues as recommended by the National Education Policy, 2020 by adopting qualitative methodology.

सार

भारत में प्रारंभिक शिक्षा के समक्ष कई चुनौतियाँ, जैसे बच्चों का विद्यालय में पहुँच, अवधारण, इकिवटी और गुणवत्तापूर्ण शिक्षा इत्यादि शामिल हैं। प्रारंभिक शिक्षा में अनुसंधान द्वारा इन पहलुओं पर ध्यान केंद्रित किया गया है। यह शोध पत्र सर्वप्रथम प्रारंभिक शिक्षा के परस्पर

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B Madhu

ENGEL'S AND LIE'S THEOREMS FOR LIE ALGEBRA BUNDLES

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ABSTRACT. We prove the Engel's structure theorem for a Lie algebra bundle E by proving the existence of a finite dimensional ample Lie subalgebra of $\Gamma(E)$, the Lie algebra of all sections of E . Further Lie's theorem is proved using the existence of a joint eigenvector in the ample Lie subalgebra of $\Gamma(E)$ corresponding to a solvable subalgebra bundle X of $\text{End}(E)$.

2010 MATHEMATICS SUBJECT CLASSIFICATION: 22E60, 17B30, 14F05, 15A03

KEYWORDS AND PHRASES. Nilpotent Lie algebras, solvable Lie algebras, Lie algebra bundles, sections, ample Lie subalgebra

1. INTRODUCTION

The object of the paper is to prove the Engel's theorem and Lie's theorem for Lie algebra bundles of finite rank. It is known that the Engel's theorem and Lie's theorem are not true for infinite dimensional Lie algebras in general. So, we first show the existence of finite dimensional ample Lie subalgebra of the Lie algebra of all sections of a Lie algebra bundle and use it to prove the Engel's theorem and Lie's theorem for bundles.

Definition 1.1. A weak Lie algebra bundle [2] (E, p, X) is a vector bundle together with a morphism $\theta : E \oplus E \rightarrow E$ inducing a Lie algebra structure on each fibre E_x for $x \in X$.

Definition 1.2. A locally trivial Lie algebra bundle [4, 7] is a vector bundle $E = (E, p, X)$ whose standard fibre is a Lie algebra L , each fibre is a Lie algebra, for each x in X there is an open set U in X containing x and a diffeomorphism $\varphi : U \times L \rightarrow p^{-1}(U)$ such that $\varphi_x : \{x\} \times L \rightarrow p^{-1}(x)$ is a Lie algebra isomorphism.

The set of all vector bundle morphisms on E , denoted by $\text{HOM}(E)$ is a Lie algebra being an associative algebra.

We know that $\text{End}(E) = \bigcup_{x \in X} \text{End}(E_x)$ is a Lie algebra bundle over X with

the fibres $\text{End}(E_x)$. It is proved in [4] that $\Gamma(\text{End}(E))$, the Lie algebra of sections of $\text{End}(E)$ is isomorphic to $\text{HOM}(E)$. The Lie algebra isomorphism $\omega : \Gamma(\text{End}(E)) \rightarrow \text{HOM}(E)$, $\sigma \mapsto \omega(\sigma)$, $\omega(\sigma)|_{E_x} = \sigma(x)$ is a morphism for each $x \in X$. We use this isomorphism in the proofs of the Engel's theorem and Lie's theorem for bundles.

The set of all sections of a vector bundle E over a compact Hausdorff base space X , denoted by $\Gamma(E)$, is a finitely generated projective module

On Smooth Lie Algebra Bundles

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Dedicates to the memory of R.L.E. Schwarzenberger of Warwick University.

Abstract

The existence of a class of smooth Lie algebra bundles is proved and examples are given. Further we construct smooth vector bundles which have the structure of non trivial smooth Lie algebra bundles.

Mathematics Subject Classification: 58A05, 55R99, 17B66, 22E99, 58E40

Keywords: Differentiable manifold; Lie algebra; Lie group; Lie group action; Smooth Lie algebra bundle; Tangent bundle; Section; Vector field

1 Introduction

The eminent mathematician J.P. Serre posed the question : Does there exist a Hausdorff Lie group bundle whose Lie algebra bundle is isomorphic to a given

ON DERIVATION ALGEBRA BUNDLE OF AN ALGEBRA BUNDLE

B. S. KIRANAGI*, RANJITHA KUMAR, K. AJAYKUMAR, AND B. MADHU

ABSTRACT. We prove local triviality of a semisimple algebra bundle and that its corresponding Lie algebra bundle is a direct summand of the centre and a semisimple ideal bundle. Further we prove that the radical bundle of an algebra bundle is a characteristic ideal bundle. Using these results we establish that an algebra bundle is semisimple if and only if its derivation algebra bundle is either semisimple or zero.

2000 MATHEMATICS SUBJECT CLASSIFICATION. 16D99, 16N99, 17B60, 55R99

KEYWORDS AND PHRASES. Algebra bundle, characteristic ideal bundle, derivation algebra bundle, radical bundle, semisimple algebra bundle, Lie algebra bundle, vector bundle.

1. INTRODUCTION

J. P. Serre posed the question: does there exist a Hausdorff Lie group bundle whose Lie algebra bundle is isomorphic to a given Lie algebra bundle.

A. Douady and M. Lazard have constructed a Lie group bundle $G(\zeta)$ (not necessarily Hausdorff) whose Lie algebra bundle is isomorphic to a given Lie algebra bundle ζ [4, Theorem 3]. They ask whether analogous result still holds locally (around each point of the base space) if one requires $G(\zeta)$ to be Hausdorff in analytic case [4, Page 151]. Don Coppersmith has constructed an example of an analytic Lie algebra bundle over an analytic Hausdorff manifold which does not correspond to the Lie algebra bundle of any Hausdorff Lie group bundle [3].

There exists a Hausdorff Lie group bundle $G(\zeta)$ over a space X whose Lie algebra bundle is isomorphic to ζ if all fibers ζ_x are isomorphic by proving a result in real algebraic geometry, namely *the real orbit of a real point under an algebraic group is open in the real part of its complex orbit* [11].

Chidambara and Kiranagi [2] have defined Hochschild cohomology of an algebra bundle with co-efficients in a bimodule bundle and interpreted the cohomology modules as modules of module bundle enlargements and discussed its applications. Kiranagi and Rajendra [13] using cohomological methods have proved that an algebra bundle is a semi-direct product of its radical bundle and a semisimple algebra bundle. They have also studied representations and special representations of an

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Geetha Prasannan

How should School Education be Today? A Sketch

Dr Geetha G Nair*

Abstract

School education today is not a mere attainment of 3Rs of Reading, Writing and Arithmetic. It is not acquiring literacy or skills alone. It is education of 3Hs -the Education of Head, Heart and Hands and should include modern concepts of Environmental Education, Population Education, Vocational Education, Consumer Education, Women's Education, Personal, Social and Health Education and Life Skills Education. A narrative using existing data justifying the inclusion of these today in School Education is presented. It is a concept paper based on collection of data through survey of literature. The concept is school education and the impact of various parameters of society on community life and the necessity to include these as relevant subjects for the purpose of schooling as it is the school students who form our future. School education here has been linked to Population Education, Environmental Education, Vocational Education, Women's Education, Consumer Education, Personal Social and Health Education and Life Skills Education per se. Though some of these such as Environmental Education is dealt with at the primary level and Population Education at the secondary level in school textbooks, it is not sufficient for the next generation students. Hence specific chapters on these topics be included at the secondary level along with thrust on the latest trends in these areas along with practical experience on these topics and related problems through direct interactions with the community. Importance at par with that of Vocational Education needs be given by the government to the other areas of Education mentioned here for successful schooling benefiting both school goers as well as the society. Community Schooling would be ideal at the secondary level for the upcoming generations.

Keywords: School Education, Environmental Education, Population Education, Vocational Education, Women's Education, Consumer Education, Life Skills Education, Community schooling, Smart schools

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very influential in digital business sector and occupying the maximum business share in digital cosmos. We have analyzed marketing analysis of Google and Facebook business model framework. These business model is not about just money generating machine, it is indeed more than that. This paper also explore the business models analysis of Google platform and Facebook platform to provide how these platforms are earning money in the digital market space and global business share.

JEL Classification: M10, M12, M18, M15, M16, M21, M31, M37.

Keywords: Digital Business Models, Performance Analysis, Digital Platform, Innovation, Business Model Framework.

Post Covid Institutional Crisis

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Abstract

The pandemic from 2019 till to-date has caused havoc to human lives and institutions. The present study brings to light the damage done to educational institutions by the corona pandemic in terms of its sustenance and ability to survive. A pre-test and post-test experiment was designed and carried out to study the effect of Covid on the structure and function of an institute and subjected to statistical analyses. The results of the analyses have been discussed.

Keywords: Pandemic, Institutions, Crisis, sustenance, statistical analyses

Harinath PR

దక్షిణభారతదేశంలో శ్రీశైల మల్లికార్జున ఉపాసన

ఆచార్య పి. చెన్నారెడ్డి అనువాదం - డా. పి.ఆర్. హరినాథ్

ఉపోద్ఘాతం

శ్రీశైలం (16°50':78°53') హైదరాబాదుకు దక్షిణంగా దాదాపు 232 కి.మీ. దూరంలో ఉంది. ఇది కర్నూలు జిల్లాలోని తూర్పు కనుమలలోని నల్లమల కొండలపై కృష్ణానదికి దక్షిణపు ఒడ్డుకు ఇంచుమించు 457 మీ. ఎత్తులో ఉంది. ప్రాచీన కాలంలో ఈ ప్రాంతానికి శ్రీ పర్వతమని, శ్రీగిరి అని పేర్లు ఉండేవి. శ్రీశైలంలో కొలువై ఉన్న దేవతలు శ్రీ మల్లికార్జునస్వామి (శివుని అవతారం) అతడి అర్ధాంగి భ్రమరాంబికాదేవి (పరబ్రహ్మశాస్త్రి 2007; రామారావు 1982; సుబ్రహ్మణ్యశాస్త్రి 1978). శ్రీ మల్లికార్జున స్వామి స్వయంభువు. దేశంలో శివుడికి చెందిన ద్వాదశ జ్యోతిర్లింగాలలో శ్రీశైలం ఒకటి. దేవి శ్రీభ్రమరాంబిక శక్తి అవతారం. శ్రీశైలం అష్టాదశ శక్తి పీఠాలలో ఒకటి. (అష్టాదశ శక్తి పీఠాలు - శక్తి: స్త్రీ సూత్రం; పీఠం:- విశ్వశక్తి కేంద్రం). శ్రీ పర్వతానికి సంబంధించిన ఆతిప్రాచీనమైన ప్రస్తావన మహాభారతం (3.83.14-8)లో కనిపిస్తుంది. తీర్థయాత్రలలో భాగంగా పాండవ సోదరులు ఈ పవిత్ర శైవతీర్థాన్ని సందర్శించారు. (ప్రభావతిరెడ్డి, 2014) ప్రాచీన కాలం నుంచి శ్రీశైలం శివక్షేత్రంగా ప్రసిద్ధిపొందింది. అంతేకాదు, పాశుపతులకు, కాపాలికులకు, కాలముఖులకు, సిద్ధులకు, వీరశైవులకు ఇది ఆవాసప్రాంతం కూడా. మత్యుపురాణంలో శ్రీశైలం (క్రీ.శ. 4వ శతాబ్దిలో సిద్ధక్షేత్రంగా పేర్కొనబడింది. ఆచార్య నాగార్జునుడు (150-250) రసవాదాన్ని (లోహాలను బంగారంగా మార్చే ప్రక్రియ) రసచికిత్సను (పాదరసం మొదలైన మూలకాలనుపయోగించి ఔషధాలతో చికిత్స చేయడం) శ్రీపర్వతంలో అభ్యసించాడు.

శ్రీశైలం ఆలయం ఎలా ఏర్పడిందన్న విషయం గురించి ఒక స్థలపురాణం (రమేశన్, 1962) ఉంది. దీనిప్రకారం, కృష్ణానదికి ఉత్తర తీరంలో ఉన్న చంద్రగుప్తవట్టణాన్ని పాలించే రాజును చంద్రావతి అని ఒక కూతురుండేది. (ప్రస్తుతం

ತೆಲುಗಿನ ಅಲಕ್ಷಿತ ಭಕ್ತಿ ಸಾಹಿತ್ಯ

ಇಂಗ್ಲಿಷ್ ಮೂಲ: ಡಾ. ಪಿ.ಆರ್. ಹರಿನಾಥ

ಕನ್ನಡಕ್ಕೆ: ಸಿ. ವೆಂಕಟೇಶ ಮತ್ತು ಡಾ. ಸುಚೇತಾ ನವರತ್ನ

ತೆಲುಗಿನ ಪ್ರಖ್ಯಾತ ಕವಿಯಾದ ಶ್ರೀ ಗುಂಟೂರು ಶೇಷೇಂದ್ರಶರ್ಮಾ ಅವರು ಒಂದು ಸಲ ಹೀಗೆ ಹೇಳಿದ್ದರು. "ನಾವು ಸಮುದ್ರದಲ್ಲಿ ಮುಳುಗಿದ ಒಬ್ಬ ವ್ಯಕ್ತಿಯನ್ನಾದರೂ ಹುಡುಕಬಹುದು. ಆದರೆ ಕಾಲನ ಪ್ರಭಾವದಲ್ಲಿ ಕಳೆದುಹೋದ ವ್ಯಕ್ತಿಯನ್ನು ಮಾತ್ರ ಹುಡುಕಲು ಸಾಧ್ಯವಿಲ್ಲ". ಈ ಹೇಳಿಕೆ ಸಾಹಿತ್ಯ ಕ್ಷೇತ್ರಕ್ಕೆ ಸರಿಯಾಗಿ ಅನ್ವಯವಾಗುತ್ತದೆ. ಅಸಂಖ್ಯಾತ ಸಾಹಿತಿಗಳು ಅಲಕ್ಷ್ಯಕ್ಕೆ ಒಳಗಾಗಿ ಸಮಯದ ಪರಿಧಿಯಿಂದ ಕಣ್ಮರೆಯಾಗಿದ್ದಾರೆ. ಕೆಲವು ಸಲ ಸಾಹಿತಿಗಳ ಹೆಸರು ಪ್ರಸ್ತಾಪಗೊಂಡರೆ, ಕೆಲವು ಸಲ ಅವರ ಕೃತಿಗಳು ಪ್ರಸ್ತಾಪಗೊಳ್ಳುತ್ತವೆ. ಕೆಲವು ಸಲ ಆಶ್ಚರ್ಯಕರವಾಗಿ ಕೃತಿ ಮತ್ತು ಕರ್ತೃ ಅಲಕ್ಷ್ಯಕ್ಕೆ ಒಳಗಾಗುತ್ತಾರೆ. ಬಹಳಷ್ಟು ಕೃತಿಗಳು ಮರೆತುಹೋಗಿವೆ. ಕಾರಣವೇನೆಂದರೆ ಸಾಹಿತ್ಯ ಪೋಷಕರ ಅಭಾವ ಅಥವಾ ಸಮಾಜದಲ್ಲಿನ ಮೌಲ್ಯಗಳ ಬದಲಾವಣೆ.

ಹನ್ನೆರಡೆಯ ಶತಮಾನದಲ್ಲಿ ರಾಜಮಂಡ್ರಿ ಸಮೀಪ ಪಟ್ಟೀಸಮ್ ಎಂಬಲ್ಲಿ ಯಥಾ ವಾಕ್ಯುಲಕ್ಕೆ ಅನ್ನಮ್ಮಯ್ಯ ಎಂಬ ಕವಿ ಇದ್ದನು. ಆ ಹಳ್ಳಿಯ ದೇವರು ಶ್ರೀ ವೀರಭದ್ರೇಶ್ವರ ಸ್ವಾಮಿ. ಆ ಕವಿ ಶೈವಪಂಥದ ಅನುಯಾಯಿ. ಅವನು ಶಿವನನ್ನೇ ತನ್ನ ಗುರು, ಮಾರ್ಗದರ್ಶಕ ಮತ್ತು ತತ್ವಜ್ಞಾನಿ ಎಂದು ತಿಳಿದಿದ್ದನು. ಅವನ ಜೀವನ ಸಂಪೂರ್ಣವಾಗಿ ಶಿವಭಕ್ತಿಯಾಗಿತ್ತು. ಅವನ ಎಲ್ಲ ಬರವಣಿಗೆಯು ಶಿವನೊಬ್ಬನನ್ನೇ ಕುರಿತದ್ದಾಗಿತ್ತು. ಅವನು ತನ್ನದೇ ಆದ ಛಂದಸ್ಸಿನ ಶೈಲಿಯನ್ನು ಬೆಳೆಸಿದನು.

ಒಂದು ಸಲ ಆ ಕವಿ ಶ್ರೀಶೈಲ ಕ್ಷೇತ್ರಕ್ಕೆ ಯಾತ್ರೆಯಾಗಿ ಹೋದನು. ತಿರುಗಿ ಬರುವಾಗ ಮಾರ್ಗ ಮಧ್ಯದಲ್ಲಿ ಪಲನಾಡು ತಾಲೂಕಿನ ಜೆಟ್ಟಿಪಲೇಮ್ ಎಂಬಲ್ಲಿ ತಂಗಿ; ಅಲ್ಲೇ

೯೮ ದ್ರಾವಿಡ ಅಧ್ಯಯನ

పరాభి పన్‌చాంగం - వైవిధ్యత

డా. పి.ఆర్. హరినాథ్

'పన్' (Pun) అనేది ఇంగ్లీషు మాట. ఒకే పదానికి రెండు మూడర్థాలున్నప్పుడు నివృణంగా అలాంటి పద ప్రయోగం చేసి లలితమైన హాస్యాన్ని పుట్టించడం 'పన్' లక్షణం. కొన్నిసార్లు ఒకేలా అనిపించే లేదా ఒకేలా వినిపించే పదాలతోనూ ఈ చమత్కారాన్ని సాధించడం జరుగుతుంది.

ఉదాహరణకు, Time Flies like an arrow

Fruit Flies like a banana

ఈ వాక్యాల్లోని చమత్కారాన్ని గమనించండి. కాలం బాణంలాగా ఎగిరిపోతుందని మొదటి వాక్యం తేలికగా అర్థమవుతుంది. రెండవ వాక్యంలోనే తికమక దాగి ఉంది. పండు అరటి పండులా ఎగిరిపోతుంది. అనే అర్థం కనిపిస్తుంది. నిజానికి అక్కడ ఉన్న అనే Flies మాటలోనే రహస్యం దాగిఉంది. మొదటి వాక్యంలోని Flies క్రియాపదం రెండవ వాక్యంలో అది నామవాచకం. రెండో వాక్యానికి అర్థం 'పళ్లమీద వాలే ఈగలకు అరటిపండు ఇష్టం' అని. ఒకేలా అనిపించే మాటలను ప్రయోగించి ఈ చమత్కారాన్ని సాధించడం జరిగింది.

A Horse is unnecessary Stable

ఈ వాక్యంలో Stable అంటే నిలకడగా ఉండడం అని సైసై అర్థం. గుర్రపుకాల అని మరో అర్థం. గుర్రాన్ని గురించి ప్రస్తావిస్తూ రెండర్థాలతో Stable ను ప్రయోగించడం జరిగింది.

ఇలాగే క్రియాపదాలను నామవాచకాలుగా నామవాచకాలను క్రియాపదాలుగా ప్రయోగించి అర్థాన్ని చమక్ మని మెరిపించి చమత్కారాన్ని సాధించడమూ ఉంది.

What is the difference between a conductor and a teacher? The conductor minds the train and a teacher trains the mind.

ఈ మాటల్లో mind అనే మాటను ఒకసారి క్రియాపదంగా మరోసారి నామవాచకంగా ప్రయోగించారు. అలాగే train అనే పదాన్ని కూడా. దానితో ఈ

శ్రీమద్రామాయణ కల్పవృక్షము - ఛందశ్శీల్పం

డా. పి.ఆర్. హరినాథ్

కవి తన మనసులోని భావానికి ఒక వాహిక నెంచుకుంటాడు. భావంలోని ఉద్వేగస్థాయిని బట్టి ఉత్పన్నమయ్యే రూపం ఉంటుంది. శ్రోధంతో పెళపెళలాడే మాటలు బహిర్గతం కావడానికి దానికి తగిన రూపమే అవసరమవుతుంది. అంటే అంతర్గత భావజాలానికి ఒక వేషం కావాల్సివస్తుంది. సృత్యంలో ఆహార్యంలాగా, కవిత్వంలో ఛందస్సు ఉంటుంది. అంచేత ఛందస్సు అనేది కవిభావానికి తొడిగిన వేషం.

వివిధ రసభావాలను ప్రకటించడానికి వివిధ గతులలో పద్యం కదనుతొక్కుతుంది. కొన్నిసార్లు కొత్త ఛందోగతులు అవసరమవుతాయి. నిపుణుడైన కవి తగిన వృత్తంలో భావప్రకటన చేసి పద్యాన్ని మెరిపిస్తాడు. పాఠకుడిని మురిపిస్తాడు.

అలాగని, ప్రతిసారీ వృత్తం మార్చాల్సిన అవసరమూ లేదు. వృత్తగతిని మార్చడం ద్వారా ఆ భావాన్ని ప్రకటిస్తాడు కవి. ఈ అంశమంతా ఛందశ్శీల్పానికి సంబంధించినది. వివిధ రకాలుగా సాగే కవితా నిర్మాణచాతుర్యంలో ఛందఃప్రయోగ దక్షత కూడా ఒక ముఖ్యమైన అంశం.

ఒకే వృత్తంలో వివిధ భావాలను పలికించడం ఒక ఎత్తు కాగా, విషయానికి తగినట్లు వివిధ వృత్తాలలో భావాన్ని ప్రకటించడం మరో ఎత్తు. సందర్భంలో విశేషం ఉన్నప్పుడు కవి విశేష వృత్తాన్ని ఎంచుకోవడం కూడా ఉంది. విశ్వనాథ సత్యనారాయణ గారికి దీనిపై కొన్ని అభిప్రాయాలు కూడా ఉన్నాయి. 'సన్నయగారి ప్రసన్న కథాకలితార్థ యుక్తి' లో ఆయన ఇలా అన్నారు: "వృత్తము వాడిన చోటనెల్ల అర్థమో, భావమో విలక్షణముగా నుండవలయును. కథ మాటుట కథలోనొక ఘట్టము ప్రత్యేకత మొదలయిన ప్రయోజనము లపేక్షించియే (కవి) వృత్తమును మార్చును"

కనుక, విశేష వృత్తాల ప్రయోగం గురించి విశ్వనాథకున్న దృష్టి ఇది. కల్పవృక్షంలో విశేష వృత్తాలు అనేకం ప్రయుక్తమయ్యాయి. బహుశా తిక్కన తర్వాత ఇన్ని విశేష వృత్తాలలో మహాకావ్య రచన చేసిన వారు లేరేమో! 'పద్మినీభాస్కరం' లాంటి కావ్యాలున్నా ఆ కావ్య పరిధి విస్తృతమైనది కాదు.

బహుభాషా 'దుబాసీ'

డా. పి.ఆర్. హరినాథ్

"It is the task of the translator to release in his own language that pure language that is under the spell of another, to liberate the language imprisoned in a work in his recreation of that work"

- Walter Benjamin

ఒక భాషలో ఒక రచన ఉండంటే, ఆ రచనలో ఆ భాష బందీగా ఉంటుంది. దానిని విడుదల చేసి తన భాషలో ఆవిష్కరించడం అనువాదకుడి పని. దీనిని తిరగేసి కూడా చెప్పుకోవచ్చు. ఆ నిర్ధారిత భాషలో ఆ రచన బందీ అయి ఉంటుంది. అనువాదకుడు ఆ రచనను విముక్తం చేసి తన గొంతులో పలికిస్తాడు.

అనువాదం ఒక పరకాయ ప్రవేశ విద్య. పైకి కనిపించేంత సులభం కాదు. మూలాన్ని అనుసరించాలి; అనుకరించాలి; అనుసృజించాలి. ఎక్కడ తేడా వచ్చినా 'Translator is a traitor' (అనువాదకుడు ఒక ద్రోహి) అనే అపప్రథ తప్పదు. అంచేత అనువాదం చేయడమంటే, మూలరచన కంటే కష్టం, క్లిష్టం కూడా.

ఆచార్య ఆర్వీయస్. సుందరంగారి అనువాదాలను పరిశీలించినప్పుడు ఈ సవాళ్లను ఆయన ఎలా ఎదుర్కొన్నారా అని ఆశ్చర్యం కలుగుతుంది. ఈ విస్మయానికి కారణం ఏమిటంటే, ఆయన కేవలం తెలుగునుంచి మరోభాషకో లేదా మరో భాషనుంచో తెలుగుకో కాకుండా విభిన్న భాషా ప్రపంచాలలోకి యాత్ర చేశారు.

ఆచార్య సుందరంగారి అనువాద వైవిధ్యాన్ని భాషావరంగా ఇలా వింగడించవీలుంది.

1. తెలుగు నుంచి కన్నడానికి అనువాదాలు
2. కన్నడం నుంచి తెలుగుకు అనువాదాలు
3. ఇంగ్లీషు నుంచి తెలుగుకు అనువాదాలు
4. కన్నడం నుంచి ఇంగ్లీషుకు అనువాదాలు

The Pioneering Palkuriki Somana

-Dr. P.R. Harinath

During the time of Shaiva Poets, which is known as "Shiva Kavi Yugam"(The Era of Shaiva poets) in Telugu literature, Mallikarjuna Pandithaaradhya has shown a strong influence on literature. As he had made a new path, he was regarded as Brahma (the creator) of Veerashaivism in Andhra Pradesh. Mallikarjuna's impact has gifted great personalities like Palkuriki Somana or Somanath in Telugu literature. People respected him as Vishnu (the organizer and manager) of Veerashaivism. Somana has emerged as an unparalleled powerful poet. Somana played a key role in spreading the teachings of Basavana or Basavanna.

Somana lived between 13-14th centuries. He followed Basavana whole heartedly. Basavana's word was final word for him. He became part and parcel of Veerashaivism during his days.

For any religion continuity is quite an important issue. To continue for generations so many things need to happen. Disciples, believers and followers should be there; arguments and discussions are required. They will make the next generation to follow the path. If not, the religion may slowly see extinction. To give continuity to Veerashaivism as envisioned by Mallikarjuna Panditharadhya, great scholar, Palkuriki Somanatha entered the field and took the responsibility to stand for it. He was a great scholar, a great poet and courageous person. He did a lot of work in Shaivism.

He wrote Somanatha Bhashyam, Rudra Bhashyam and Chaturveda saaram. He recorded the lives of great devotees of Shiva. In common mans language he wrote Basava Puranam, the life story of Inspiring Basavana. Somana is a thorough scholar in Telugu, Kannada and Sanskrit also. Basavapuranam (an epic on Basavana) is Somana's greatest work. He wrote this epic in 'dwipada' meter (two lined meter) which is easy to sing. He used the people's language to reach them in majority. This work was a sensation on those days.

Strategies of poetry :

Somana's ideas are astonishing. By the time of Somana the literary field was getting dominated by classical literature and Sanskrit language. Kings courts are patronizing mostly scholarly based works. The works that should reach everyone in the society are not written. They were beyond the reach of many people.

Looking at the situation Somana felt that he should reach common man. He got hold over the colloquial usage. In the beginning of his works he has shown his scholarship by writing poetry in classical style. It mesmerized the scholars. Simultaneously he thought to make common man come near to his poetry. Hence he used both the styles to spread his ideas.

In addition to this, Somana talked about devotees who contributed a lot to

కథన సౌందర్యం

- సి.ఆర్. తారనాథ్, ప్రాఫెసర్, తెలుగు & హెడ్, డిపార్ట్మెంట్ ఆఫ్ ఎడ్యుకేషన్ ఇన్ సాఫల్ సైన్సెస్ & హ్యూమానిటీస్ (డి.ఇ.ఎస్.ఎస్.హెచ్), రీజనల్ ఇన్స్టిట్యూట్ ఆఫ్ ఎడ్యుకేషన్ (ఎన్.సి.ఇ.ఆర్.టి), మానస గంగోత్రి, మైసూర్, కర్ణాటక.

'వాడు భలే కథలు చెప్తాడు'

అనే మాట తరచుగా మన రోజువారీ మాటల్లో వినబడుతుంటుంది. ఈ మాట ప్రశంసతో అన్నదికాదు, ఆ చెప్పిన వాడిని మెచ్చుకునే మాటా కాదు. దీనిలో వ్యంగ్యం ఉంది. ఆ వలనా వాడు చెప్పే మాటలు నమ్మడానికి వీలులేనివి అని లోలోపల ఆర్థం.

'కథ' అనేది ఒక సాహిత్య ప్రక్రియగా ప్రసిద్ధి పొందింది. మనందరికీ తెలుసు. రోజువారీ మాటల్లో వినిపించే పై మాటల్లాంటివి విన్నప్పుడు ఆ ప్రక్రియకుండా లక్షణాలు కొన్ని తెలుస్తాయి.

కథ అంటే - కొంత నిజమూ, కొంత కల్పనా కలిసినది. విషయంలో నమ్మకకర్తం కాని విషయాలు కొన్ని ఉండవచ్చు. అలాంటి విషయాన్ని చెప్పినప్పుడు మనం నమ్మదగినంత స్థాయిలో, మనలను ఒప్పించే లక్షణాలుంటాయి. ఇవన్నీ చెప్పకనే చెప్పినట్లయింది.

ఈ మాటల్లో కథన రహస్యం దాగి ఉంది. 'వాడు కథలు చెప్తాడు' అన్న ఆరోపణ ఉంది. నమ్మవలసిన అవసరమేమీ లేదు కదా - అయినా ఎందుకు నమ్ముతాం? అవి కథలని ఎలా తెలుసు? వ్యక్తులు తమ అనుభవాలకు, నమ్మకాలకు అవతలి ఠీరంలోని విషయాల గురించి నమ్మరు. ఇది సహజం ఇందులో తప్పుపట్టాల్సిందేమీ లేదు. భూమి గుండ్రంగా ఉందనే విషయాన్ని చాలామంది నమ్మలేదు. ఇప్పటికీ పాశ్చాత్య దేశాలలో 'Flat Earth Society' లాంటివి ఉన్నాయి. అదలా ఉంచితే, అలా తమ పరిధికి అటువైపున ఉన్న అంశాల గురించి నమ్మదగిన రీతిలో చెప్పగల శక్తి కథకు ఉంది. ఆ శక్తి పేరు కథనం.

ఇదొక శిల్పంగా సాహిత్య లోకంలో పదునెక్కింది. ప్రసిద్ధికెక్కింది. అదికవి నన్నయ తన కవితా లక్షణాల గురించి, ఆశయాల గురించి చెప్పిన అంశాలలో 'ప్రసన్న కథా కవితార్థయుక్తి' ఒకటి కదా! కథ ప్రసన్నమయ్యేలా రచించే నేర్పు - ఈ నేర్పు కథన శక్తి.

నన్నయ దగ్గరనుంచే ఆరంభిద్దాం. ఆయన రచించిన ఉపాఖ్యానాలలో కథన సౌందర్యం చాలా ప్రతిభావంతమైనది. కథనంలో తమకు తెలిసినదంతా చెప్పాలనే ఆరాటం పనికి రాదు. ఎంత చెప్పాలో తెలిసి ఉండాలి. మన సంభాషణల్లో మాటలకు ఎంత శక్తి ఉందో, మౌనానికి అంత శక్తి ఉంది. కథనంలోనూ అంతే ప్రకటిత అంశం ఎంత బలమైందో, సూచితాంశం కూడా అంత బలంగా ఉంటుంది.

సలదమయంతి కథను ఒక ఉదాహరణగా చూద్దాం. ఆ కథలో నలుని తండ్రి పేరు, రాజ్యం, పుట్టుక, బాల్యం, ఎదగడం ఇలాటివన్నీ గణగణా రెండు మూడు పద్యాల్లో ముగించేశాడు. హాస ప్రవేశించినప్పటి నుంచి కథను నిదానంగా నడిపాడు. అంటే పఠితకు ఆనక్తి ఎక్కడ జనిస్తుందో అక్కడి నుంచి కథనంలో మలుపు ఏర్పడుతుంది. కథకుడు అక్కడ నుంచి విజృంభిస్తాడు.

మనుచరిత్రలో ప్రవరుడు హిమాలయాల్లో దారి తప్పాడు. తనకు మార్గం చెప్పేవారికోసం వెతుక్కు తున్నాడు. ఈ వెతుకడంలో అతనికి పులులు, ఖడ్గ మృగాలూ లాంటివి కనిపించాయి కూడా. పెద్దన ఒక్క పద్యంలో వీటిని చాటేశాడు.

అకలంఘ్యత సత్యముంచెలియ మాయాద్యార
కావంతి కా

కర్పూరవసంతరాయలు - సౌందర్యం

డా. పి.ఆర్. హరినాథ్

గేయానికి కావ్యస్థాయిని కలిగించిన కృతులలో 'కర్పూరవసంతరాయలు' ప్రసిద్ధమైనది, విశిష్టమైనది. ఆచార్య సి.నారాయణరెడ్డిగారి సృజనాత్మక ప్రతిభ ఈ కావ్యంలో ప్రతిబింబిస్తుంది. 1957వ సంవత్సరం జూన్ నెలలో నెల్లూరులో జరిగిన 'తిక్కన ఆయంతి' సభకు ఉపన్యాసకుడిగా వెళ్లిన ఆచార్య సి. నారాయణరెడ్డిగారు, సభాసంతరం శ్రీ తిక్కవరపు రామిరెడ్డి గారికి, శ్రీ జెజువాడ గోపాలరెడ్డిగారికి తన 'కొత్త కావ్యాన్ని' వినిపించారు. అనాటి సాహిత్య వాతావరణంలో గేయకావ్యాన్ని రచించి మెప్పించడం ఒక సిద్ధి. పద్యం పల్లకీలపై ఊరేగుతున్న కాలమది. అలాంటి కాలంలో అందరినీ మెప్పించిన రచన ఇది.

శ్రీ మల్లంపల్లి సోమశేఖరశర్మగారు 'History of Reddy Kingdoms'లో చెప్పిన విషయాల నాధారంచేసుకుని ఈ కృతిని రూపొందించినట్లు కవి స్పష్టం చేశారు.

కావ్యసూత్రం

'వృష్టి కన్ననుదేశద్భుష్టియై గరిష్టము' అనేది ఈ కావ్య సూత్రం.

కథాపరిచయం

కుమారగిరిరెడ్డి కొండవీటికిరాజు. రసజ్ఞుడు. ప్రతిచైత్రంలోనూ వసంతోత్సవాలు, మదన పూజలు జరిపించేవాడు. ఈ వేడుకలలో పన్నీరు చందనాది సుగంధ ద్రవ్యాలతో పాటు కర్పూరపు ఖండాలను ప్రజానీకం పైకి విసురుతూ ఊరేగేవాడట. అందుకే ఆయనకు, 'కర్పూరవసంతరాయలు' అని పేరు వచ్చింది. లకుమ అనే నర్తకిలోని కళాసౌందర్యాలకు రాజు పరపశుడై, వశుడైనాడు. రాజ్యాన్ని రాణిని విస్మరించాడు. దేశ సంక్షేమం కోసం రాణి తపించింది. లకుమ కాళ్లపై పడి రాజును వీడిపోయింది. లకుమ త్యాగానికి సిద్ధపడి, అత్యాచారం చేసుకుంది. సందేశపత్రాన్ని లిఖించింది. రాజు అమె త్యాగానికి నివ్వెరపడ్డాడు. అమె సందేశాన్ని పొందించి రాజ్యసంక్షేమాన్ని

KAnil Kumar



Learning Styles as a Correlate of Achievement of Students in Mathematics It's Implication to Classroom Teaching Learning Process

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Abstract

Students' achievement in Mathematics is very influential for achieving success in all other subjects. Mathematics is having its application in almost all other disciplines. Mathematics is used all over the world as an essential tool in natural science, social science, engineering, medicine, etc. As Mathematics is abstract and it needs skills to understand and logical reasoning to solve problems which all individuals may not possess and it can become the hurdle in achieving their goals. The present study helps us to find out the different Mathematical abilities which are essential for achievement in Mathematics. One such ability is learning styles of students. Individual's learning styles plays an important role in achievement in various subjects at the school and postgraduate level. The knowledge of students' learning styles would help the teachers and counselors to select appropriate teaching techniques. The purpose of the study was to find out the relationship between learning styles of students and achievement in Mathematics in postgraduate course under the University of Mysore. The sample selected for the study consists of 80 postgraduate students who were pursuing M.Sc Mathematics by using simple random sampling technique. The study followed survey method under educational research. Learning styles inventory of Kolb by Peter Honey and Alan Mumford (2006) which categorizes the learning styles of students under four categories, namely activists, reflectors, theorists and pragmatist learning styles was used for assessing the learning styles and analyzing its influence on classroom teaching learning process. The findings of the study reveals that the learning styles of students vary and majority of students are reflectors, followed by pragmatist, theorist and activists were few. The analysis of the data further reveals that male and female students do not differ in their learning styles, and there is a high correlation between the learning styles and achievement in Mathematics of postgraduate students. This study implies that students will have various styles and multi-faced approach in learning. This has to be understood by the teachers and other practitioners to improve the students learning Process as well as to improve the quality of Education.

Keywords: Learning Styles, Achievement in Mathematics, Teaching Learning Process.

A FOLLOW-UP STUDY ON THE EDUCATIONAL STATUS OF THE PARTICULARLY VULNERABLE TRIBAL GROUPS IN MALAPPURAM DISTRICT

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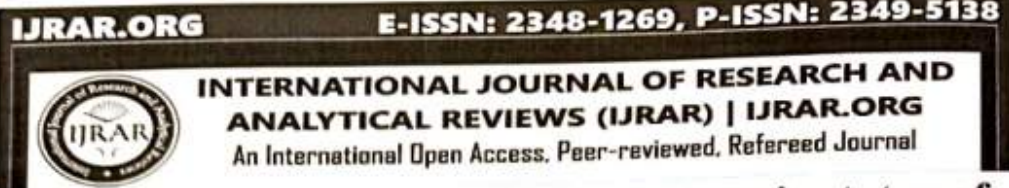
Abstract:

Education among tribes is given highest priority for the simple reason that it is the key to socio-economic development of tribal people. Education enables them to perform their role to be useful citizen in democracy. Development of the state lies with the development of the backward people who are socio-economically disadvantaged and educationally backward in relation to total population. Ashram schools for particularly vulnerable tribal groups are one of the major interventions in the field of educating the Scheduled Tribe children is that of the Ashram schools which have been in vogue for the past many years, and have been functioning in the tribal areas. The objective of the scheme is to provide better educational facilities to the SC and ST male and female students in the pattern of a public school. Educational schemes aim at removing their backwardness so that they may develop their economic, social and educational status and come to join the main stream of the country. The cholanaikkan, kattunaikkan, Kadar, koraga and kurumba, the particularly vulnerable tribal groups of the state are known for its backwardness when compared to most of the other scheduled tribe communities of the state. The educational, social and economic attainment of these communities over the decades since independence is not at all encouraging. The social development and economic development of tribes is interlinked with their educational status. The proposed study has great relevance in the present scenario as the main stream society and some among the tribal communities are fast in acquiring sophisticated skills to improve their standards of life. This study is intended to examine how far ashram school education promotes the educational and socio-economic status of particularly vulnerable tribal group students (PVTGS) of Malabar Region of Kerala.

Key words: Particularly vulnerable tribes, Cholanaikkan ,Kattunaikkan, Ashram school, education, Socio economic status

Introduction

Education is a pivotal access-point leading up to the aegis of all-round human development. The significance of this access can be validated by the modern viewpoint that distinguishes the educational development of citizens of a nation as the prominent indicator of the nation's socio-economic and cultural progress. Universal access to quality education is one of the basic duties that mark a progressive government and its society. In its attempt at the elimination of poverty and ignorance, education is an apparatus that governments can exploit to their best advantage. Kothari Commission (1964-66) has remarked that "One of the important social objectives of education is to equalize opportunity enabling the backward or underprivileged classes and individuals to use education as a lever for the improvement of their condition." Every society that prizes the function of justice within it must be zealous in its attempts to improve the everyday lot of its common man through investments that secure progressive equality of opportunity and



A follow-up study on the Socio-economic status of the Particularly Vulnerable Tribal groups in Malappuram district

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Abstract

Among a number of socio-economic indicators, Education of people from the tribal community is given top priority for the simple reason that it is the key to their socio-economic development. Education enables them to play their part in being responsible citizens in a democratic country like India. The development of the country is dependent on the development of people who are socio-economically disadvantaged and educationally backward in comparison to the total population. Ashram schools for Particularly Vulnerable Tribal Groups are one of the major interventions in the field of educating Scheduled Tribes children. It been in existence for many years and have been operating exclusively in tribal areas. The objective of this scheme is to provide better educational opportunities for SC and ST students in a manner similar to that of a public school. Educational programs aim to bring them out of the margins, so that they can improve their economic, social, and educational standing and eventually join the country's mainstream. The Cholanaikkan, Kurumba, Kattunaikkan, Kadar and Koragas, Kerala's most vulnerable tribal groups, are known for their backwardness in comparison to the majority of the state's other scheduled tribe communities. The educational, social, and economic progress of these communities in the decades since independence has been discouraging. Tribes' social and economic development are inextricably linked to their educational status.

The proposed study is highly relevant in the current context, as the mainstream society and some tribal communities are rapidly acquiring sophisticated skills in order to improve their standard of living. The purpose of this study is to determine how far the Ashram School education has improved the educational and socioeconomic status of students from the Particularly Vulnerable Tribal Groups (PVTGS) in Kerala's Malabar Region.

Key words: Particularly Vulnerable Tribes, Cholanaikkan, Kattunaikkan, Kadar, Kurumba, Koragas, Ashram School, Education, Socio-economic Status

K.N.Vidya

On transformation of certain bilateral basic hypergeometric series and their applications

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Abstract. In this paper, we obtain new transformation and summation formulae for bilateral basic hypergeometric series and give a simple proof of Jacobi's triple product identity. Further, we present applications of the main results.

Keywords. Bilateral basic hypergeometric series; Jacobi's triple product identity; mock theta functions; theta functions.

2010 Mathematics Subject Classification. 33D15.

1. Introduction

Euler was the first to introduce the concept of basic hypergeometric series in 1748. But Heine made this into a systematic theory by generalizing Gauss' ${}_2F_1$ series. Heine's transformation formula, Jacobi's triple product identity, and Cauchy's q -binomial theorem are perhaps the foundation stones for further development of the theory of basic hypergeometric series through the summation and transformation formulae. Since then a number of mathematicians namely Dougall [6], Jackson [9, 10], Ramanujan [11], Bailey [3, 4], Slater [13], Andrews [1], Ismail [8] and Schlosser [12] have used techniques such as residue calculus and analytic continuation and contributed to the summations and transformations of basic and bilateral basic hypergeometric series identities. For more details, one may refer the books by Gasper and Rahman [7] and Slater [13].

In 1970, Andrews [2] obtained a transformation formula for bilateral basic hypergeometric series by using an easily proved transformation lemma given below.

Lemma 1.1. Subject to suitable convergence conditions, if $c_n = \sum_{m=0}^{\infty} a_{n+m} b_m$, then

$$\sum_{m=0}^{\infty} b_m \sum_{n=-\infty}^{\infty} a_n = \sum_{n=-\infty}^{\infty} c_n. \quad (1.1)$$

ON SOME TRANSFORMATION FORMULAS AND THEIR
 APPLICATIONS TO PARTIAL THETA FUNCTION
 IDENTITIES

D. D. SOMASHEKARA¹, K. N. VIDYA^{2*}

ABSTRACT. In this paper we derive three new transformation formulae for bilateral basic hypergeometric series. As applications of these transformation formulae, we deduce the well-known q -Gauss summation formula and Sears's two ${}_{3\phi_2}$ transformation formulae. Further, we establish the reciprocity theorem of Ramanujan and its three variable generalization.

1. INTRODUCTION AND PRELIMINARIES

The basic hypergeometric series ${}_{r+1}\phi_r$ is defined by

$${}_{r+1}\phi_r \left[\begin{matrix} a_1, & a_2, & \dots & a_{r+1} \\ b_1, & b_2, & \dots & b_r \end{matrix} ; q; z \right] = \sum_{n=0}^{\infty} \frac{(a_1, a_2, \dots, a_{r+1})_n}{(q, b_1, b_2, \dots, b_r)_n} z^n,$$

where $|q| < 1$, $|z| < 1$,

$$(a)_{\infty} := (a; q)_{\infty} := \prod_{n=0}^{\infty} (1 - aq^n),$$

$$(a)_n := (a; q)_n := \frac{(a)_{\infty}}{(aq^n)_{\infty}}$$

and

$$(a_1, a_2, a_3, \dots, a_n)_n = (a_1)_n (a_2)_n (a_3)_n \dots (a_n)_n, \quad n \text{ is an integer or } \infty.$$

An ${}_{r+1}\phi_r$ series is called well-poised if $a_1 q = a_2 b_1 = \dots = a_{r+1} b_r$ and very well-poised if it is well-poised and $a_2 = -a_3 = qa_1^{1/2}$. The bilateral basic hypergeometric series ${}_{r}\psi_r$ is defined by

$${}_{r}\psi_r \left[\begin{matrix} a_1, & a_2, & \dots & a_r \\ b_1, & b_2, & \dots & b_r \end{matrix} ; q; z \right] = \sum_{n=-\infty}^{\infty} \frac{(a_1, a_2, \dots, a_r)_n}{(b_1, b_2, \dots, b_r)_n} z^n,$$

where $\left| \frac{a_1 a_2 \dots a_r}{b_1 b_2 \dots b_r} \right| < |z| < 1$.

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Key words and phrases. Bilateral basic hypergeometric series, q -Gauss sum, Sears's transformation formula, Bailey's transformation formula, Reciprocity theorems of Ramanujan.

NEW CONGRUENCES FOR ℓ -REGULAR BIPARTITIONS FOR
 $\ell \in \{3, 5, 6, 10, 20\}$

K. N. VIDYA

ABSTRACT. Let $B_\ell(n)$ denote the number of ℓ -regular bipartitions of n . In this paper, we study the Arithmetic properties of $B_\ell(n)$ for $\ell \in \{3, 5, 6, 10, 20\}$ and we establish several infinite families of congruences satisfied by them.

1. INTRODUCTION AND PRELIMINARIES

A partition of a positive integer n is any non-increasing sequence of positive integers whose sum is n . The number of such partitions is denoted by $p(n)$, and the number of partitions where the summands are distinct is denoted by $q(n)$. Let $b_\ell(n)$ denote the number of ℓ -regular partitions of n , where an ℓ -regular partition of n is a partition of n such that none of its parts is divisible by ℓ . The generating function for the number of ℓ -regular partitions of n is given by

$$\sum_{n=0}^{\infty} b_\ell(n)q^n = \frac{f_\ell}{f_1},$$

where f_k is defined by $f_k := \prod_{m=1}^{\infty} (1 - q^{km})$, k , a positive integer.

In 1997 Gordon and Ono [8] obtained some divisibility properties of $b_\ell(n)$ by powers of certain special primes. This have strongly influenced many authors to study the arithmetic properties of $b_\ell(n)$, its divisibility and the distribution. In fact Andrews, Hirschhorn and Sellers [4] derived some infinite families of congruences for $b_4(n)$ modulo 2. Hirschhorn and Sellers [9] obtained many Ramanujan-type congruences for $b_5(n)$ modulo 2. Webb [19] established an infinite family of congruences for $b_{11}(n)$ modulo 3. Xia and Yao [22] established several infinite families of congruences for $b_6(n)$ modulo 2. Cui and Gu [6] derived congruences for $b_\ell(n)$ modulo 2 for certain values of ℓ by employing the p -dissection formulas of Ramanujan's theta functions. In [20], Xia found congruences for $b_4(n)$ modulo 8. Keith [11] obtained the following conjecture which was proved by Xia and Yao in [23]:

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Key words and phrases. Congruence, partition, regular partition, regular bipartition, theta functions.



On m -regular partitions in k -colors

K. N. Vidya

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Abstract We consider $p_{(m,k)}(n)$, the number of m -regular partitions in k -colors. We find many infinite family of congruences modulo 2, 3, 5 for some m -regular partitions in 3 colors, especially, for $m = 2, 4, 10, 20$.

Keywords Partitions · k -colors · k -regular partitions · Congruences

Mathematics Subject Classification Primary 11P83 · Secondary 05A17

1 Introduction and Notations

A partition of a positive integer n is a non-increasing sequence of positive integers, called parts, whose sum equals n . Let $p(n)$ denotes the number of partitions of n . Then, the generating function for $p(n)$ is given by

$$\sum_{n=0}^{\infty} p(n)q^n = \frac{1}{(q; q)_{\infty}}.$$

Here, in this sequel, we use the following standard q -series notation:

$$(a; q)_{\infty} := \prod_{n=1}^{\infty} (1 - aq^{n-1}), \quad |q| < 1.$$

Let $p_3(n)$ denotes the number of partitions of n in three colors. Then, the generating function for $p_3(n)$ is given by

$$\sum_{n=0}^{\infty} p_3(n)q^n = \frac{1}{(q; q)_{\infty}^3}.$$

Let $p_{(m,k)}(n)$ denotes the number of m -regular partitions of n in k -colors. Then, the generating function for $p_{(m,k)}(n)$ is given by

$$\sum_{n=0}^{\infty} p_{(m,k)}(n)q^n = \frac{(q^m; q^m)_{\infty}^k}{(q; q)_{\infty}^k}. \quad (1.1)$$

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HURWITZ TYPE RESULTS FOR SUMS OF SQUARES AND SUMS OF TRIANGULAR NUMBERS

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Abstract

Let $r_k(n)$ denote the number of representations of n as a sum of k squares and $t_k(n)$ denote the number of representations of n as a sum of k triangular numbers. Let $r_{\alpha,\beta}(n)$ denote the number of representations of n as a sum of α times a square and β times another square and $t_{\alpha,\beta}(n)$ denote the number of representations of n as a sum of α times a triangular number and β times another triangular number. We prove a number of results in which the generating function of $r_2(2^k(an+b))$, $r_3(2^k(an+b))$, $r_{2,3}(2^k(an+b))$, $t_2(2^k(an+b))$, $t_{1,2}(2^k(an+b))$, for various integer values of k , a and b , is a simple infinite product. We also obtain a relation between $t_{1,2}(3^{k+1}n+3^k+3^{k-1}+\dots+3+1)$ and $t_{1,3}(n)$.

Keywords: Theta functions, sums of squares and sums of triangular numbers, infinite products.
2010 Mathematics Subject Classification: Primary 33D15.

1 Introduction, Notations and Elementary Properties

For any complex numbers a and q with $|q| < 1$, we use the following q -product notation:

$$(a)_{\infty} := (a; q)_{\infty} := \prod_{n=0}^{\infty} (1 - aq^n),$$
$$(a)_n := (a; q)_n := \frac{(a)_{\infty}}{(aq^n)_{\infty}}$$

and

$$(a_1, a_2, a_3, \dots, a_n)_n = (a_1)_n (a_2)_n (a_3)_n \dots (a_n)_n, \quad n \text{ is an integer or } \infty.$$

Ramanujan's general theta function $f(a, b)$ [1][4][8] is defined by

$$f(a, b) := \sum_{n=-\infty}^{\infty} a^{n(n+1)/2} b^{n(n-1)/2}, \quad |ab| < 1.$$

Some of the properties of $f(a, b)$ are given by [4, Entry 18, p. 34]

$$f(a, b) = f(b, a), \tag{1.1}$$

On the reciprocity theorem of Ramanujan and its applications

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Abstract. In this paper, we give two new proofs of the reciprocity theorem of Ramanujan found in his lost notebook. We derive the well-known quintuple product identity using the reciprocity theorem. Further we obtain two interesting partition theoretic identities from the reciprocity theorem.

Keywords: Basic hypergeometric series, reciprocity theorem, Jacobi's triple product identity, quintuple product identity, partition function.

MSC 2000 classification: primary 33D15, secondary 11A15.

1 Introduction

On page 40 of his lost notebook [7] [3, entry(6.3.3)], Ramanujan has given the following beautiful reciprocity theorem of two variables.

Theorem 1. If a, b are complex numbers other than 0 and $-q^{-n}$, then

$$\rho(a, b) - \rho(b, a) = \left(\frac{1}{b} - \frac{1}{a}\right) \frac{(aq/b, bq/a, q)_{\infty}}{(-aq, -bq)_{\infty}}, \quad (1.1)$$

where

$$\rho(a, b) := \left(1 + \frac{1}{b}\right) \sum_{n=0}^{\infty} \frac{(-1)^n q^{n(n+1)/2} a^n b^{-n}}{(-aq)_n}$$

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Kalpana Venugopal

STRATEGIES FOR REDUCING BAG BURDEN – AN EXPERIMENT*

BY

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ABSTRACT

The outcome of this paper proves that bag burden could be reduced without the need for space, with very little fund, can be achieved with co-operation of the stakeholders with no dependency. The students would also develop good organisational skills and a sense of responsibility. And the best positive outcome would be no stress on students' health too.

KEYWORDS

Bag Burden, Education.

INTRODUCTION:

"India's National Education Policy-2020 is about the spirit which reflects that we are shifting from the burden of the school bag to the boon of learning which helps for life from simply memorising to critical thinking" – Narendra Modi, Prime Minister of India. For the past few decades, it has been a matter of great concern that the students were literally drooping with the heavy burden of school bag. Yashpal Sharma committee made aware of the fact that heavy school bags were hampering the child's physical and mental health. Concerned over these the committee proposed 'Learning without Burden' for students. PILs, signature campaigns and request to concerned authorities paved way to battle this burdensome bag burden. Various journals, articles and policies of the government referred to voiced grave concerns on the consequences of heavy bag burden.

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NURTURING THINKING ROUTINES IN ANGANAWADI CHILDREN: PERSPECTIVES OF 21ST CENTURY

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ABSTRACT

The world in the 21st century throws challenges to young people through its complex environmental, social and economic pressures. Responding to these challenges requires young people to be creative, innovative, enterprising and adaptable with motivation, confidence and skills to use creative and critical thinking purposefully. Countries across the world are working towards providing such a goal-oriented education to prepare the young ones for the future. A greater need arises in the developing countries to enable the countries to achieve sustainable development. Several developing countries have changed their educational policies and have brought in a drastic change in the education practices. India is also one among them in implementing a large initiative viz. the Integrated Child Development Services (ICDS) to reach out to the children in every rural corner of the country. However the strategies to develop a thinking society is not yet envisioned. The need of the hour is to devise specific effective strategies and implement efficiently in order to steer the country towards sustainable development. The present paper discusses the strategies for the same through the implementation of thinking routines in young children of Anganwadis.

Keywords: Thinking Routines, Dispositions Of Creative And Critical Thinking, Early Childhood Education, Anganwadis.

INTRODUCTION

The world in the 21st century throws challenges to young people through its complex environmental, social and economic pressures. Responding to these challenges requires young people to be creative, innovative, enterprising and adaptable with motivation, confidence and skills to use creative and critical thinking purposefully. The main goal of education is training thoughtful students who are not only able to identify ambiguous and complex thinking situations but are also able to think actively and independently. All over the world, countries are working towards providing such a goal-oriented education to prepare the young ones for the future. Though this kind of education is required by all the countries, the need to give it a big thrust is more in the developing countries. Several developing countries have changed their educational policies and have brought in a drastic change in the education practices. India is also one among them in implementing a large initiative viz. the Integrated Child Development Services (ICDS) to reach out to the children in every rural corner of the country. A study of the effectiveness of these strategies will guide us towards a better understanding of the need of the hour.

Rao, Sun, Jessie Wong, Brendan, Patrick, Shoeffler, Young, Bray, Diana Lee (2014) have conducted a rigorous education literature review and have reported the great effect in large scale comprehensive programmes typically funded by the government and which include more than one type of intervention. For example, the ICDS of India. More systematic research is required with respect to the issues related to type of intervention and minimum "dosage" of intervention required to achieve sustainable

goals is typical milestones of cognitive development

- The types of early child development interventions that are effective in attaining typical milestones and can be relatively easily scaled up in different developing country context.
- The minimum "dosage" of intervention needed to achieve sustainable gains in children's cognitive development considering their expected milestones.

The researcher in the present study has initiated an experimental study with a set of children belonging to the Anganwadis of ICDS to arrive at a plausible type of intervention keeping in mind the "dosage" of intervention to nurture creative and critical thinking dispositions through thinking routines. Cognitive development involves learning, thinking and language skills and this paper focuses on the thinking aspect of cognitive development, and specifically, the creative and critical thinking dispositions in young children. This research is in-line with the specific recommendations made in the report mentioned above ---

- Invest in comprehensive large-scale programs like Pastoral del Niño programs in Paraguay, ICDS in India and the Integrated Programme in the Philippines.
- Invest in well-designed and properly implemented parent-focused or child-focused interventions as they have positive effects on children's cognitive development.

Developing creative and critical thinking skills is crucial for increasing a country's capability and effectiveness



IMPACT OF METACOGNITIVE SKILLS INTERVENTION PROGRAM ON ACADEMIC ACHIEVEMENT OF PHYSICAL SCIENCE STUDENTS OF SECONDARY SCHOOL

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ABSTRACT

This study is mainly focused about the development of metacognitive skills and its impact on academic achievement of students. Keeping this purpose in view an interventional package based on metacognitive skills in physical science is developed. The pre-test, post-test equivalent, experimental and control group design is used in this study. In this study, ninth standard private school students were selected as the sample of the study. Raven's progressive matrices intelligent test was used for equating the groups. Seventy students were divided in two groups i.e. experimental and control group. Interventional package encompassed with strategies namely; structured teaching, Self-directed learning and Group discussion, developed on the line of sub components of Metacognitive skills. Achievement test was constructed on four units of physical science which were used for developing interventional package. Pre-test was administered for both experimental and control group on academic achievement. Forty-three days of teaching (treatment) was done for experimental group and conventional method was used for control group. Achievement test was administered as post-test for both the groups. The difference between the scores of pre-test and post-test of both the groups were calculated by applying t-test. The obtained data was analysed and interpreted in tabular form. The result shows that, there is a significant difference between the achievements of students of experimental and control group. This indicates that interventional program was more effective than the conventional method of teaching to enhance the academic performance in physical science.



KEY WORDS: Metacognitive Skills, Interventional Package, Structured Teaching, Self-directed Learning, Group Discussion, Achievement Test.

INTRODUCTION

Academic achievement of students at secondary level is influenced by many factors. Cognitive Constructivism emphasizes more on knowledge construction by the individuals. The metacognition-thinking about thinking determines the performance of the learner and recognised as a most suitable strategy of learning (Veenman & Blout, 1995, Wang et al., 1990, 1993). The development of Metacognitive skills among the students is a challenging task. It should be developed on proper structuring and sequence. The present study focuses on the development of Metacognitive skills which led to the academic development. Proven Intervention strategies are necessary to develop the Metacognitive skills. It is observed from the studies (Barouche, 1997) that higher order thinking skills are the means of development of Metacognitive abilities among the learners. Hence, the researcher has developed the interventional package encompass structured teaching, self-directed learning, and group discussion. However, structured and conducive

**A STUDY ON LEARNING STYLES AMONG TEACHERS AT SECONDARY LEVEL**Somashankar H.¹ and Prof. Kalpana Venugopal²¹Research Scholar, RIE (NCERT), Mysore, Karnataka.²RIE (NCERT), Mysore, Karnataka.**ABSTRACT**

The present study was conducted to find out the learning styles of teachers at secondary level. Survey method was conducted on a sample of 636 secondary teachers in Mandya district. Learning Styles Inventory by Honey and Mumford was used for data collection. Data was analysed by using percentage. The findings were discussed in the study and relevant implications were given.

KEYWORDS: Learning Style, Secondary Teachers.

INTRODUCTION

Learning styles are personal way in which individual process information and the courts of learning new concepts and principal. Learning styles differ from individual to individual. For the same individual they differ from the subject to subject. As per the definitions offered by Rosenber, "Learning style refers to an individual's characteristics pattern of behaviour when confronted with a problem. In simple language, a learning approach to learning a task in his learning style. It is his predisposition for behaviour in learning situations.

An individual's characteristics pattern of behaviour when confronted with a problem in his learning behaviour. It is learner's approach to learning a task, or it is the learner's predisposition to learn. The learning style of an individual is his pattern of learning a task. It is his predisposition in a learning situation.

Learning style has a bearing on the achievement of learner knowledge of the influence of various styles of learning and achievement will assist the teachers to facilitate the learners while learning. The learning style is a hypothetical construct that has been developed to explain the process of mediation between stimulus and responses. Dunn (1992) viewed that learning style is the way in which each learning to concentrate on process and retain new and difficult information. Hill (1994) defined learning style as the unique way in which one individual searches for meaning.

Though various psychologists have defined the term 'learning style' in their own manner, nevertheless all agree that it refers to individual characteristic pattern of learning behaviour which is pervasive and consistent in nature (Verma, 1988). Keefe (1979) defines learning styles as the "composite of characteristic cognitive, effective and psychological factors that serve as relatively stable indicators of how a learner perceives, interacts with and responds to the learning environment". Stewart and Felicetti (1992) define learning styles as those "Educational conditions under which a student is most likely to learn". Learning style refers to the way one internally represents experiences and results or processes information.

LEARNING STYLES IN TEACHERS

Teachers learning styles preferences are little explored the use of instruments reporting individual learning or cognitive style is attractive for educationists, especially within high accountability educational

Self-Concept in relation to Academic Self-Handicapping among Adolescents: Educational Implications

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Abstract: In the present study, it is attempted to assess the relation between Self-concept and Academic Self-handicapping among 1679 secondary students of Mysuru district. There is a negative relation found between Self-concept & Academic Self-handicapping among secondary students. There was no influence of gender on the relation between Self-concept & Academic Self-handicapping seen. On the whole, it was found that gender had no role to play in the relation between Self-concept & Academic Self-handicapping among secondary student. The implications of reducing the Academic Self-handicapping behaviour and strategies to enhance self-concept among students are discussed.

Index Terms - Self-concept, Academic Self-handicapping, Adolescents, Secondary students

1. INTRODUCTION

The holistic education aiming at the overall development of the individual also has the inherent feature that it protects one's self-worth. The curriculum developed and planned focus not only on the cognitive and psychomotor domains but also the affective domains of every individual. There is an integration among all these domains that leads to the overall development of an individual. Self-concept is crucial for any individual to perform effectively on any task. This develops during childhood and later move on to influence as they become adults. During adolescence, self-concept begins to develop. It is necessary for adolescents to develop a positive self-concept. It is necessary for adolescents to develop a positive self-concept as well as high self-esteem to improve their chances for a better and satisfying adulthood.

The phase of adolescence pose more challenges to the individual. During developmental phases, there are various factors influencing the self-concept of adolescents making it difficult to identify greatest factor in shaping the self-concept. One study opines that mass media has greatest effect on self-concept (Cathcart & Gumpert, 1986), whereas (Rull, Baiocchi, Hopper, Devics & Olson, 2009) suggests that peer interaction is the most significant contributing factor affecting self-concept, while another study claims the messages received from family have the higher bearing on self-concept (Lanza- Kaduce & Webb, 1992).

In the present day education system, evaluation plays a critical role and usually most students perceive this as negative. With reference to the norms of academic context, students' self-worth is questioned when they fail to be successful in any given task and also carries with them the risk that they may be seen to have low ability. This is mainly due to the reason that they equate their self-worth with academic ability. Hence, evaluation scenarios in most instances are seen as a threat to Self-esteem. To protect one's self-worth and prevent being looked as a failure, an individual uses various strategies to achieve the objective of maintaining a high self-worth leading to a higher self-esteem. This self-concept is one of the most important variables in the academic domain, due to its significant influence on appropriate cognitive functioning (Santana, Feliciano & Jimenez, 2009).

Consistent with the self-worth motivation theory, students use self-handicapping as one of the strategies to protect their self-worth in the event of potential failure and in some cases, to enhance their worth in the event of success. The instances of evaluation and grading are high in the education system of country. The curriculum has an in-built scope for assessment and evaluation of tasks by self, peers and teachers, also at times in public thereby creating ample opportunities for students to use self-handicapping strategies.

In situations where the individual is not confident of her/his own ability and the performances are being assessed, students tend to employ self-handicapping strategies to protect and enhance their self-worth, in turn their self-concept which is already present and important.

Academic Self-handicapping

The behaviour of self - handicapping has been considered as a self-protective strategy, used by all, especially adolescents in different situations assessed as threatening the positive self-esteem. Self-handicapping behaviour involves creating obstacles/impediments to performance to protect or enhance one's perceived competence (Berglas & Jones, 1978). This behaviour provides opportunity to protect the individual's fragile image, to externalize failure and internalize success.

TEACHING STYLES OF TEACHERS AT SECONDARY LEVEL: A SURVEY

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Abstract

The present study was explored to find out the teaching styles of teachers at secondary level using by survey method. A stratified random sample of 636 secondary teachers was selected for the study. The study was carried out in Mandya district, Karnataka. Teaching Styles Questionnaire by Ramona Palos was used for data collection. Data was analyzed using by percentage. The findings of the study and relevant implications are discussed.

Keywords: Teaching Style, Secondary Level Teachers.

Introduction

Teaching is a process which facilitates learning. Teaching is a beautiful performing art and the teaching process depicts the general pattern of classroom behaviour. The act teaching leads to reciprocal contacts between teacher and pupil and the interchange itself. Like other performers, teachers must convey a strong sense of presence of highly focused energy (Lowman, 1984) the effective teaching is essentially concerned with how well to bring about desired pupil learning by some educational activity. Teaching styles are very important for effective teaching and learning (Sternberg and Erigorenko, 1995, 2001) and a profile of styles make teaching more effective.

Teachers are not a uniform group of individuals; each develops a unique pedagogical style. Guild et al. (1985) developed four categories of style difference. Firstly, style is a concerned with cognition in which people gain and perceive knowledge differently. Secondly, style is concerned with conceptualization in which people form ideas and think differently. Thirdly, style is concerned with affect in which people feel and form values differently. Lastly, style is concerned with behaviour in which people act differently.

A keystone in the theoretical foundations of any discussion on learning and teaching styles is the acceptance that there is no single correct way to learn or to teach individual styles influence how an individual learns, how individual teachers teach and how the two interact with each other (Dixon & Woolhouse, 1996).

To teach for a successful intelligence means to use a set of techniques to encourage students to involve into a type of learning which stimulates different learning skills.

To identify the teaching styles of teachers Ramona Palos (2006) constructed a tool according to the Sternberg's theory on successful intelligence. He classified the teaching styles into four, based on Sternberg's theory. They are:

1. Teaching style which facilitates the development of reproductive thinking.
2. Teaching style which facilitates the development of analytic thinking.
3. Teaching style which facilitates the development of creative thinking.
4. Teaching style which facilitates the development of practical thinking.

Taking Education for Peace (EFP) Forward - Means and Possible Interventions among Secondary School Students

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ABSTRACT

"A candle loses none of its light by lighting another candle." - Thomas Jefferson. 'Education for peace' stands on four pillars mainly peace concepts, peace initiatives, peace values and peace skills. There are plenty of things said and initiated too, but there are few who stand for its values and carry forward with the apt skills that one need to possess and become ambassadors of peace. If we want to see education for peace actively functioning, that it should begin from every one of us and surely to achieve the crown being our best here on earth or thereafter as like noble laureates immortal. EFP calls for change of mind set, change in attitudes improve skills, approaches and living in harmony with oneself and with others. This paper discusses means and possible interventions of EFP within the system of education set up and analyses the peace values and peace skills among the secondary schools of Karnataka in the student perspective. Hence taking education for peace (EFP) forward is individual and collective responsibility.

Keywords: Education for peace, Peace concepts, peace initiatives, Peace values and Peace skills

Everyone must be committed in the matter of peace, to do everything they can ...peace is the language we must speak" - Pope Francis. Education for peace is built on the *four pillars* and they are as follows *Peace concepts, peace initiatives, Peace values and Peace skills*. There are plenty of things said and initiated too, but there are few who stand for its values and carry forward with apt skills that one need to possess and become ambassadors of peace.

Education for peace

World wide the need of 'Education for Peace' was felt at the birth of the UNO. And there after it has slowly yet firmly affirmed its necessity not only to conflict ridden countries but to every person born on this earth. In Indian scenario, NCF-2005 -EFP though there have been effort to take it to the classrooms, it still has not reached sufficiently to the last student

as well as to the teachers. Hence integrating it through the text book construction and reaching to the student body was initiated. Teachers are the transmitters of peace hence teachers preparedness to instruction as well as personal efforts to practice it oneself becomes equally important.

It is unfortunate that beside the effort of many institutions for the promotion of peace, peace studies continue to be ignored by Indian academic institutions. From ancient times India is rich in cooperation, peace, cultural heritage of peaceful co-existence, *ahimsa* and Gandhian ideals on non-violence have influenced the peace proponents all over the world. Although Non-Governmental Organizations (NGOs) have been contributing to different aspects of peace studies, viz., human rights, gender discrimination, environmental studies etc, they do not impact education adequately at

Influence of Self-handicapping on the Self-esteem of adolescents: Possible Counselor Interventions

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Abstract:

The process of education aides in the holistic development of learners. It enables them to develop required competencies and skills, to deal effectively with real- life situations. Learning in any domain is influenced by various factors that promote or hinder the effectiveness of learning in students. These factors have their roots in psychological and social constructs. The phase of adolescence poses more challenges to the individual. There are various factors influencing the self-esteem of adolescents.

Self-handicapping is one such construct which individuals employ to protect their self-esteem in spite of failures. Schools and classrooms provide excellent real-world contexts for examining self-handicapping behavior. In such settings, students are continually confronted with tasks and situations in which information about their ability and intelligence is on public display. The behaviour of self – handicapping has been considered as a self-protective strategy, which is used by all. Adolescents too employ it extensively, in different situations assessed as threatening the positive self- esteem. It becomes the responsibility of teachers to understand the interaction effect of these factors on the development of adolescents. The teacher as a responsible counselor should be able to reduce self-handicapping behaviors in students so as to promote a healthy development. This paper identifies the concept of self-handicapping, contexts promoting this behaviour, its influence on developing self-esteem, and possible counseling strategies that can be employed in curbing this behaviour, thereby assisting in the healthy development of individuals.

Key words: self-handicapping, self-esteem, counseling strategies.



Yoga in School Education



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Introduction

Yoga makes a noteworthy difference in the mental well being of children of all ages and from all backgrounds. Regular practice of yogic postures enhances the ability of students to concentrate, to deal with impulsive behaviour, and to think more clearly. It helps mental equilibrium and self-control. Yoga teaches children to be gentle with themselves and others. It generates positive emotions and compassion. Furthermore, yoga reduces stress and helps children to release tension and relax. It helps children develop lifelong health habits (both physical and mental), equanimous them with the option of healthy practice of exercises for the body and brain [1]. Yoga offers students a balanced and safe way for them to relate with themselves and to their surroundings, both through inner & outer awareness. Practising yoga intensifies self-confidence as the students measure their own individual success and improvement. Yoga promotes group cooperation & accelerates the learning of vocabulary in a playful manner [2]. It has an exhilarating and calming effect, which in later life could lead to a marked reduction of stress, blood pressure problems postural and nervous disorders. Children enjoy associating the name of a pose with the characteristics of the animals and other aspects of nature it represents, thus relating to the oneness of creation [3]. Recognising all these benefits, which are based on sound research and practice most countries have recommended for yoga in school education.

A distinctive aspect of Yoga is the attention and mental focus that children learn to exercise while doing the postures. The result is the toning up of both the body and mind. In adopting and maintaining a posture there is a certain co-ordination between the muscular system and the nervous system, that influences the physical and mental behaviours. Yogic postures do not just invigorate the body but also aid immensely to keep the mind healthy and calm thus bringing a feeling of refreshment. The physical benefits are improvement of flexibility, freedom of movement, better posture & gait, improved digestion, circulation, nervous, & endocrine systems and stronger resistance, coordination of body and mind through postures

[4], improved concentration, self-control, self confidence; focus upon one thing at a time, awareness of themselves, their abilities & individual differences; persistence & perseverance to attain; observation & self assessment; appreciation of silence; seeking for perfection, are all learned through control of breath and body postures [1]. This has great implication for academic learning [5]. The mental benefits of yoga are immense such as relaxation, calmness of mind, increased concentration, appreciation of silence, self-control, better coping with stress & tension, and generates positive emotions. It also harnesses mental energy & effort, helps deal with impulsive behaviour and enables to think more clearly [2]. Yogic practices can remove the psychological blocks in the minds of children and also, make them aware of the psychological changes that happen in their body and brain. It can make them aware of their own distractions and give them the ability to focus on the theme of the subject they are studying. It can improve their responses, creativity, receptivity, memory, willpower and behavior [6]. Awareness and consciousness of body and mind makes them to be aware of their own abilities. Alertness and mindfulness makes them to be aware of meaningful learning and to seek meaning in learning. Visualization in meditation aids in stimulating the senses and promotes creativity [3]. Children will be more relaxed, focused, one-pointed and tranquil and less destructive, restless, violent and distracted, in class. All this accelerates learning and improves performance in school. It costs virtually nothing to set up a time for yoga lessons. A 10-minute yoga session per day is adequate and it does not require any equipment. Any open classroom is sufficient for conducting a yoga class. Yoga is not a religious practice, nor does it conflict with any religion, it is a way of life. The sooner it is learned and practiced in life the quality of life is assured. Therefore it is imperative to begin this early in life and school is the best agency to do so.

In India, Yoga has been an integral part of Health and Physical Education that has been a compulsory subject up to the secondary school stage, since 1988. The National Curriculum Framework 2005 [5] adopted a holistic definition of health i

Use of Self-Handicapping Strategies in Learning Context by Pre-Service Teachers: A Study

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ABSTRACT

The aim of the study is to investigate self-handicapping strategies used by pre-service teachers in their learning context and to analyse the use of these strategies and the variation with respect to gender. The sample consisted of 121 pre-service teachers of both genders aged 21 to 24 years and enrolled in the second year of the Bachelors' programme of Education at University of Mysore. The data were collected with the self-reporting Likert scale instrument 'Self-handicapping scale' developed by Rhoades et al (1990). Students reported using self-handicapping strategies to different extents. There was no significant difference found in the use of self-handicapping strategies among male and female pre-service teachers. The importance of identifying the self-handicapping behaviour and developing strategies to overcome the same is discussed in this article.

Keywords: Self-handicapping, Pre-service teachers

INTRODUCTION

The process of education aiming at the holistic development of the individual also has the role of protecting one's self-worth which is very vital. Not only is the curriculum planned to focus on the cognitive and psychomotor domains, but also the affective domains of every individual. Each of these domains influences each other very strongly and results in overall development of the individual. Self-concept and self-esteem are very crucial for an individual to perform effectively. These components guide and shape the development in the positive way. Self-concept and self-esteem tends to develop during the adolescence. It is necessary for adolescents to develop positive self-concept and high self-esteem in for a better and satisfying adulthood.

Evaluation plays a critical role in the education system and usually most students' perception is negative. With reference to the frame of academic context, students' self-esteem is threatened when they fail to be successful in any given task and also carries with them the risk that they may be seen to have low ability. This is mainly due to the reason that they equate their self-worth with academic ability. Hence, evaluation scenarios in most instances are seen as a threat to the self-esteem. Self-esteem and self-worth form the pillars of self-concept in the developmental stages. To protect one's self-worth and prevent being looked as a failure, an individual use various strategies all leading to achieve the objective of maintaining a high self-worth leading to a higher self-esteem. Also, consistent with the self-worth motivation theory, students use self-handicapping as one of the strategies to protect their self-worth in the event of potential failure and in some cases, to enhance their worth in the event of success. Pre-service courses have in-built in its curriculum a much scope

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Gender Issues in Classroom Practices: Perceived Challenges and Mitigative measures

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Abstract

Gender stereotyping and gender-based practices continue to challenge the education system hindering the achievement of Universal Secondary Education. According to NCF (2005), achieving gender equality has been a key objective of education policy in India for over three decades, but it has lacked critical edge in implementation. This study explores occurrence of gender discrimination practices in classroom as perceived by students and teachers with reference to gender bias and gender stereotyping. The study focuses on the innovative practices or strategies implemented by teachers in reducing the prevalence of gender-based practices in terms of gender-inclusiveness and gender-neutrality. A descriptive survey research design was employed for the study. The researcher-developed questionnaire regarding gender-based practices was administered to secondary level students to comprehend the extent of occurrence of gender discrimination. Interviews with teachers and stake-holders are conducted to understand the challenges faced by teachers while implementing the strategies to reduce gender discrimination in curricular practices. The suggestions, innovative practices used by teachers and stakeholders, aiming at mitigating the occurrence of gender discrimination at school are elicited. The findings from this study is expected to have implications for changes in organising the curriculum, transaction methods, and also inputs for content and pedagogy of pre-service and in-service teacher education.

Keywords: Gender issues, Gender equality, Classroom practices, Mitigative measures

Introduction

Despite the recent economic growth and development in India, the nation continues to face large gender inequalities in access to education and occupational status. As of 2009, only two-thirds of girls ages six through 17 were enrolled in school as compared to three-fourth of boys (Kishor & Gupta, 2009). Over the course of development, Indian children are immersed

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Peace Values for Personality Formation among Secondary Schools Students of Karnataka

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ABSTRACT

Peace is dynamic, so is 'Education for Peace'. Peace Values that are imparted to the students through their curriculum, school environment and through their teachers build form them towards fullness of life. This paper discusses about Peace Values and Personality Formation more precisely among adolescents. These students are of KV and JNVs of Karnataka who through their Text Books (NCERT Text Books) have ample opportunity to build themselves as good citizens of the country and world at large.

Keywords: Peace, dynamic, Text Books, NCERT, Karnataka, Personality Formation

Values are underlying principles and priorities on which people base their lives morally. Differences in values are inevitable. If we are to experience peace within as well as around, we need to value relationships. Today living in peace with these relationships upholding universally and constitutionally accepted values is becoming extremely challenging and time testing in the life of a person. If there is no peace value in the mind of the individual life how there can be peace in the world. If one has an educated mind without peace it will be sure to transmit negative peace with fuller knowledge. Persons need to evaluate ones actions and live as a better person who is reflected in his/her personality. Hence knowing self comes before knowing others even in manner of solving personal problems and striving to live in peace in harmony. Education for peace seeks to nurture the knowledge, skills, attitudes, and values that comprise a culture of peace.

Reviews of related literature

Vogt (2016) makes known of how theologians have drawn fruitfully of growing interest in virtues from neuroscience and anthropology fields arguing that a more expensive, inter-disciplinary engagement would enhance theological understandings of virtue, formation and social transformation. Pohlung *et al.* (2017), expresses the role of gratitude and moral elevation in moral identity development. Anselma *et al.* (2016), are of the opinion that Morality's centrality to liking, respecting and understanding others. These have examined morality's relationship to three distinct dimensions of social projection: liking, respecting and knowing a person. They have arrived at an understanding that certain moral traits were more important than others especially honesty, compassion and fairness. Education for peace is holistic. Inner peace is the kernel of collective peace. It is the ability to respond justly and affirmatively to the needs and sufferings of the others is the

Dynamics of Parent Engagement in Preschool

KALPANA VENUGOPAL*

Abstract

This is a narrative of the engagement of parents and family in a preschool. The purposive strategy of action planned in the study is detailed. It entails vivid descriptions of creative ideation, designing, development and process of parent and family involvement in supporting school activities and initiatives. The discussion that ensues draws on the underpinnings to establish the implication of meaningful engagement between the home and the school.

INTRODUCTION

Education is a major concern of the community and therefore the participation and involvement of parents and the family in school is pivotal. Parents have a right to be involved in schools where their children are being educated. No one knows the child better than the parents and family, so schools can learn a great deal from parents' intimate knowledge of their children. Involvement of parents and the family facilitates the relation between the school and home (World Bank, 2007). Relationship with parents and family

may be a way to avoid unexpected intrusions and to reduce antagonism and adverse relations between the community and the school. They can provide the much-needed resources and other volunteer support to the school, such as financial, free labour (development of teaching-learning material), sponsorship and expertise. Involvement of parents and family can improve schools' can accountability and make the school more responsive to the needs of the community. Enhancing family and parents' participation in the school may help increase student development. In other

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CONCEPTUAL THOUGHTS ON COGNITIVE DEVELOPMENT IN YOUNG CHILDREN – A REVIEW

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Abstract: All over the world, research has picked up on early childhood education, especially with respect to the techniques and strategies used in nurturing the development of children in various aspects like cognitive, emotional, social, linguistic and physical. Most of the developed countries are working towards fine tuning the curriculum for early childhood education in terms of making them emotionally balanced, socially adaptive and future-ready with life skills and 21st century skills. Interestingly, it is the 21st century skills viz., Communication, Collaboration, Creative thinking and Critical thinking which lays the foundation for children to develop emotional and social maturity. Also, research has spread the results of nurturing 21st century skills in the early years as an effective strategy for preparing the young generation towards the unknown future. This paper presents a review on how the conceptual thoughts about cognitive development in young children have evolved.

Keywords: Cognitive development, young children, learning for life.

Introduction:

Early childhood care and education systems are being appraised in many countries due to various reasons. A major reason being the growing labour force participation of women which force the existing systems to expand their capacity and extend their services. Another crucial reason is to prepare the children from socio-economically disadvantaged families for formal schooling in primary schools and in preventing psychosocial problems.

Global research indicates that 85% of a child's core brain structure is already complete in the early years and the actual spending on children below 6 years is only one-eighth of the spending on children in the 6-14 age group. Research has also indicated that the chances of a child's brain developing to its full potential are considerably and often irreversibly reduced if the early years are not supported by or embedded in a stimulating and enriching physical and psychosocial environment. The United Nations Development Programme (UNDP), 1990 created the Human Development Index which measures the achievements of countries based



Achieving Learning without Burden in India – An Overview

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Abstract: Children of present day need to be educated differently in order to face the challenges of the century. This can happen only when they enjoy learning and learn how to learn. The key overall thrust of curriculum and pedagogy reform across all stages will be to move the education system towards real understanding and towards learning how to learn - and away from the culture of rote learning. The aim of education will not only be cognitive development, but also building character and creating holistic and well-rounded individuals equipped with the key 21st century skills.

Key Words: Learning without Burden, Joyful Learning.

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Introduction

The statement, "A lot is taught but little is learnt or understood", truly represents the education system in India and has been the focus of discussion for several decades in the field of education and among the policy makers. Both students and teachers seem to have lost their joy in learning. Teachers are not enthusiastic in making learning meaningful and joyful for the students and the textbooks are of no help in this regard. If carrying a bag loaded with books is one dimension of physical burden, the child's daily routine is the other dimension of burden. Added to this is the rigorous academic regime imposed on children by both parents as well as teachers coupled with the harsh focus on examinations and grades. The child is forced to worry about results and hence left with no joy at all but only experience a painful journey on this road of education.

Greater concern with respect to academic burden on students and unsatisfactory quality of learning has been raised and discussed by several committees and groups. Some of them are: Ishwarbhai Patel Review Committee (1977), National Council of Educational Research and

Malli Gandhi

Anthropological Work in Hyderabad and Farhabad Hills: A Study

Malli Gandhi*

Abstract: *Anthropological investigations in Hyderabad were started in 1931. It was carried in Hyderabad on the basis of archaeological remains and aboriginal races found in the hilly regions within the state. Hyderabad State occupied an important position with regard to racial anthropology of India. Many key answers to the tangled questions of racial history of South India were sought here from the living population and the skeletal remains spread over the entire state. Anthropological work in the state began with the study of living aboriginal population of Chenchus who originally inhabited the Farhabad Hills. The then Nizam, Usman Nawab Ali Khan provided all for conducting research in the state. Ghulam Ahmad Khan was appointed as the census commissioner who extended active co-operation to anthropologists. The chief objective of the paper is to study how Anthropological work had critical observations with regard to the tribal community (Chenchus), their indigenous knowledge practices, domestic life, housing patterns, social organisation etc.*

Keywords: *aboriginal races, Nallamalai Hills, Farhabad Hills, reformation, rehabilitation, Chenchus, Pentas, agriculture, livestock, exogamy, social customs, education, ethnic groups.*

INTRODUCTION

Chenchus of Hyderabad and Farhabad Hills

Chenchus of Hyderabad state are one of the aboriginal races in India. They lived in the Farhabad Hills of the state. They were undoubtedly the branch of the Chenchus of the neighbouring Nallamalai Hills. The Hyderabad state and Nallamalai Hills were linked by the Krishna river. Chenchus drifted away from the main stock at an early period due to the floods of Krishna River. There are no authentic records to state when the separation of Chenchus of Hyderabad State took place. However, there was sufficient evidence to prove that separation and isolation took place due to the Farhabad Hills. The Hills undoubtedly helped in providing safe shelter for many of the primitive tribes. Chenchus lived in small *pentas* where *pentas* are called cluster of huts. The 1931 census report stated that there were a total number of 33 Pentas with a

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Research Article

CHARACTERISTICS OF PARTHENOGENESIS IN APHIDS

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ABSTRACT

In different habitats, several species of aphid with worldwide distribution portray both cyclic parthenogenesis (CP) alternating asexual and sexual reproduction and obligate parthenogenesis (OP) of only asexual reproduction, but not only sexual reproduction. The occurrence of CP and OP is respectively widespread and exceptional and influenced mostly by environmental factors which set survival status of aphids through rotation decay and genetic changes, thereby delineating tripartite association among gene, environment and evolution with the significance of reproductive polymorphism.

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INTRODUCTION

Aphids and scale insects, as pests, are economically important for their serious attack on a number of indoor and outdoor plants of most of the places. The biological relevance of both the insects is that they naturally show parthenogenesis in which eggs hatch and embryos develop within a female without fertilization and it is also found in other invertebrates and vertebrates. In the pineapple mealybug (scale insect), *Dysmicoccus brevipes*, asexual reproduction by parthenogenesis and sexual reproduction coexisted in Okinawa, a south-western region of Japan, but only asexual lineage exhibiting obligate apomictic thelytoky was discovered in Ishigaki another region (Tabata et al. 2016). Thus, two patterns of reproductions were found in two Japanese regions of mealybugs.

Sexual reproduction largely predominates in animals and indicates that this is outweighed by the genetic and ecological consequences of sexuality, including both the acquisition of advantageous mutations and the elimination of deleterious mutations occurring in different individuals.

The evolution of sexual reproduction becomes dominant and successful in the face of competition from asexual lineages in the same environment. In the present review paper, the characteristics of plasticity in asexual mode of reproduction are discussed to explore how parthenogenesis is successful in aphids.

Characters of parthenogenesis

Types: Cyclical and Obligate Parthenogenesis

Paterka et al. (2012) reported that in 1956, the Russian wheat aphid, *Diuraphis rufus* (Hemiptera: Aphididae), became an invasive species of USA. Nearly 20 yr later, new biotypes appeared that were capable of overcoming most sources of resistance and became a renewed threat to wheat, *Triticum aestivum*. This is due to the fact that Cyclical (CP) and Obligate (OP) Parthenogenesis enable aphids to both adapt to changing environments and exploit host resources. Paterka et al. (2012) documented these forms of reproduction for Russian wheat aphid in wheat and wild grasses in the Central Great Plains and Rocky Mountain regions during falls 2004-2009. Colonies from sample sites also were held under unheated greenhouse conditions and observed for the presence of sexual morphs and eggs through the winter. Russian wheat aphid populations were mainly OP and attempted to overwinter as adults, regardless of

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Research Article

CHALK CHROMATOGRAPHY: A LOW-COST INVESTIGATORY PROJECT FOR HIGH-SCHOOL STUDENTS

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opinionaire, colours, improvisation.

ABSTRACT

Science experiments and projects are effective tools in achieving learning by doing. Alarminglly, lack of necessary equipments seriously affects Science teaching, which in turn corptels improvisation of low-cost apparatus/experiments. In this context, present study aims to (1) design and propose an innovative and low-cost project on chalk chromatography, (2) determine and compare the Retardation factor / Relative flow (Rf) value of 12 colour inks using it and (3) find out the opinion of teacher trainees about this working model. The method includes marking of twelve coloured ink on twelve shafts and running chromatography using water as solvent. The chromatogram revealed that orange colour had highest Rf value (0.925) and pink had the lowest (0.517). It is to be noted that, Rf values calculated are not consistent hence, this technique is not to be used for analytical purpose. Excepting that limitation, the favorable opinion and remarks of almost all the future teachers (N = 128) establishes that, present working model is innovative, easily improvrisable, low-cost, can help for joyful learning and be able to ignite the creative minds of school children. Hence, the current activity is assertively proposed as a novel idea and a low/ no-cost project for high school students for active learning even at home and to motivate them to go beyond text book.

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INTRODUCTION

Holistic development of the child which is the aim of the education is only achievable with pragmatic approach which imparts learning by doing and experiencing things. Science experiments and projects are very efficient tools in creating interest in learning, developing skills, nurturing creativity, instilling scientific attitude and training in scientific method (Aghogun 1991). It encourages students to be an independent learner, critical thinker and problem solvers (Shymansky et al., 1990; Carin and Bass, 2001; Kolb, 1984). It also facilitates hands-on and minds-on learning which improves the quality of instruction in-turn the education (Saroja and Evelyn, 2014). Further, Ogunnyi (1982) and Yara (2010) said that laboratory occupies central position in Science instruction where theory is practiced with lots of activities. Further, Adenira (2006) and Yara (2010) stated that laboratory strategy provides non-threatening, realistic and concrete approach to learn Science. In addition, Oyediji (2000) found that students taught with laboratory instruction method performed significantly better than those taught with traditional lecture and text book method.

Alarminglly, Ziad et al. (2014) and Hamidu et al. (2014) reported that lack of necessary equipments and time constraint are the top barriers of effective Science teaching. In this context, as an attempt to find solution to such long existing problems of many schools, the present study aims to (1) design and propose an innovative, easily improvrisable and low cost project on chalk chromatography, (2) determine and compare the Retardation factor / Relative flow (Rf) value of 12 colour inks using it and (3) find out the opinion of teacher trainees about this working model.

Chromatography is a laboratory technique to separate a compound from the mixture. The mixture is dissolved in a fluid called mobile phase, which carries it through a structure holding another material called stationary phase. The various constituents of the mixture travel at different speed causing them to separate. It has different types like column, thin layer and paper, and ascending, descending and circular chromatography.

Review of Related Studies

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SIMPLE METHOD TO STUDY GEOTAXIS IN DROSOPHILA: AN INEXPENSIVE APPARATUS TO DEVELOP 'HOME LAB'

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Abstract

Teaching and learning strategies must be designed in such a way that that, it should help students achieve the wide range of knowledge, skill and values about Sustainable Development. In this regard present study aims to improvise an innovative, inexpensive and simple method to make a comparative study of geotactic responses of three strains of *Drosophila melanogaster*, which can also be performed by the school students (of IX-XII classes) even at home. Inexpensive, durable and transparent plastic tubes of three numbers were improvised using OHP sheets. The tube were graduated from 0-80cm and divided in to four quarters of 20cm height each. Normal red eye (OK), mutant sepia eye (se) and white (w) *D melanogaster* flies were introduced into the tubes and their climbing ability were assessed. Results showed that 77.6% of OK flies were climbed up in the tube and 49.6% of w flies stayed inside the bottle. It may be concluded that, se was highly negative geotactic and w exhibited poor negative geotaxis. The presently improvised setup performs the desired task and can be a novel apparatus to build a 'Home Lab'. Further, as the materials used in the experiment are low cost, reusable and no animal was killed/ harmed, this may indirectly inculcate the values of sustainable development.

Key words: Sustained development, climbing ability, negative geotaxis, improvisation, mutants.

Introduction

Children are natural scientists and experiments are the wonderful method to learn Science. Although scientific principles are the main focus of the laboratory experiments, children will also learn all kinds of other skills like handling apparatus, measuring, calculation, cleaning, reading, and writing, as well they gain the knowledge of using the waste, which contributes for the sustainable development. Therefore, teaching and learning strategies must be designed in such a way that that, it can help students achieve the wide range of knowledge, skill and values about sustainable development. Incidentally, present study aims to improvise, inexpensive and simple method to make a comparative study of geotactic responses of three strains of *Drosophila melanogaster* (without killing/ harming any animal), which can also be performed by the school students (of IX-XII classes) even at home.

Behaviors are quantitative traits determined through actions of multiple and pleiotropic genes and subject to genome-environment interactions (Ashult, 2004). Geotaxis which is driven by the gravity is an instinct behavior and it increases reproductive success (Ricker and Hirsch, 1985) and has been extensively studied with *Drosophila* in the past. Linderman, et al. (2012) defined negative geotaxis as the measure of how quickly a fly is able to climb vertically after being tapped to the bottom of a vessel as a part of innate escape response. Studies establish molecular and neural mechanisms underlying their behavioral responses to gravity (Inagaki, et al., 2010). For instance, Mertens (2005) found that, Pigment-Dispersing Factor receptor signaling in *Drosophila* contributes to geotactic behaviors. Stoltenberg and Hirsch (1997) reported that in addition to chromosome I, II and III, Y-chromosome also affects *Drosophila*'s geotaxis. The locus of geotaxis behavior in *D melanogaster* has been mapped (Desroches et al., 2010) and 18 candidate genes are now implicated (Armstrong et al., 2006). Further, genes involved in geotaxis of *D melanogaster* are identified (Tuma, et al., 2002) and found in heterozygous state in *D pseudoobscura* (Dobzhansky and Spassky, 1962).





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Research Article

DO DROSOPHILA LARVAE PREFER LIGHT OR DARK?-AN IMPROVED INVESTIGATORY PROJECT FOR HIGH SCHOOL STUDENTS TO GO BEYOND TEXT BOOK

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Phototaxis, practical classes, mutants, transition, rava-jaggery' medium

ABSTRACT

Present study aims to explore the phototactic behavior of larvae of three *Drosophila melanogaster* strains (namely Oregon K, sepia eye and white eye) with an improvised low-cost setup, which in turn may be a useful project for the school students of IX - XII classes. Simple light-dark preference test was carried out using a pair of glass Petri dishes with dark and light area, small cupboard and LED torch emitting 1000 lux light. Number of larvae in light and dark area was captured using a smart phone and their percentage was calculated. Results showed that all the three strains of larvae were negatively phototactic and normal O.K larvae were more (84%) sensitive to light than the mutant sepia (70%) and white (71%) eyed larvae. There may exist a relation between phototaxis response and eye color. Further, as the pre and in-service teachers opined, this study can be an effective project for the higher secondary students for active learning by doing and to go beyond text book.

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INTRODUCTION

Appropriate preference for light or dark can be crucial for an animal's survival (Gong *et al.*, 2010). Studies found two types of photo-receptor neurons (PRs) expressed by either Rhodopsin5 and Rhodopsin6 in the larval eye (Salcedo *et al.*, 1999; Sprecher *et al.*, 2007; Keene *et al.*, 2011; Hassan *et al.*, 2005) and Humber and Sprecher (2017) found that only the Rhodopsin5 subtype is essential for light avoidance. Gong *et al.* (2010) reported that two pairs of isomorphic neurons in the central brain switch the larval light preference. Further, Xiang *et al.* (2010) found that light-avoidance-mediating-photoreceptors tile the larval body wall. Carl Friedrich and Thomas (2017) mapped the larval eye's mind to understand the neural circuitry of larval vision. Further, Zhao *et al.* (2017) stated that turns with multiple and single head cast mediate *Drosophila* larval light avoidance. Studies also stated that, visual pathways which mediate *Drosophila* larval light avoidance and circadian clock entrainment are distinct (Keene *et al.*, 2011) and are developmentally related (Hassan *et al.*, 2005). Rodriguez and Campos (2009) reported that inactivation of DOPA decarboxylase neurons increases the response to light throughout larval development and Mapel *et al.* (2002) found the strong role of neofA-encoded phospholipase C signaling

along with Rh5 and Rh6 in both larval and adult extra-retinal circadian photoreception. Studies as well compared the larval and adult photoreception mechanisms and stated that larval and adult photoreceptors use different mechanisms to specify the same Rhodopsin fates (Sprecher *et al.*, 2007); and some transcription factors regulate diverse aspects of larval and adult photoreceptor development at different stages and in a context-dependent manner (Mishra *et al.*, 2013). Furthermore, Rodriguez and Campos (2009) stated that *Drosophila* larval photobehavior can be used to study the control of locomotion. Practical classes bring the theory in action to verify Science concepts and provide empirical evidences. Not only that, they develop problem solving and reasoning ability, enhance mastering the subject, provide the scope for learning by doing, inculcates practical skills, trains in scientific methods and cultivates scientific temper (NCERT, 2006). Studies proved that, students learning with lots of experiments understand the concept well and get high marks in exams (Emerson and Taylor, 2004; Ball *et al.*, 2006). Correspondingly, Frank (1997) finds that, compared to students in a control class, students' homework scores increase when they participate in an experiment related to the homework topic.

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THERMOTAXIS ASSAY ON DROSOPHILA MELANOGASTER USING HAIR DRYER GENERATED THERMAL DIVISION SETUP: SIMPLE INVESTIGATORY PROJECT FOR HIGH SCHOOL STUDENTS

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Abstract: Present study aims to make a comparative study on thermotaxis behavior among the three strains (OK, *se* and *w*) of adult *Drosophila melanogaster* using an improvised setup and to propose this simple investigation as a project for IX - XII class students. Using low-cost materials like OHP sheets, 90cm long tubes were prepared and thermal division / difference of 10 °C (24.5 and 34.5 °C) were created using hot air from hair dryer. With the standardised method thermal preference was assayed. Results show that all the three strains of flies were negatively thermotactic, avoiding higher and preferring lower temperature; and *se* flies were more sensitive than others. Further, presently improvised setup provides a new and simple method for investigating thermotaxis in *Drosophila*. Therefore, this experiment is proposed as a project for the students of IX to XII classes to develop inquisitive mind.

Key Words: Thermal gradient, improvisation, mutants, smart counting and bet-hedging strategy.

Introduction

Drosophila melanogaster is a poikilothermic organism that must sense and respond to both fine and coarse changes in environmental temperature for comfortable survival [1]. Even minor deviations in environmental temperature can have major impacts on development and lifespan [2] and ultimately the Darwinian fitness [3]. *Drosophila* uses multiple, redundant signaling pathways and neural circuits to execute thermotaxis behavior. Recent works has uncovered some of the key molecules mediating flies' thermo-sensation including the Transient Receptor Potential (TRP) channels [4], [5] and Gustatory receptor Gr28b [6]. Reference [7] found that for slow response TRPA1 is required and Gr28b is for rapid response. Studies have identified in the brain a set of warmth-activated anterior cell neurons [8], Dorsal Organ Cool Cells - a set of thermo-sensitive neuron for larval cool avoidance [9], [10]. Reference [11] stated that fine thermal discrimination of larva is depends on multiple rhodopsins and reference [12] found that projection neurons get excited by cooling, warmth or both in *Drosophila*. Similarly, reference [13] reported

that, parallel mushroom body circuits- the β' and β -systems control temperature-preference in *Drosophila* during aging. On the other hand, reference [14] reported that histamine and its receptors modulate temperature-preference behavior and reference [15] demonstrated that neuropeptide diuretic hormone 31 (DH31) and Pigment Dispersing Factor Receptor (PDFR) contribute to regulate the preferred temperature decrease at night-onset. Variability in thermal preference may reflect an adaptive bet-hedging strategy [16]. Further, *D. melanogaster* rely on behavioral strategies to stabilize their body temperature [17] and reference [18] opined that such thermoregulatory strategies may shape immune investment.

For in-depth understanding of thermotaxis behavior of *Drosophila* (larvae / adult) studies in the past used various methods and materials. Basically, in all these methods a gradient is typically created by heating and cooling opposite ends of a thermally conductive material [19], [20], [21], [22]. For instance, horizontal thermal gradient apparatus [23], [11], aluminium blocks containing temperature controlled circulating water [24], using lamp as





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Research Article

EFFECTS OF ELEMENTS ON THE CANCER SUPPRESSING GENE p53

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p53 gene, element effects, apoptosis,
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ABSTRACT

There are evidences to show environmental and occupational exposures of people to excess levels of elements resulting in health risk. Though p53 is generally known as a cancer suppressor gene through its expression and production of anti-cancer proteins, elements with carcinogenic properties, like arsenic, cadmium, mercury, nickel, chromium VI, affect both p53 expression and its functions such as DNA repair, cell growth arrest and apoptosis. There is one more mechanism of element indirect interference with p53 over expression by affecting its regulatory agent of MDM-2. In addition to carcinogenic effect, certain other elements e.g., cobalt, beryllium, etc., at minimum doses involve in p53 expression to act as cancer preventive agents.

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INTRODUCTION

The prevalence of cancer in the world is increasing and in certain cases the causal factors and mechanism of occurrence could not be identified. p53, is a gene, which codes for a protein regulating the cell cycle. It performs as a tumour suppressor gene. In cells of multicellular organisms, it conserve chromosomal stability by preventing genome mutation and popularly known as 'Guardian of Genome'. Arnold J Levine was widely acclaimed researcher of cancer biology for the first time discovery of p53 in 1979. In-vitro introduction of p53 in to p53-deficient cells has been shown to cause rapid death of cancer cells or prevention of further division.

Rapid industrialization is discharging toxic heavy metals into the environment. Several studies have indicated over exposure of human beings to the elements which are found in drinking water, food and air beyond the permissible limit of the World Health Organization. Further, certain elements namely arsenic, lead, mercury, etc. exist ubiquitously in the environment, and exhibits carcinogenicity. Consequently, health hazards like neurologic, cardiovascular, and dermatologic abnormalities and cancers are associated with the rising environmental pollution (Arshad et al. 2015). Occupational exposure to metals such as cobalt and beryllium

represents a risk factor for immune-mediated and respiratory diseases.

When different types of elements participating in multiple physiological roles, enter and accumulate in different tissues of body, their nature of effects is many fold. In the present review, the significant association of elements and p53 gene are discussed.

Structure, role and regulation of p53

In human being, p53 gene is situated on the 17th chromosome (17p13.1). The name is because of its molecular mass with 53 kilodalton fraction of cell proteins. The p53 protein is a phosphoprotein made of 393 amino acids and consists of four units. In normal cells, the p53 protein status (level and function) is low. DNA damage and stress signals may cause the raise of p53 proteins, which have three major functions, namely growth arrest, DNA repair and apoptosis (cell death). The growth arrest stops the progression of cell cycle and replication of damage of DNA. During the growth arrest, p53 may activate the transcription of proteins involved in DNA repair. Lastly, apoptosis has to avoid proliferation of abnormal DNA of cells.

The concentration of p53 is correctly controlled in cells. While it can suppress tumours at normal level, high level of p53 may cause harmful effect of exhausting aging process by

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Research Article

BLOOD-LEAD LEVEL AS A BIOMARKER OF HUMAN EXPOSURE TO ENVIRONMENTAL POLLUTION AND HEALTH RISK

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Lead poisoning, Human blood, Biomarker,
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ABSTRACT

Blood, a specialized liquid tissue is not only a primary clinical sample for diagnosis of diseases, but also biological sample for assessing human exposure to environmental elements and for relating its higher status with environmental and occupational health risk. Lead among other trace elements, is best indicated by blood sample in comparison to other samples namely urine, teeth, hair, nail etc. Hence, blood lead levels have been widely assessed throughout world. The mean concentration of blood lead, lesser than 5 µg/dL, is considered as the reference value useful for comparison between subjects of different places to recognize whether the subject is exposed to a particular source of lead pollution. Among other groups (adults, women and workers), pregnant mothers and children are studied generally for their exposure status, because they are most susceptible to toxic effects of lead. Blood lead levels of subjects from a region are compared with lead levels of environmental samples (air, water, soil, food) to find source and with their metabolic parameters and characters of several diseases to predict health hazards.

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INTRODUCTION

Environmental monitoring is a systematic method practiced throughout the world for assessing human exposures to chemical substance of natural and man-made sources, based on sampling and analysis of substances of environmental origin and tissues and fluids of the subjects. This technique takes advantage of the knowledge that chemicals that have entered the human body leave markers reflecting the exposure. The marker may be the chemical itself or breakdown product of the chemical or some change in the body that is a result of the action of the chemical on the individual and habitat of the subjects. For example alteration in the levels of certain enzymes or other proteins, modifications of normal body process and the environment may serve as markers of exposure. In the case of elements, the fluctuating levels are considered as the biomarkers of human exposure.

In the modern world, synthetic chemicals are a part of every aspect of human life; they are critical to preventing and treating disease, the transportation, to agricultural production and to the many consumer products used for supporting the standard of living that we enjoy. Therefore, it is not surprising that many of these find their way into the soil, air, water and food and thus ultimately into the fluids and tissues of individuals. So,

biomonitoring of lead (Pb) may be used to assess its levels, effects and sources whether natural or man-made means of reaching the environment. For example, lead being available as naturally existing forms or pollution products that are part of the food that we eat, water that we drink and the air that we breathe can be determined in the blood of subjects from different habitats to serve as a valuable tool in various public health activities aimed at avoiding the deleterious effects associated with exposure to toxic substances.

Lead contamination is widespread throughout the world and all the groups of subjects from fetus in womb, children and adults in home, outside and working places are exposed to lead from various sources. From a risk assessment of blood lead level (BLL) and risk-management perspectives, the present review targets to

- ✓ Establish baseline and reference levels for environmental chemicals.
- ✓ Apply in clinical evaluations to assess individual risk of exposure.
- ✓ Identify highly exposed sub populations and health endpoints of concern.

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HANDS-ON AND MINDS-ON LEARNING OF SCHOOL CHILDREN IN ZOOLOGY MUSEUM

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Abstract: Present study aimed to find out the IVth class students' learning experience and achievement levels after they visited a Zoology museum. The students were guided to observe museum exhibits with explanation. Every student submitted a museum visit report and attended a posttest after a week time. Their reports and posttest marks were analyzed and results were discussed. It is observed that the children were much enthusiastic on seeing varieties of animals in one place, posed many questions and actively involved in touching and holding the specimens (birds, starfish, etc.). Further, achievement test score of girls ranged from 3 to 9 with the average value of 6.73 and that of boys from 6 to 10 with average of 8.25, but their averages were not significantly different ($t = 0.047$). The kinesthetic learning experiences were found associated with developing many skills and motivating them to participate actively in various learning processes and accomplish better learning outcomes. They understood the concepts of adaptation, structure and function relation. Though they expressed concern and kindness towards animals, they could not comprehend 'biodiversity'. In addition, museum visit can help in popularizing science and bridging the school and community. Therefore, it is strongly recommended that museum visit may be considered as an essential part of beyond school activity for hands-on and minds-on learning.

Keywords: Kinesthetic learning, active participation, science popularization, animal museum visit.

I. INTRODUCTION

Museum exhibits do more than entertainment and enhance students' knowledge and motivation (Allen, 2004) and optimize the connection between science and everyday life (Marris et al., 2016). A few studies also reported that museum trip can enrich environmental awareness (Puzalan and Facalante, 2021), develop inquiry skills (Ash, 2003), provide opportunities for sensory and aesthetic encounters (Bell, 2017), sustain interest in learning, develop social skills, problem solving ability and regulate the emotions of children (Luke et al., 2019). In this connection, a few suggestions were made, particularly for optimum integration of classroom and museum experiences for effective learning (Ziebell and Saha, 2020), a national frame work to support learning in museum (Wardrip and Braham, 2020) and teacher's independence to transform student learning in the museum (Krucoff, 2019).

Purushottam

DISTANCE EDUCATION

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INTRODUCTION

In an era where we are talking of open educational resources and mega universities in the context of distance education, it is astonishing to notice that distance education had a humble beginning in the non-traditional efforts of some individuals. Though the prospective aims of establishing this form of education has changed over the centuries, yet the basic intention of closing the "social gap" in higher education has remained intact.

It is felt that equality of educational opportunities should be provided, there should be greater access to higher education and those who have missed educational opportunities earlier should have a second chance. In view of the changed circumstances for working people and housewives as well. But in developing countries there is a need to meet the shortages of technical manpower which the existing conventional universities are unable meet. Further the quality of education should be made relevant to the needs of the country. A system that can meet all these demands has to be innovative and flexible and distance education, it is believed that it can meet some of the educational needs of the country. Several countries of the world, which practice distance education are many nations in the world.

The term open and distance learning reflects both the fact that all or most of the teaching is conducted by someone who is away from the learner, and that the mission aims to include greater dimensions of openness and flexibility, whether in terms of access, curriculum or other elements of structure. Open and distance learning systems can usually be described as made up of a range of components such as: the mission or goal of a particular system, programs and curricula, teaching/learning, strategies and techniques, learning material and resources, communication and interaction, support and delivery systems, students/tutors, staff and other experts, management housing and equipment, and evaluation. The open distance learning system is used for school age children and youth those who are unable to attend ordinary

schools, or to support teaching in schools, both at primary and secondary level. However, most courses and programmes are aimed at the adult population.

OBJECTIVES OF DISTANCE EDUCATION

- To study the need and importance of distance education in present scenario.
- Analyse the effectiveness of distance education in present education system.
- To study the present status of distance education.
- Compare the standard of education between regular and distance education system.
- To analyse the effectiveness and implementation of technology in distance education system.

MEANING AND DEFINITIONS

There is an extensive overlap between the use of the term "open education" and "distance education". The decision of the UK government in mid 1960s to rename the University of the Air "The open university" popularized the term "open". The terms are not, however synonymous, "distance education", has mentioned earlier, replaced the expression "Correspondence Education" whereas open education is a term which even face to face or non-distance education institutions may use.

To solve this problem distance education is considered as an alternative to the formal system and most of the countries are making use of this method of teaching at distance which denotes the application of multimedia approach. During the entire learning process which offer correspondence courses at certificate, diploma, graduate and post-graduate levels.

DEFINITIONS

"Distance teaching may be defined as the family of instructional methods in which the teaching behaviours are executed apart from the learning behaviours, including those that in a contiguous situation would be performed in

PV Manjula

Study of the Effectiveness of Computer Aided Instruction for Teaching the Concept of Place-Value to Primary School Children with Hearing Impairment

Ms. P. V. Ramanakumari[1]

Ms. P. V. Manjula[2]

Abstract:

Computer can play vital role in learning process as it can work with the imagination of students. The concept of Place value is a fundamental mathematical concept in the students' mathematics learning. A conceptual analysis and explication of the concept of "Place-value" points to a more effective method of teaching it.

Pupil with hearing loss face many problems in the learning process. Their inability to hear or the hearing of little sound and speech initiate's adverse academic implications that leads to their underperformance. Lack of adequate input brings about a delay in abstract reasoning necessary for effective academic performance. Computer assisted instruction plays very important role in this situation.

The present study aimed at developing computer aided instruction (CAI) for teaching the concept of place value to primary school children with hearing impairment and also studying its effectiveness in teaching the concept. Two matched groups, one using CAI and the other in the traditional method were employed in the study. The pre- and post- test carried out on the two groups showed that the group which used computer assisted learning program performed significantly better than the group that used traditional methods in both the speed of learning as well as practical usage of the concept.

Keywords: Hearing impairment, Computer Aided Instruction, Place value, Technological strategies

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I. INTRODUCTION

"Education is the harmonious and progressive development of all the innate powers and faculties of man- physical, intellectual and moral".

Pestalozzi

Education is very important in all stages of human life. Education has been the torch bearer of humanity's most noble ideals. School education in recent times has emerged as an important segment of the total education system expected to contribute significantly to the individual as well as the national development processes.

Elementary education is the most crucial stage of education spanning the first eight years of schooling. The foundation for the development of personality, attitudes, social confidence, habits, learning skills, and communicating abilities of pupils is laid in these years. The basic skills of 3 R's are acquired at this stage. The importance of quality of elementary education hardly needs any emphasis. If a child goes through good education at this stage, he will never look back in life for he has been adequately prepared to exercise his initiative to overcome difficulties.

Technology means the systematic application of scientific or other organized knowledge to a practical task. Educational technology is the use of technology to improve education. It is a systematic, iterative process for designing instruction or training used to improve performance. Educational

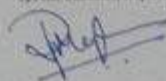
technology is sometimes also known as instructional technology or learning technology. (Wikipedia: Educational technology).

Educational technology is based on theoretical knowledge from different disciplines (communication, psychology, sociology, philosophy, artificial intelligence, computer science, etc.) plus experiential knowledge from educational practice (Natalie Deseryver).

Educational Technology has developed into a wide, independent discipline, encompassing several definitions and practices, some of which may be conflicting and contradicting. Educational Technology can be considered either as a design science or as a collection of different research interests addressing fundamental issues of learning, teaching, and social organization. Nevertheless, there are a few fundamental principles that are to govern the practices of Educational Technology. (Alessi & Stanley, 2001).

1) Use of technology is principled: Technology means the systematic application of scientific knowledge to practical tasks. Therefore, Educational Technology is based on theoretical knowledge drawn from different disciplines (communication, education, psychology, sociology, philosophy, artificial intelligence, computer science, etc.) plus experiential knowledge drawn from educational practice.

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Raghu V D

Abstract

Motivated strongly by L - Matrix of colored graph[1] and Harary matrix[7][15], in the present paper color Harary matrix and color Harary energy are defined. McClelland's type upper and lower bounds are derived for color Harary energy. Color Harary spectrum for certain standard graphs are worked out.

Subject Classification: 05C15, 05C50.

Keywords: Colored Harary spectrum, Color Harary energy.

1. Introduction

Vertex labels, vertex colors, vertex marking by signs and so on are powerful combinatorial tools in graph theory with many applications [3] [4][11]. Equally effective tools of linear algebra in graph theory are matrices representing graph and their spectrum [5][6][9][14]. Starting with the concept of π -electron energy of a graph introduced by Gutman[8], there are many research articles available in the literature on different types of energy of a graph [5][9][14]. $(0, 1)$ adjacency matrix, $(0, 1, -1)$ Sidel matrix, Degree matrix, Lapcian and Signless Laplacian are the guiding matrices for introducing any new types of matrix for a graph. They have many applications [6]. For a connected graph distance matrix, Harary matrix, Transmission matrix, Laplacian distance and Laplacian Harary matrices are providing new tools based on distance between two vertices or their reciprocals to study spectral graph theory [7][10][12][13][15]. Recently ideas of labeling, coloring and marking of vertices [1][2][11] are also exploited to define matrices representing graphs.

Let $G=(V(G), E(G))$ be a connected graph on vertex set $V(G)=\{v_1, v_2, \dots, v_n\}$ and edge set $E(G)$. The distance between the vertices v_i and v_j , denoted by $d_{ij} = d(v_i, v_j)$ is the length of shortest path between them. The adjacency matrix $A(G) = (a_{ij})$ of the graph G is a square matrix of order n , where

$$(a_{ij}) = \begin{cases} 1, & \text{if the vertices } v_i \text{ and } v_j \text{ are adjacent;} \\ 0, & \text{otherwise.} \end{cases}$$

Since $A(G)$ is symmetric, its eigenvalues $\lambda_1, \lambda_2, \dots, \lambda_n$ are all real numbers, whose sum is equal to zero. The energy $E(G)$ of a graph G [14] is defined as

$$E(G) = \sum_{i=1}^n |\lambda_i|.$$



On maximum degree (signless) Laplacian matrix of a graph

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Abstract

Let G be a simple graph on n vertices and v_1, v_2, \dots, v_n be the vertices of G . We denote the degree of a vertex v_i in G by $d_G(v_i) = d_i$. The maximum degree matrix of G , denoted by $M(G)$, is the real symmetric matrix with its ij th entry equal to $\max\{d_i, d_j\}$ if the vertices v_i and v_j are adjacent in G , 0 otherwise. In analogous to the definitions of Laplacian matrix and signless Laplacian matrix of a graph, we consider Laplacian and signless Laplacian for the maximum degree matrix, called the maximum degree Laplacian matrix and the maximum degree signless Laplacian matrix, respectively. Also, we introduce maximum degree Laplacian energy and maximum degree signless Laplacian energy of a graph. Then we determine the maximum degree (signless) Laplacian energy of some graphs in terms of ordinary energy, and (signless) Laplacian energy. We compute the maximum degree (signless) Laplacian spectra of some graph compositions. A lower and upper bound for the largest eigenvalue of the maximum degree (signless) Laplacian matrix is established and also we determine an upper bound for the second smallest eigenvalue of maximum degree Laplacian matrix in terms of vertex connectivity. We also determine bounds for the maximum degree (signless) Laplacian energy in terms of first Zagreb index.

Keywords: Maximum degree matrix, maximum degree Laplacian matrix, maximum degree signless Laplacian matrix.

AMS subject classification : 05C50.

Independent Transversal Dominating Energy of a Graph

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Abstract

Let G be a simple graph and let $V(G)$ be its vertex set. The independent transversal dominating set or γ_{it} -set is a dominating set of G which intersects every maximal independent set of G . Using the γ_{it} -set, a diagonal matrix is constructed which is similar to the ones available in the literature for covering set, equitable dominating set and so on. Using the idea of signless Laplacian, one can add this diagonal matrix to the usual adjacency matrix of G to obtain new matrix called independent transversal dominating adjacency matrix denoted by $A_{it}(G)$. The sum of all the absolute values of eigenvalues of $A_{it}(G)$ is called independent transversal dominating energy denoted by $E_{it}(G)$. In the present paper, some spectral properties of $A_{it}(G)$ are obtained. Some upper and lower bounds for the largest eigenvalue of $A_{it}(G)$ and $E_{it}(G)$ are derived. $E_{it}(G)$ is obtained for some standard graphs.

Keywords: Spectrum of independent transversal dominating matrix, independent transversal dominating energy of a graph.

AMS subject classification : 05C50.

1 Introduction

All graphs considered in this paper are finite, undirected, loopless, and without multiple edges. We denote the vertex set and the edge set of a graph G by $V(G)$ and $E(G)$ with $|V(G)| = n$ and $|E(G)| = m$ called order and size of G respectively. The minimum and maximum degree of a vertex of G are denoted by $\delta(G)$ and $\Delta(G)$ respectively. For more concepts and standard results on graph theory one may refer [3, 4, 6]. A set S of vertices is independent if no two vertices in S are adjacent. An independent set of maximum cardinality is a maximum independent set of G . A subset D of the vertex set V of G is called a dominating set of G if every vertex $v \in V - D$ is adjacent to some vertex in D . The domination number of G , $\gamma(G)$ is the minimum cardinality of a dominating set in G . A minimum dominating set of a graph G is called a γ -set of G [17]. A subset C of $V(G)$ is called covering set of G if every edge of G is incident

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Visions, nightmares and naval chords-obsessions of modernist literature

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Abstract

This paper is a study of recurring images of the obsession with the novel signifying both union and separation. Drawing heavily on the theories of psychoanalysis developed by Sigmund Freud and others, modernist fiction inaugurated by Ulysses plunges into networking patterns of the contemporary cityscapes. The persistent allusions to vampires and rats penetrating and disrupting the extensive life veins of the urban civilization gets subliminally connected to the metaphor of the novel, serving as a point to return, a rat that binds and ruptures as well. Beyond theme of leaving the home and returning to it has its centrality in the novel, oedipal theme and not entirely unconnected to female gaze which Freud illustrates in his theories.

Keywords: Networks, novel, oedipal, brains, primal mauling, auto-erotic pleasures

Introduction

The modern literature is entangled in the labyrinthine pattern of connections existing in sexual, linguistic, financial and pathogenic ideas, which is richly suggested by the nets of Stephen Dedalus, Mrs. Ramsay's knitting needles and the countless web like patterns in the Freudian dream analysis. A creature which is notoriously synonymous with acts of infiltration into modernist networks is the rat, the rampant symbol of decay and devastation unleashed by the cultural decadence and apathy. The rats make the insidious intrusions into every firm and aspect of the modern networks like sewers, transportation systems, the infernal world of pipes and cables. By making nocturnal intrusions into the very life-veins of contemporary city civilisations, rats unleash an unaverted attack on the very pretensions and facades of world which has already started revealing signs of decay and degeneration. Rats in a way becomes the visible manifestations of an irreversible process determined by the mysterious deniers of history.

Historically rats resurface at those junctures, when the cyclic patterns of time begins to reveal signs of an inevitable sundown time, as *The Wreckland* has its "rat alley" and the cemetery episode in *Ulysses* and Freudian explorations into the case history of the Rat Man. One of the lesser studied aspects of literature is the incidental familial similarity between rats and vampires. One of the exemplar instances is the episode of Dracula's transformation into a swarm of rats when the Vampire makes his inroads into Great Britain. Bram Stoker must be having the striking but nearly imperceptible analogy existing between rats penetrating the walls and vampires penetrating the bodies. Both are calculated acts of violating the permissible boundaries. Even as the vampires are leeching the blood of the victim caught at the zenith of an organic act, the rats draw out the life blood of the city by disrupting its manmade circularity.

There is a new death like obsession with the vampires in Modernist fiction, beginning with the ironic Dracula to James's *The Sacred Fount* (1901) and Stephen's poem in *Ulysses* (1922) ⁸⁹. Vampirism is one of the possible ways of exploring self with the other. Van Helsing in Dracula makes the succinct observation as he remarks that, the invitation extended to the vampire presumably grants him the infinite freedom to come and go as he pleases. In a rather unexpected way Vampirism annulled forever the traditional boundaries and divide between high and popular literature. With his manifold diversified acts in telepathy, spiritualism, demonic possession and invasion, has often been described as a phobic reaction against the intrusions of technology. Modernist city civilisations have extensive networks serving as their lifeblood, like that of water, gas, electricity and telephone. Life was no longer something which could be taken for granted. Along with this ushering in of innovative networking, there began to arise serious ethical and ideological

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CULTURAL PRODUCTIONS AND LITERARY HISTORIES- A CRITICAL STUDY

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ABSTRACT

Themes of cultural production has never failed to inspire a lot of accompanying controversies. Raymond Williams once referred to culture as one of the most dangerous words in the language. The economic complexities associated with culture worked yet another dimension, with the arrival of the Cultural production on the scene, which was ridden with perceptible subjects of political and economic realities which had turned out to be the bestative grounds capable of determining the leitmotifs of the cultural production, which inevitably began to meet its end in every nuanced detail of post industrial world. Cultural was no longer depended on the traditional meanings, dogmas and collective ideals as their place effectively taken over the cultural movements of a latter day capitalist bourgeois aesthetic which was heavily determined by underlying allegiance to the realities of the emerging market economies. The paper is a detailed analysis of the deepened growth and flourishing of cultural productions.

KEYWORDS : transmission of culture, knowledge systems, imperial culture, Indigenous culture, lecturing practices, dehumanizing equivalents

Cultural production, as a powerful metaphor has crept into the language in the second half of 19th-century, but the idea already made its presence much before, over since the beginnings of the print culture. During the age of Romanticism itself cultural production had its beginnings from poets, novelists, playwrights, actors, printers, editors, publishers and others. Together they created a culture which mostly went against the norms of the day and created a horse space in the world of literature, philosophy and arts. In this frame of reference we usually tend to ignore the role played out by administrators in the creation and dissemination of culture across the various artists, literary and philosophers. The apparatus and bureaucratic hierarchies began to play major parts in the emergence of literature. This was something unprecedented in the entire history of literature and ideology.

Till the 1800s ecclesiastical and political Authority was in the case of the Catholics played a pivotal part in determining the various paths of the social culture, could be seen in the labelling of Christ as 'great administrator general of the human world'. This word of administrator had once suggested a multiplicity of themes and images holding relevance to art, sciences and other aspects of the cultural production, most of which remains in terms tangible and nearly indecipherable. This is a way paved way for the evolution and transmission of culture, whose innovative and inclusive character excluded the human player and ultimately reduced him to a mere spectator and onlooker.

The change over from administrator to manager began to signify more than one idea associated with the theme of cultural production. Originally manager used to be a designation of someone who is managing the playhouse and director on the lines on the suggested meaning of somebody managing a corporate enterprise which gradually came to be connected to a person capable of producing and managing knowledge systems as the case the Royal Society had. The director is a designation that came later on adding a commercial character to which till then had been a matter of art and records. Historically the word takes its beginnings in Netherlands and later on came to be associated with a certain authority wielding institutional designation in British East India company. In the times that followed all these diverse designations like managers, director and proprietor somehow got intricately connected to the subtle strategies along which the culture and the cultural production began to take place, as can be seen in similar instances the way these ideas get originated, disseminated, and finally gets firmly rooted seems mostly impervious, carrying an unmistakable signs of the imperial domination, the imperial culture and the gradual marginalization of the indigenous cultures and institutions.

From the academic and institutional status that lecturers were gradually passing over to the celebrity status wielded by the lecturers, attributing a three dimensional scope of sciences and the theme of living arts. These lectures began to possess a character of their own which imparts an added sheen to the scene of institutions or university as well as to the persons who became the economic backbone of these lectures and sometimes it's up intellectual inspiration as well. Peter George Farnham comments "no country but England versus anything of the kind. It is only here that extensive and really important institutions like this can be conducted with the spirit and the fact that they are". But another unexpected aftermath of this extensive and widespread lecturing practices has been that along with the institutionalization and creation of the celebrity or the people the paper began to fetterize the lectures and the topics that deserved much more detailed interrogation than mere fashion and entertainment. The inevitable conclusion that develops from this celebrity encumbered audience gradually began to take it for granted and even the lectures that deserved a special and complex listening fell into the collective essential of vestige.

It became increasingly evident from the very beginning that institutions and universities would never be able to continue the process of these lectures which were becoming more and more regular as well as expensive. So it is obvious that the universities and institutions began to seek the sponsorship coming from elsewhere as the traditional sponsors of the universities and the institutions were often unable to sustain the heavy financial implications of these lectures in spite of the academic and cultural character they seem to possess. The net result was ultimately the sponsors began to emerge from those quarters which were least expected or anticipated earlier. Financial sponsorship was often forthcoming most of whom were not having the stature to determine the theme and quality of the discourses, the sponsors will have their own penchant to fulfil and they found that the growing demand for seats in the lecture halls could be a sign of the ever growing profile and systems of academy system and institutionalization. This had far-reaching implications which could not be corroborated with the depth of research and academic profile of the speaker as most of the universities and institutions were desperately searching for the requisite financial basis to continue these celebrity lectures which had become a matter of institutional prestige, authority and esteem.

Sometimes evoking this kind of financial support in the form of sponsorship associated to a act of striking the Russian budget. Their genuine intentions of their theories were either ignored or accepted the perception of the vigilant scrutinizing



ORIGINAL RESEARCH PAPER

Education

TRIBAL IDENTITIES AND LITERARY TRADITIONS

KEY WORDS: 1. Tribal worship 2. Tribal ceremony 3. Folklore traditions in Tribal literature 4. Tribal and folklore traditions 5. Tribal worship 6. Mother goddess

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ABSTRACT

This paper is a study of the complex and intriguing web of relationships existing between the tribal traditions, fertility cults tracing their origins in the primeval memories dating back to Neolithic age, played out and manifested in countless forms in heterogeneous aspects of contemporary life as literary traditions. The paper is not subscribing to the stereotypical notion of the tribal identities as an idea that belongs to the past. On the other hand, the tribal tradition is thriving forward as a dynamic principle always revealing its capability to accommodate the ever changing ethos and tenets of the human civilisation, at the same time remaining one of the most sought-out destinations wherein lies the uncharted histories of the vast human race.

The complex web of relationships existing between folklore traditions, myths and fertility rituals probably marks the transition of the nomadic hunter-gatherer into life of settled farmer, going by the theories as evolved by James Frazer, Jesse Weston and Claude Lévi-Strauss. It had been one of the primary acts to safeguard the life and crops from incursions of nature, exorcise the evil spirits and appeasement of the guardian spirits. Frazer points out that the absolute conviction that offering sacrifices to the patron spirits ensured the fertility of the soil must have been at the core of the ritual performances. Closer examinations will reveal the common strands running across folklore traditions and fertility rituals, both of which revolve around the leitmotif of bringing about prosperity of man, long life, advancement of the tribe and warding off the spirits that are inimical. The roots of these folklore traditions could be traced back to the New Stone Age as per the theories of Jesse Weston. It could be symbolic dramatization of the magical rituals before venturing out into the corresponding uncertainties of nature in hunting and foraging that must have marked the beginnings of folk traditions carrying their undesirable dramatic and ritual power.

These tribal traditions could not be same for different cultures, which ultimately derives its character from the details of the labour that ensures their livelihood, variously explaining the traceable features that signify the tribal traditions of hunter, farmer and mariner. At a time when man's understanding the water forces that demarcated the terraced paths of life remained largely unpredictable, moulding their own conscious aspects around, these tribal ritual performances helped to bring about the much-needed psychic energies that thrust the mortals to engage in an eternal discourse with powers that be. It did not take much time for the tribal ritual performances to encompass the multitudinous themes representing the aspects of this unyielding forces like, water, earth, fire and air, the specificities and mystique of each of these later beginning to reassert themselves in the form of folk arts and literature.

Leading writers and theorists on Tribal arts and Anthropology usually subscribe to the underlying theme of the ritual literature, whose primary impetus is derived from the primordial belief that the ritual union of the male and female factors ensures the fertility of the soil. There exists certain inseparable links between the soil that yields a rich harvest and woman giving birth to children as at the core of these tribal ritual practices. These are tribal ritual practices existing throughout the world that worship the menstruation cycles of earth. In one of the major temples of Kerala dedicated to Lord Siva and Parvati, the sanctum of the goddess will remain closed during those time cycles that mark the menstruation of Devi, which in all probability traces its origins from the archetypal belief. Western civilisations held the belief that the

human blood is essential to ensure the fertility of the soil, and appease the rain gods, leading to the consecration of many acts of human sacrifice finding their spaces in folk literature as well. The ancient Phoenicians held the belief that the Goddess Melas has to be propitiated with blood of the new born, representatives of which are abundant in Phoenician tribal traditions. Similar human sacrifices had been part of the annual/vegetation rituals of Khonds community in Bengal.

These fertility ritual which had been an integral part of the tribal traditions acquired greater sophistications as tribal traditions seamlessly got merged into the lesser acts of worship and artistic performances. At the core of most elite classical performances, it is not difficult to identify the strains of the archetypal fertility rituals from the most heady positions to the prevalent cultures of receiving guests, heterogeneous themes of folklore practices is on large. Jesse Weston points that most the dance practices in various parts of the world bear unmistakable imprints of these folk identities with their roots in fertility cults. In many languages across the world, 'fertility' is liberally used as one of the synonyms of earth. The folk literature places equal emphasis on the agricultural yields as well along with the fertile earth, whereas it is not unusual to come across expressions analogous to 'barley-mother', 'barley-mother' and 'corn-mother' in ancient folk literature. In the tribal traditions of Kerala, the ripe paddy stems are preserved throughout the year and worshipped as the insignias of Bhagarwati, the goddess of fertility. Nurture in Kerala will be complete without the accompanying image of the ancient tribal traditions.

Almost every contemporary ritual in temples of Kerala like 'pongal', 'pongal', 'barbar vada', 'Nalam kuppil' have their ultimate substance deriving these tribal traditions. The 'Udayan Pujas' performed on the paddy fields in Southern Kerala is replete with images of the fertility rituals of the Neolithic age. Various themes and expressions of the fertility cults can be ascribed to many of the traditional rituals like Vedu, Theyyam, Thira, Oduvariyattam, Kariyar Kali and Hadyam, as observed as M.E. Raghava Varma, one of the leading exponents of folk arts and literature. Plants as well as the divinity as various manifestations of fertility since seeds, acts of sowing and harvesting are imbued with nature, and emanating from its core, the human forms and aspects were attributed to them in folk literature. In folk literature dealing with agricultural activity, primacy has been given to the mass of blood and its suggestive red colour which ultimately lead into its linkage with coins and fertility. For the mother goddess of fertility, blood of sanctification corroborates the corresponding ideal of creativity as well. The benevolent aspects of the mother in the elution of her blood is ultimately linked to the birth of everyone. Ever since the beginnings of agriculture, this blood ritual of the mother bears the marks of the fruition of life principle, underling the perceptible power

Aesthetics of Agnosticism through the Ages

Karunakurn B Shaji

Abstract

The paper makes a comprehensive search into the subtle and often intriguing ways in which the agnostic ideal begins to cast its spell in determining aesthetic principles of literature, beginning with a group of deviant ideologues and the poets who were primarily proteges of them, the epochal ties Godwin-Shelley bonding claiming its ancestry to primal classical archetypes. Acts of denouncing ecclesiastical authority and the nascent Edenic harmonies brought upon its progenitors the susceptible shudder of an aesthetic ideal which asserted the ravishing assault on the human sensibilities with a disarming vigour, authenticity and candour. It tremulously unleashed synergies of a vision that continued to cast its unmistakable spell in all later ways of looking at reality and aesthetics, and still thriving forth unabated.

Key Words: Romantic aesthetics, Methodism, Catholicism, Transcendent Creator, Newtonian Universe, German Idealism, Promethean theme.

In deep contrast to eighteenth century Enlightenment Romantic art, ideology and literature placed emphasis on the value of feelings, the profound influence of unknown and unconscious forces as well as deep unorthodox religious experience. It sought to underplay human rationality. The Enlightenment always affirmed the role and authority of 'Reason' over feelings and emotions. Kant sought to assert the relevance of trusting one's own reason: 'Have courage to use your own reason, which is the motto of enlightenment.'

A number of systems and schools of ideology vied with each other for attention and rapport during the Romantic age, the most prominent of being, the Pantheism of early Wordsworth and Coleridge, Deism of Thomas Paine, Atheism as fiercely upheld by Shelley, William Godwin's Unitarianism and the Methodism as practiced by John Wesley. Some of these held onto intellectual and academic discussion of those days while others got rejected. The Church was under tremendous pressure as the scientific and technological advances of threatened to challenge the very foundations of religious faith. The trepidation of the church found its visible manifestation as the huge church building project undergone during the period. It also witnessed Gordon Riots against the Catholic Religious Acts. The Repeal of the Test and Corporations Act (1828) was the logical conclusion of the sequence of these ravages of the times.

Descartes' 'Cogito ergo sum' (I think, therefore I am) helped to open a portal of intense subjectivity for Romantic poets which led to an analysis of the relationship between art and philosophy. Complex questions were raised as to whether pondering the philo-



Politics of Canonisation in Literature - A Critical Enquiry

Karunakaran B Shaji

Abstract

The fervent zeal for canonisation seems to be peaking during the age of Romanticism which inspired the coming together of sciences and arts, inaugurating the epochal moments of the final transition to a collective understanding of the vaster forces that underlie the artistic perceptions, ethos and scientific rationale that underlie the artist's preoccupied self. In the momentous and radical transformations that Institutions, Academies and Universities of the day witnessed, the traditional academic stratifications of disciplines were becoming increasingly incapable of accommodating the vastly expanding territories of knowledge. In the madonnine world of awareness unlimited, the Institutions and Academies let their doors remain opened for the emerging themes of scientific knowledge and artistic perceptions, and they found many avenues for holding forth endless discourses. This paper is making a critical study of the signature moments of this transition from Romanticism to Modernism and themes of Canonisation.

Keywords: Canonisation, Medieval Scholasticism, Print Culture, *Semestria*, *Presbyterian Enlightenment*, Institutionalised Realities

Defoe is often remembered for his fierce scepticism regarding the worth of the much floated academic as well as non-academic projects of his time. These projects were mostly notorious for staking tall claims about their supposedly ambitious targets, which on many counts were extravagant, unsocial and even bordering onto unlawful. In his *Essay upon Project*, Defoe airs his suspicion and distrust and exposes unethical commercial practices that came to characterise these projects. He identifies the commercial raptors of the times like The East India Company, African and Hudson Bay Companies as evil incarnate. The essay makes total deconstruction of these projects and to find them lacking in the concept of social welfare as well as political ethics. The belief that human thought and action are capable of the radical reformation of society is lacking any historical evidence.

Race begins to articulate a new set of paradigms which offers socially viable projects including the pronouncement of infrastructure highways, and humanitarian societies. Defoe insists that the projects that vastly ignore the creation of infrastructure highways, and humanitarian societies. Before insisting that the vastly ignored the humanitarian ideals should be discarded. Incidentally Defoe reinvents the role of the merchant in the modern frameworks of society and brings him back from the classical image, trusting him with a historical responsibility of revamping the social economy, relationships and politics. In this epochal act of reinventing the archetypal role of merchant as the carrier of cultural insignias, histories and civilisations, Defoe adds a different charm to the sheer contemporaneity of the merchant he has salvaged from the chronicles of history from the verge of a possible amnesia.

Defoe's new age merchant is one who becomes a meeting ground of private investment, national welfare and human progress. He is holding forth a discourse between the past archetypes, the present socio-political realities and the humanitarian ideals. Mary points out that the force merchant is at the centre of the human action to social projects and thereby bringing about the merging of the river the liberal government territory of public benefits. Defoe is not ignoring the fact that ultimately every merchant would be keen about the personal benefits accruing to him, but insists that welfare of the community would be added element.

Legacies of Harbours and Sane Insanities *A Critical Analysis of the Creative World of PG Wodehouse*

Karunakaran B. Rajji

KEY TERMS: *Received Studies/Colonial India/Indian English writings/Indian reality/Genre Research/Thematic analysis/Dialogic genre/ narrative*

ABSTRACT: This paper makes a study of the legacy of comedy which PG Wodehouse inherited and nurtured since in which he has transformed the classical and contemporary codes of humour to a narrative style that is often satirical and bordering upon burlesque of living. The causes of such upward compatibility and comic space which Wodehouse values into his narrative enterprise are directly related to a thorough childhood and constant graduation into adulthood for which he had never been emotionally and spiritually evolved. The apparent dichotomies between being and becoming often pointed into heavy consequences to the border of ideal and realistic situations, usually ideal and idealised. The classic cast, typical and often diluted characters instead of characters who populate the fictional universe could often be tracing their ancestry-the classic representation itself that formed largely the unconscious self of the author. He never has ultimately led none of the most power literary constructs that demonstrate intricate imaginations of the human consciousness. This paper is integrated into four parts.

The creativity and direction that informs the moulding of the Indian life inevitably came to quell on writers of Indian origin for whom this necessity often appears like a harbinger. They inherit and explore it with a characteristic sense of transmuting, discovering in it features that are strategic and personal mapping one Indian's imagination of the entire class that determines the Indian special identities from its complex to market place, academic of cultural discipline to the emergence of cross-pollination of ethnic enterprise. The general absence of these specialities in the Westernised consciousness serves as compelling factor for many of its accepting adherence within its culture to be transformative resistance on the Indian reality, which may become a desired effort for the institutionalised to push the former ethnic Indian factor. Yet the responses one may attain a remarkable transition from, concerning an Indian often to be appreciated by the Western worldliness. The aspects of Indian sensibility reflected by PG Wodehouse starts out with an engaging discourse. The very essence of Indian English writings with its evolving characteristics seems to derive its origins from the writings of Wodehouse to some extent. The space boundaries with grammar in the Indian version of English, which lies in the core of the ideal and real class, is an English construct because an object of many of the ethnocentric creative discourses to be parallel and contradictory frequently. Despite the fact of its emergence in India for more than a century, it never acquired its historical character and power due to the lack any defining attributes. Even as the popularity of American English with its own Hollywood and athletic thrust, was nearly overshadowing the signature of King's English, the Indian Indian never had been willing to desert the regional dialects of the language of their cultural moorings, still continuing to worship sacred chants of Received Standard, with its approval nature of diction.

Many of the characters of Richard Kipling, like Thoreau, have an earnest conviction calculated to make a sense world in the educated Indian's sensibility observations with twilight dreams of fading legends of Oxford English. His characters act as special agents to many of the self-proclaimed virtues of superior English educated Indians. The typical romantic partners that usually become the objects of his attention take their inspiration largely from the popular English textbooks he might have learnt in the school rather than the books themselves that underlines the language of the entire patterns of life in the dream and here. In his constant comparison to describe his identity, he describes his ethnocentric language to be described from books, ultimately being himself to be derived for the human reality he has been reduced to. He self-defines, accepts carefully drawn out with the language because the incidental cause for the demise of both George Orwell often based on how impact the language of Wodehouse would push his readers to, whereas often he remains ignorant of the power of the spoken underestimates these sentences were capable of. Validating the apprehensions of Orwell, many an educated Indian who often fell into the trap of viewing Wodehouse as a gentleman came from the Upper class English and European sensibility. Incidentally Wodehouse never revealed any genuine awareness of the special political transformations that were beginning to unfold in the world association. Under regions to edge when it draws its remarkable power from the structures of the political events that

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