



**17<sup>th</sup> Conference on Postgraduate Research**  
**International Postgraduate Research Conference 2016**

**“Dynamic Collaborations: Creatively, Innovation and Stability”**

*Abstracts*

**December 8 – 9, 2016**



**Faculty of Graduate Studies**  
**University of Kelaniya, Sri Lank**



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17th Conference on Postgraduate Research

*“Dynamic Collaborations: Creatively, Innovation and Stability”*

### **Abstracts**

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## Message from the Vice-Chancellor



It is with great pleasure that I welcome you to the International Postgraduate Research Conference 2016. At a time when Sri Lanka is moving towards becoming a knowledge-hub, conferences that focus on creativity and collaboration are a critical contribution to the intellectual culture of the country. I congratulate the Faculty of Graduate Studies for organizing this conference, now for the 17<sup>th</sup> year, taking the lead in nurturing a research culture at the university.

This conference is an important link in the culture of disseminating knowledge nationally and internationally. University of Kelaniya has focused on marking its presence in the international research culture through the organizing of various conferences and symposia for graduates, undergraduates, and the wider academic world inside and outside the university. The university treats this as a crucial priority since research and the production of knowledge constitutes an important part of the contribution that a public higher educational institution must make to national development. As such conferences such as these that maintain the tradition of interdisciplinary research plays a significant role in the university's commitment to the national need.

I would like to thank and congratulate the Dean of the Faculty of Graduate Studies, the organizing committee, and the supporting staff for organizing this event. I would also like thank the researchers, reviewers, editors and other academics that contributed to sustaining the core values of quality and innovation throughout this conference. I wish the conference and all the presenters all the very best.

**Senior Professor Sunanda Madduma Bandara**

Vice-Chancellor

University of Kelaniya

Sri Lanka

## Message from the Chairman, Research Council



It is with great pleasure that I issue this message on the occasion of the 17<sup>th</sup> International Postgraduate Research Conference (IPRC) 2016 organized by the Faculty of Graduate Studies of the University of Kelaniya, under the theme “Dynamic Collaborations: Creativity, Innovation and Stability”.

I am very thankful to the Dean of the Faculty of Graduate Studies and the Organizing Committee for selecting this highly important theme for the conference. In the present era where the entire world is aiming at rapid economic development, dynamic collaborations are extremely important. It is well known that the collaboration among researchers of different disciplines can accomplish more than what individual researchers could achieve.

In order to find solutions to the problems faced by individual countries as well as the entire world, a broad approach is needed. This can only be done through interdisciplinary and multidisciplinary research. Such research helps to solve the societal and environmental problems in a more successful manner mainly due to the complexity of the society and the environment. Further, for new innovations and to popularize them, multidisciplinary approach is needed. In addition, to accomplish the 17 Sustainable Development Goals identified by the United Nations, which are envisaged to be achieved by 2030, collaborative approaches are very much needed.

Today funding organizations, both local and international, are also highly concerned on multidisciplinary and interdisciplinary research and give priority when providing funding for research.

I congratulate the Dean of the Faculty of Graduate Studies and the Organizing Committee for their untiring efforts in organizing this Conference in a highly successful manner. I hope that the presenters will get valuable and pleasant experience from this Conference.

I wish IPRC 2016 every success

**Senior Professor M. J. S. Wijeyaratne**  
Chairman of the Research Council  
University of Kelaniya

## Message from the Dean, Faculty of Graduate Studies



It is with much pleasure that I write this message for the 17<sup>th</sup> International Postgraduate Research Conference, 2016 organized by the Faculty of Graduate Studies. This annual conference organized by the Faculty of Graduate Studies remains a favorite venue for local and international scholars to exchange their research and ideas.

This year's conference theme focuses on collaboration and innovation, emphasizing the importance of bringing together research from diverse fields to a common platform to produce interdisciplinary research that cuts across disciplinary boundaries. The dissemination of knowledge through academic conference is currently becoming an increasing trend in Sri Lanka. In this respect, this annual conference, now in its 17<sup>th</sup> year, remains a pioneering conference that has established a strong tradition of research at the University of Kelaniya. Its cross-disciplinary focus draws scholars from across over seven disciplines from around the world to this conference annually. This year, the conference was organized using an online conference management platform that facilitated a smooth organizing process and better data management in registration and reviewing.

I trust that our participants will benefit much from these innovative interventions and I hope that this conference will stimulate future collaborative interventions in the field of interdisciplinary research in Sri Lanka. I wish all the participants all my best!

**Professor Ariyaratna Jayamaha**

Dean

Faculty of Graduate Studies

University of Kelaniya

## **Message from the Chairman, Board of Study, Commerce & Management Studies**



On behalf of Faculty of Commerce and Management Studies, University of Kelaniya, it is my great pleasure to send this message to the International Postgraduate Research Conference 2016 (IPRC) organized by the Faculty of Graduate Studies, University of Kelaniya.

It is a great honor for us to host IPRC 2016, which is a forum for researchers and scholars to share knowledge, information, exchange experiences, to present innovative concepts and research related to all areas of Commerce and Management for sustainable development, and to promote the quality of life.

In addition, the conference will also lead to future research collaborations and strengthening of common network with over 500 participants both from local and overseas. The presentations and deliberations will bring up great opportunity to gain insightful knowledge about the projects being conducted in the region. Through the interaction, we expect to stimulate an active research environment that is relevant to our communities.

My very sincere gratitude to invited speakers and participants for their great contributions, and to all our sponsors, advisory boards, reviewers, colleagues and staffs for putting tremendous efforts into the organizational and administrative arrangements of this important event. The success here encountered is greatly encouraging for the future and we strongly support and promote IPRC to go forward furthermore.

**Professor D. M. Semasinghe**

Dean

Faculty of Commerce & Management Studies

University of Kelaniya

## Message from the Chairman, Board of Study, Computing & Technology



I am pleased to write this message for the International Postgraduate Research Conference, 2016 organized by the Faculty of Graduate Studies, University of Kelaniya. This conference is an important event at the University of Kelaniya, and it stands for its best traditions of research and knowledge sharing.

The Faculty of Computing Technology is one of the university's most recently established faculties, and therefore, it will benefit much from a conference such as this. The scholars affiliated to our faculty and field have shown considerable interest in presenting their research at the IPRC 2016, and I have no doubt that they will learn much from the interdisciplinary focus of the conference. As a conference where many national and international scholars meet to exchange their ideas, this conference will also benefit from the presence of CT professionals who are leading researchers in the field.

I wish all the participants at the conference all my best, and hope that the event will be a great success.

**Dr. P. G. Wijayarathna**

Dean

Faculty of Computing & Technology

University of Kelaniya



## Message from the Chairman, Board of Study, Humanities



It is with great pride and pleasure that I write this message to congratulate the International Postgraduate Research Conference 2016 organized by the Faculty of Graduate Studies, University of Kelaniya. The IPRC conference remains a favorite venue of members of the Faculty of Humanities to present their research and interact with local and international scholars of their field.

The Humanities Faculty of the University of Kelaniya has a tradition of producing and maintaining interdisciplinary research that is grounded in the study of literature, languages, religious cultures, and critical thinking. As such, I consider this conference to be an important forum where academic members of the Humanities Faculty can engage with researchers from other disciplines and universities. This year's conference theme, with its strong focus on creativity, innovation, and collaboration, shows the values that define the research culture of the university and emphasizes the particular importance of engaging creatively with traditional as well as new knowledge. This year's conference includes presentations by a very high number of Humanities scholars. This is a strong testament to the way the Faculty of Graduate Studies remains an important point of intersection for scholars in the field of Humanities to meet scholars of other disciplines.

I would like to congratulate the Dean, Faculty of Graduate Studies, the organizing committee, and the presenters for coming together to make this event a success. I wish the conferences and the presenters all my very best!

**Professor Lakshman Senevirathne**

Dean

Faculty of Humanities

University of Kelaniya

## Message from the Chairman, Board of Study, Medical Science



It is with great pleasure I send this message for the International Postgraduate Research Conference (IPRC 2016) organized by the Faculty of Graduate Studies, University of Kelaniya. At the University of Kelaniya, we are committed to provide high quality education and to conduct high impact research and events like IPRC provides researchers a platform to showcase and disseminate their work with other researchers, academics and policy makers.

Today, Faculty of Medicine is one of the leading research institute in Medicine as well as Speech and Hearing Sciences in the country. The academics staff members of the faculty have an excellent publications records and have received many Presidential awards for their scientific work published in high impact journals. The number of research generated by the faculty of Medicine has grown steadily over the years and this is clearly reflected by the increasing number of presentations in the field of Medicine at the annual sessions organized by the Faculty of Graduate Studies.

Finally, I would like to take this opportunity to congratulate the Dean of the Faculty of Graduate Studies and the team for their untiring efforts to organized International Postgraduate Research Conference 2016. I wish them all success at the conference.

**Professor Nilanthi De Silva**

Dean

Faculty of Medicine

University of Kelaniya

## Message from the Chairman, Board of Study, Science



Research generates new knowledge and research symposia are instrumental in disseminating new knowledge. The vision of University of Kelaniya “To become a center of excellence in creation and dissemination of knowledge for sustainable development”, makes all of us at the Faculty of Science at University of Kelaniya actually conscious and efficiently committed towards making a difference in our society by generating new knowledge. Knowledge based economies in the world have progressed well indicating that lack of natural resources or having huge land areas are not crucial anymore for the development of the country. We, the faculty of Science believe that, research and innovations are the most effective contributor to the development of a country.

This time, the abstracts presented by the Faculty of Science include new findings in the areas of biology, chemistry, computer science, environmental science, information and communication technology, mathematics and physics. I have no doubt that most of the research communications published in the proceedings of this annual research symposium will lead to further studies which will generate detailed results to be published as full papers, patents and innovations in near future.

I am continually impressed and inspired by the recent efforts and commitments of the University of Kelaniya to promote a rich research culture among academics as well as students and this annual research symposium undoubtedly provides a positive catalytic effect in inculcating a research culture especially among the young academics. I congratulate all the presenters and researchers and for their active contribution to develop new knowledge.

**Professor N. A. K. P. J. Seneviratne**

Dean

Faculty of Science

University of Kelaniya

## Message from the Chairman, Board of Study, Social Sciences



It is with much pleasure that I write this congratulatory message for the International Postgraduate Research Conference, 2016. The IPRC conference has now become an annual tradition at the University of Kelaniya providing a platform to both senior and budding scholars to share their research.

As a Faculty that places much emphasis on the production of new social research, scholars of the Faculty of Social Sciences find the annual IPRC conference to creatively engage with interdisciplinary research. The social sciences now place increasing emphasis on collaborative research that draws on multiple disciplines and traditions, and the conference's focus on this theme this year is a key concern of all social science research today. Moreover, the political focus of producing knowledge that is socially engaged, critical, and creative is of paramount importance for social scientists. This, perhaps, explains the reason for the great popularity of this conference among scholars from the Faculty of Social Sciences.

As the Dean of the Faculty of Social Sciences, I am particularly happy that the faculty is represented in high numbers at the IPRC conference this year. I congratulate the Dean of the Faculty of Graduate Studies and the organizing committee for both organizing the conference and upholding the tradition of research culture in the university. I wish the conference and the presenters my best.

**Professor A. H. M. H. Abayarathna**

Dean

Faculty of Social Science

University of Kelaniya

## Editor's Note



International Postgraduate Research Conference (IPRC) 2016 organized by the Faculty of Graduate Studies, University of Kelaniya, Sri Lanka revolves around the theme of “Dynamic Collaborations: Creativity, Innovation and Stability”. This theme is consistent with the research culture inculcated within the University of Kelaniya to promote new knowledge and its application towards betterment of world of work and society as a whole.

IPRC is a unique conference, because instead of limiting itself to a single subject discipline or traditional branch of knowledge it covers all disciplines in the higher education domain. For many years, the advancement of knowledge in Asian civilization has taken a path of increasing specialization. We have approached understanding our world by deconstructing it into smaller and smaller fragments creating the disciplines and sub-disciplines in order to be able to predict, or at least to explain, behaviour in nature, individuals, and society. In today's knowledge landscape there are powerful drivers for multidisciplinary research. Interdisciplinary research moves beyond simple collaboration and teaming to integrate data, methodologies, perspectives, and concepts from multiple disciplines in order to advance fundamental understanding or to solve real world problems. Interdisciplinary research requires either that an individual researcher gains a depth of understanding two or more than one discipline and be fluent in their languages and methodologies, or more frequently that multidisciplinary teams assemble and create a common language and framework for discovery and innovation.

IPRC 2016 received a record number of excellent papers. This abstract volume had published selected research abstracts encompassing subject disciplines in Commerce and Management, Computing and Technology, Humanities, Medicine, Science and Social Sciences.

I appreciate the enormous efforts put forth by authors to compile research abstracts to IPRC 2016. In addition to that I value the contribution of eminent review panel of reviewing research abstracts. Further, it is worth to admire involvement of faculty coordinators in this endeavour.

I wish all the success for IPRC 2016 through creating new knowledge that drives creativity and innovation and stability.

**Professor P. M. C. Thilakeratne**

Director, Center for Distance & Continuing Education,  
Department of Accountancy,  
University of Kelaniya

## Keynote Abstract



### Professor Joseph M Mula

Adjunct Professor (Accounting Informatics)  
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Adjunct Professor (Accounting & Information Systems)  
Faculty of Economic and Business, University of Brawijaya,  
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Southern Queensland, Australia

## Understanding Fraud and Corruption – Experiences of and Lessons for Sri Lanka

Many authors and researchers who have undertaken studies in Sri Lanka agree that fraud and corruption are rampant. This is partly due to the customary practice of finding a 'person-in-the-know' to get anything done, particularly if it involves any government-run agency. Governments in Sri Lanka have been involved in all peoples' lives even for the smallest day-to-day activity. Consequently, a door has been opened for minor public officials and others to take advantage of people for their personal gain. Thus significant fraud and corruption occurs.

Of course, Sri Lanka is not the only country to experience these phenomena. Every country in the world has experienced some form of fraud and corruption, going back centenaries. The paper provides some global evidence to first set the scene and then presents some reasons why there have been significant rises in economic crimes on a global scale as well as in Sri Lanka. According to a recent (2015) Transparency International Global Perception survey, Sri Lanka was ranked 83<sup>rd</sup> out of 175 countries, along with China with an Index of 37 where an index number of 100 means no corruption. Some examples of corruption in Sri Lanka are described along with fraud activities. A historical summary is provided of efforts to fight corruption and fraud up to the present day.

However, to minimise these crimes, legislators and law enforcement need to understand fraud and corruption as well as why they occur. They need to learn lesson from other countries and develop forensic investigators that can identify symptoms that may lead to crimes being committed. Fundamental to this understanding is the theory of the 'Fraud Triangle' and its three constructs – perceived pressure, perceived opportunity and rationalisation. Removing any one of these constructs will minimise fraud in organisations. The paper discusses what research has shown are the tools and techniques that help reduce incidences of fraud, including the six symptoms for fraud detection.

Finally, some lessons that Sri Lanka could learn to help fight corruption and reduce fraud, are summarised. In conclusion, some key world figures speak out against these crimes that are a plague on economies and peoples of the world, which needs to be eradicated. One small positive that might come from this growth in fraud and corruption, is that there are career opportunities for forensic finance and accounting investigators as well as cyber-crime investigators.

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# Commerce & Management Studies

## **Integrating Outsourcing in Financing University Education in Nigeria and Sri Lanka: Case Study of Adamawa State University Mubi, Nigeria and University of Ruhuna, Sri Lanka**

D. Mohammed<sup>1\*</sup>, S. Ahmed<sup>2</sup>

State-owned universities in Sri Lanka and Nigeria practice outsourcing either consciously or intuitively. Outsourcing has been part of spontaneous means of generating revenue. Therefore, the concept of outsourcing is not new in financing universities in both countries. Subcontracting, consultancy, part time among others was used in describing outsourcing by various institutions in Nigeria and Sri Lanka. Due to were budget deficit in Sri Lankan government limit capital outlay in public sector organizations. In Nigeria, some state governments' advised state owned universities to strengthen their internally generated revenues (IGR) in order to sustain the continuity of the universities. The objective of this study is to examine how outsourcing can fit into university education financing in these two countries. This study is explanatory and uses secondary data from relevant literatures available. In order to collect the data, the study selected two State Universities i.e, Adamawa State University Mubi, Nigeria and University of Ruhuna, Sri Lanka. The study revealed that outsourcing increases revenue in both universities under study through cost savings in recruitment, employee compensation, overtime, hazard, transport, health and insurance scheme among others. Adamawa state university division of General Studies (GST) and School of Basic and Remedial Studies (SBRS) insource and outsource teaching services whereas university of Ruhuna outsource cafeteria and cleaning services; both universities save cost worth millions of Nigerian Naira (NGN) and Sri Lankan Rupees (LKR) per annum respectively. Hence, the study recommends the integration of outsourcing in financing of university education in both countries.

**Keywords:** *Outsourcing, Financing, University Education, Nigeria and Sri Lanka.*

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## **Impact of Office Design on Employees' Performance: A Case Study of Banking Organizations of Western Province in Sri Lanka**

M. Hansika<sup>1\*</sup>, B. Amarathunga<sup>1</sup>

In simply an office can be defined as a room, set of rooms or building where people work, usually sitting at desk. Accordingly, office design can be defined as the general arrangement of the room, set of rooms or building where people work. Most of times, the office design is unsafe and unhealthy. As a result of that employees get frustrated and they will not perform at their best. So the main objective of this study is to investigate the impact of office design on employees' productivity with the focus on banking organizations which are located in Western province, Sri Lanka. In order to conduct the study, with the use of random sampling technique 4 banks located in the Western province, Sri Lanka taken in to consideration and 42 respondents use as the sample. Self-developed questionnaires were distributed among the respondents. In order to observe the employees performance in the current office structure, spend two days (4) in each bank (in the office hours). According to the regression results, there is a positive relationship between the independent variable (office design) and the dependent variable (employees' performance) as well according to the correlation analysis there is high (significant) relationship between independent variable (office design) and the dependent variable (employees' performance). Finally it is concluded that, the Office design should be done in a careful manner otherwise employees get frustrated and they will not perform at their best. Accordingly employees' performance will decrease and consequently organizational performance will decreased.

**Keywords:** *Employees' performance, Office design, Organization performance, Banking Industry Sri Lanka*

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## **Impact of Brand Promotion Strategies towards Destination Brand Equity with Special Reference to After War Context in Sri Lankan Tourism**

P. G. R. R. B. Higgoda \*

Brand equity and promotion are significant concepts in Marketing. The purpose of promotion is to reach the targeted customers and persuade them to buy. Therefore the promotion is vital element of marketing mix. Developing and properly managing brand equity has been emphasized as an important issue in today's changing businesses. Therefore, the aim of this study is to investigate how brand promotional mix i.e. advertising, personal selling, sales promotion, public relations and direct marketing effect on brand equity. Importantly, this study investigates the relationship between promotional mix on destination brand equity in Tourist Industry. Keller' Model was used to build up the conceptual model. The methodology adopted in this study was quantitative. Data were gathered through face-to-face interviews from 200 respondents using a semi-structured questionnaire. Data was analyzed using descriptive statistics, correlation and regression. Findings of this study revealed that brand promotional mix have positive impact on brand equity. The results further show that advertising, public relations, sales promotion and direct marketing have significant positive impact on brand equity dimensions. Moreover, the results show that advertising/propaganda is the most influential factor for the destination brand equity. These results imply that managers should select appropriate promotional strategies for creating a high level of destination brand equity. More importantly, managers should pay more attention on advertising strategies, i.e. extensive investments on advertising, advertising diversity, direct marketing for building adequate level of destination brand equity.

**Keywords:** *Brand, promotional mix, brand equity, tourism Industry, destination branding equity.*

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## **The Psychological Manipulation of Advertising in the Modern World a *Discussion of Revealing Advertising as Manipulative or Informative***

A. Dissanayake<sup>1\*</sup>, N. Jayasinghe<sup>1</sup>

Marketing is a universal management process that identifies, anticipates and satisfies customer requirements profitably. Advertising is used as the core of marketing in the present context. This paper focused on the topic that the advertising as information or manipulation and proving the fact that the modern advertising techniques are manipulative. The topic has narrowed down to sub topics such as advertising, the importance, characteristics, advantages and disadvantages, the highest advertising investments and the ethical aspects. The paper has collected qualitative and quantitative data; primary sources including the views of experts, interview sessions, observations and the secondary sources through the measurements of advertising growth. The modern advertising methods has restricted the freedom of choice of consumers by the power of manipulative advertising. The psychological techniques are being used including creating a subconscious motivation via conveying a subliminal message, creating perception through selective attention, selective distortion, selective retention and priming. The learning techniques are being persuaded through repetition including operant conditioning through positive reinforcement, classical conditioning through celebrities and brand ambassadors. The consumer behavior is influenced in related with AIDA concept & PLC through psychological manipulation and emotional appeal. The purpose of this paper is aware the target audience to realize the techniques of manipulative advertising by their free choice of decision making. The customer has to choose the best product or the service through realizing the disadvantages it can cause to the community and avoid the influence of harmful products and services. The unethical manipulative advertising will effect physically, financially and socially. The mechanism of investment in advertising and the impact of economic growth will be discussed. The ethical aspects of manipulative advertising depends on the service or the product and relies on the theme of the company. The customer should realize the product or service which is harmless to him by differentiating its' value to the society. Manipulative advertising is not unethical but it depends on the factor which the product is harmful or harmless to the society.

**Keywords:** *Advertising, Psychological manipulation, Subconscious motivation, AIDA concept*

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## **Influencing Factors for The Adaptation of Mobile Phone Banking App Case Study for ABC Bank PLC**

C. Vincent<sup>1\*</sup>, A. Wijayanayake<sup>2</sup>

ABC Bank PLC introduced a mobile application referred as “Mobile App” software application designed to run on smart phones. The focus of this research is to evaluate influencing factors for the adoption of this mobile banking app in the context of registered retail mobile banking users of ABC Bank PLC and thereby to identify the relationship between the factors.

The conceptual frame work was developed bases on the concept of Parasuraman’s (1988) SERVQUAL model measuring the relationship between the mobile banking application and its impact on customer adaptation to the mobile banking app. According to the critical literature review five dimensions were identified as important for customer adoption to internet banking (Mobile App) namely Awareness, Reliability, Perceived Value, Ease of use and Social influences.

The research data was collected from actual mobile banking app users both customers and employees from ABC Bank PLC. The researcher was able to collect 73 positive responses to the questionnaire which was circulated among the target group. The reliability as measured by Cronbach’s alpha for the hypothesis which met the minimum requirement.

The descriptive analysis of data has been done to evaluate the research findings. The Pearson correlation and regression analysis found all 05 dimensions have a positive impact on the adaptation of mobile banking app. The R2 coefficient revealed that the Social influence and Ease-of-use having highest influences.

The limitation of the study is that it was focusing on the mobile banking app uses of ABC Bank PLC, where the scope of the study is much limited. The study provides a comprehensive understanding of Influencing factors affecting the adaptation of mobile banking app at ABC bank PLC, enabling the bank to simulate Product Development and Marketing strategy.

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## **Building Relation Between Company and Consumers Through Co-Creation: European and Asian Context**

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Building relations with stakeholders seems to be a standard behaviour in the companies that operate throughout the today's markets. One of the forms of building relations is to invite a customer and other stakeholders to contribute to product creation, to assess the quality of the service or to share experiences that were gained while using the products. However, is it worth to open up for clients' experiences? Maybe the clients are not interested in such issues? How this process looks like in different countries, taking account of different levels of market development and cultures? Those questions gave an impetus to conduct a research among clients from different countries, such as Poland, Germany, Romania, China, Georgia or Sri Lanka. The emphasis in this article is placed on presentation of research results from two countries: Poland (European culture, HDI 0,834) and China (Asian culture, HDI 0,834). The target group of the survey was young people which by virtue of their psycho-physical characteristics are more open to share their experience and engage in various activities. The aim of this article is to present similarities and differences in building relations through co-creation in China and Poland. The paper consist of two parts, theoretical and practical. Theoretical deliberations were devoted to the explanation of supporting the process of product creation. In this part also advantages of process of building relations with clients have been shown. Empirical part has been devoted to the presenting of results of studies showing the interest of young people in participation in co-creation in Poland and China.

**Keywords:** *Co-creation, Customer, Building relations, Europe, Asia*

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## **The Impact of Service Quality on Passenger Retention in the Airline Industry: Case Study on Sri Lankan Airlines**

U. S. Warnakula \*, S. C. Thushara<sup>1</sup>

Air travel facilitates economic growth, world trade, international investment and tourism and is therefore central to the globalization-taking place in many other industries. The service quality has become a one of the most important factors, which determine survival of airline industry. Therefore, it is mandatory to maintain the service quality in order to compete with other competitors in the Airline Industry. The purpose of this study is to explore the impact of service quality on passenger retention in the airline industry. The SERVQUAL model was used as an instrument to measure service quality on passenger retention. The methodology adopted in this study was quantitative. Data was gathered through face-to-face interviews from 364 frequent flyers of Sri Lankan airlines using semi-structured questionnaires. The cronbach alpha was used to test the reliability of the data. Correlation and Multiple regression analysis were used to measure the effect of service quality on passenger retention. The findings of the study revealed the importance of the tangibility reliability, responsibility assurance and empathy in service quality towards the passenger retention. The practical implication of the finding is that Sri Lankan airlines should consider service quality as a critical element in passenger retention.

**Keywords:** *Service quality, SERVQUAL model, and Passenger retention, Airline Industry, Sri Lanka.*

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## **The Soft Skills (Communication) of Project Management: A View from Project Managers**

B. O. Liyanage<sup>1\*</sup>

The stakeholder relationship and communication management (soft skills) are key elements of project management. The project management subject includes two significant dimensions namely as hard factors and soft factors. Hard factors are tools and techniques (budget, schedule) and soft factor is project communication management. These two factors are essential for the successful completion of goals and outcomes. This study was designed to identify the impact of project communication management skills on project managers. The research study is focused to identify soft skills (Communication) in project management. Accordingly, it is mainly based on reviews obtained from project managers who works in the different projects in Sri Lanka. Furthermore, this study investigates new methods of stakeholder management in project management and explains frequency of project communication in a project depending on stakeholder's requirements. The qualitative method allowed the understanding and evaluation of project manager's responses about the stakeholder management and relationships. Hence this study was mainly highlighted about the project managers' attitudes and perception about the project communication. Accordingly, the research revealed that the successes or failure of the project depends on identifying and prioritizing stakeholder relationships, developing and implementing strategies for engaging and communicating with them. The data collection for this study was done by the key informant interview method. It provided an opportunity to build a strong relationship with ten expert project managers. Furthermore a study developed a story according to the project managers' views and attitudes .There were eight themes emerged from the thematic analysis of transcribed interviews such as knowledge, experience, project requirements, new methods, leadership, public relations, project design and project nature .The study explored success projects are delivered through effective project communication skills analyzed from important themes such as public relations and leadership. The research was concluded that soft skills are very essential and it was mainly impact on the delivery of successful projects because skill of public relations and leadership are highly essential in being experienced and knowledgeable project manager to deliver success projects.

**Keywords:** *Project management, project managers, communication, stakeholder management, soft skills*

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## **The Impact of Celebrity Endorsement on Purchasing Decision of Cosmetics Products Industry in Sri Lanka**

U. Munasinghe<sup>1\*</sup>

The celebrity endorsement has been an ever-featured strategy of marketing products. Like other countries, celebrity endorsement has been a common technique of promoting brands in Sri Lanka. In Sri Lanka, celebrities like movie actors, television stars, and famous athletes endorse products to influence consumers buying behavior. Marketers of various companies do not hesitate to spend large amount of money on their celebrity endorsement campaigns knowing the impact of it which influence the purchasing intention as a powerful promotion tool. Since this study pays attention on the cosmetics industry, pilot survey of the study identified key brands that most prominently use celebrity endorsement as a technique in the marketing strategy as well as the key celebrities in Sri Lanka and India who endorses cosmetics products which has taken the consumers attention the most. 20-40 age groups who are naturally respond to the glamour world very keenly and positively are the major consumer type which reacts to these celebrity endorsements well specially in the cosmetic industry. In conceptualization author uses the TEARS model in relation with purchasing decision of Cosmetic industry. This study will shed some lights on how the Sri Lankan consumers of 20-40 age groups are affected by celebrity endorsement of cosmetic industry since in Sri Lankan context it has never been done a study regarding the impact of celebrity endorsement on consumers of 20-40 age group purchasing decision in cosmetic industry.

**Keywords:** *Celebrity Endorsement, Purchasing decision, Cosmetic Industry, TEARS model, Sri Lanka*

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## **A Study on Working Capital Management and Its Impact to The Firm's Profitability: Case Study in Leading Leather Garment Manufacturer, Sri Lanka**

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Working capital is critical for every organization to run day-to-day operations of the organization and it plays significant role in increased profitability, growth opportunities and shareholders wealth of the organization. The aim of working capital management is ability to settle short-term obligation by controlling the current assets and current liabilities effectively and efficiently to get maximum return to the organization. Working capital management is necessary for every business in their short-term planning process and managers should be decided to keep optimum level on each element. Holding them either too much or too little both are giving negative result to the business since there are significant costs associated with each element. So it is no surprise to study on working capital management in an organization since it is one of the main decisions in financial management. This study is to exactly analyses working capital management and its impact to the firm's profitability in Sri Lanka's only, and leading high quality leather garment manufacturer, profitability measured by the Return on Assets (ROA) and analyses the impact from the working capital elements such as inventory holding period, accounts receivable period, accounts payable period, cash conversion cycle, current ratio and quick ratio to the profitability. To investigate this relationship, secondary data analysis utilizes financial data based on independent audit statements of the company for the period of 2000-01 to 2014-15 (15 Years) and a quantitative analysis was conducted by using the SPSS statistics 20.0, linear regression runs in order to validate the hypothesis; correlation and regression analysis. Furthermore, descriptive statistics and correlation matrix also used to analyze the collected data. The findings show that the accounts receivable period (ARP) and cash conversion cycle (CCC) have a significant and moderate positive relationship with ROA. In addition, current ratio (CR) and quick ratio (QR) have significant and strong positive relationship with ROA. However, inventory holding period (IHP) and accounts payable period (APP) have insignificant relationship on profitability. And also based on key findings conclude that the company can increase the profit by offering effective credit facility system in order to encourage customers to buy more products and company has room to increase the profitability through effective working capital management. Thus, this study suggests that the managers can create profit by promoting their sales under the credit facilities until the overall benefits are higher than the overall cost and effective working capital management provides an inward option for source of financing other than the traditional sources of finance. Moreover, the study suggests that inventory management strategies such as JIT, EOQ and ABC analysis system should be implemented to avoid overstocking and stock write off while minimizing holding cost.

**Keywords:** *Working capital management, profitability, inventory holding period (IHP), accounts receivable period (ARP), accounts payable period (APP), cash conversion cycle (CCC), current ratio (CR) and quick ratio (QR).*

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## **Key Factors Effecting the Customer Adoption to Internet Banking: A Case Study on a Private Banks**

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Banking industry in Sri Lanka plays a vigorous role in managing financials assets of the country. This conventional type of banking consumed a considerable amount of time of the customers as well as the bank. The cost involved in conventional banking is much higher than the digital banking. Internet banking is now catching the banking industry at a rapid phase by eliminating and transforming the conventional banking activities to a web based online system. The increased of competitive gravities and the speed of the technology changers are leading to a speedy growth of internet banking. As to face the competitiveness of the bank, it introduced customer's internet banking service. However, adoption of internet banking shows a low user rate. The objective of the study was to identify key factors that effecting customer adoption of internet banking and the relationship between each of the factors. Through literature review five factors identified they are customer perception and conduct, technology readiness marketing and promotions, service quality and risk. Due to several limitations research was conducted among the internal and external customers users and nonusers of the internet banking. To cover the entire country Colombo region, North region, Greater Colombo, Central Colombo, Southern regions were selected. 100 questionnaire was posted and 60 complete response were gathered from the above region. The method used for the study is the quantitative method questionnaire survey was posted. The finding done through a structured questionnaire and results were analyzed through SPSS software. The results shows that customer perception and technology readiness were not significant and it had a weak relationship with internet banking marketing promotions, service quality have moderate positive relationship with internet banking and risk had moderate negative relationship. Banks should make more attention to improve customer perception and conduct and technology readiness to have a relationship with internet banking, awareness programmers should be introduced for customer about the benefits of internet banking, bank should implement proper customer inquiries promptly, security plays a major role in internet banking and dual password should be introduced. The study further revels when the risk is low adoption of internet banking is high because it had a negative relationship.

**Keywords:** *Internet Banking, Customer adoption, Internet Banking Industry, Sri Lanka*

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## **The Impact of E Service Quality on Customer Willingness to Adopt for Online Banking Services: With Special Reference to Private Banks Operates in Sri Lanka**

B. P. S. V. Pathirana \*

This study examined the factors of E-service quality that affects adoption of Internet Banking among banking customers in Sri Lanka. Objectives of this study are to find out the relationship between electronic service quality and customer satisfaction for electronic-banking in Sri Lanka, to evaluate the influence of a banking service qualities on adoption of Internet banking among private bank customers, to explore the relationship between E Service Quality and customer satisfaction on internet banking customers in private banks, to understand customer prospects and their desire in e-banking sector, to help in assessing E service quality factors in the context of online banking. The methodology used in this study was quantitative. Survey questionnaires was developed based on the previous studies. Data was gathered through face to face interviews from 89 respondents. Total of 200 survey questioners distributed among Internet Banking Users of above three banks and received 89 with complete answers. Data was analysed using descriptive statistic and correlation analysis. Cronbach's Alpha was used to measure the reliability of the data. This study identifies six factors of e service quality that affect Internet Banking adoption. Those are Responsiveness, Web usability, Personalization, Trust, Reliability and Privacy and Security. Results show that a greater variability in adoption of Internet Banking can be explained by Responsiveness, Web usability, Personalization, Trust, Reliability and Privacy and Security. The findings of this study help the bank management to strengthen the bond between the banks and their customers, thereby helping them to retain and/or expand their overall customer base.

**Keywords:** *Internet banking, Electronic Service quality, Customer satisfaction, Adoption of Internet Banking*

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## **Appraising The Difficulties Faced by Factory Workers of Agro-Inputs Manufacturing Companies in Sri Lanka**

W. R. W. M. A. P. Weerakoon<sup>1,2\*</sup>, P. M. N. Mihirani<sup>3</sup>, J. P. U. Samaraweera<sup>3</sup>, M. W. C. Dharmawardhana

This study assessed the status of workers at agro-inputs manufacturing factories in Sri Lanka, where the major objectives were to (1) assess the problems faced by workers at factories, and (2) assess the extent to which firms have identified and solved those problems. Data was collected from 180 workers of 10 companies during 2012 and 2015. Both qualitative and quantitative aspects were assessed through descriptive and inferential statistics. Results revealed that factory workers were poorly paid where 78% of the women in factories were underpaid compared to men. Most employers haven't yet identified the skills, knowledge and potential of workers. Over 85% of the workers experienced frequent job rotations without any foreseeable career path. Over 63% of the companies had not maintained proper training plans or employee records except the records on wages and simple workshops. Nearly 70% of the companies haven't maintained occupational health and safety records of individuals. Although several standards were implemented, occupational safety, health training, and welfare weren't among the top priorities. Although accidents were rare among women, occasional accidents among men indicate that the risks of calamities haven't wholly curtailed. Cafeteria facilities, restrooms, sickrooms and sanitation were often below standards where first-aid or medical assistance weren't readily available. Job insecurity, issues on family welfare such education and health of children were among the severe burdens that workers, especially women required support, but haven't yet received. Participation in unions and raising complaints were limited among women due ignorance or lack of awareness. The study highlights the need of a national policy and a monitoring system to assure that basic needs of workers at factories are fulfilled with a cautious focus on health, nutrition, reverence, family welfare, work milieu, remuneration and career development with regard to both permanent and contract-based workers irrespective of the gender. Moreover, a mix of proper human resources functions is suggested with a robust involvement of the top level management where the burdening issues of workers are focused.

**Keywords:** *Agro-input Manufacturing Company, Factory Workers, Issues of workers, Human resources, Sri Lanka*

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## **Marketing Chain Analysis of Rice Production in Ampara District, Eastern Part of Sri Lanka**

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This study was initiated to examine the rice marketing chain system in Ampara district of Eastern province which is most famous geographical point for rice production in Sri Lanka. The objectives of this study were to analyse the structure of marketing chain, to examine the channel members in this chain, to understand the determinants of rice supply, to find out the major constraints in marketing the rice in this region. The data were collected through interviews from 42 famers, 15 millers, 10 business community, and 06 middle men by using self-administrated questionnaire and checklists. This was enhanced by several secondary data such as published materials. The results obtained from this analysis indicates that educational level and experiences in rice business of farmers, millers, business community, price and profit of rice and seasonal variety of rice, quantity and quality of rice were found to be the most important variable which were designed the marketing chain of the rice market in Sri Lanka. The main marketing determinates of rice marketing were famers, business community, millers, and middle man. However, few rice producers are channeled or distributed to household consumers as direct selling small medium entrepreneurs. Further rice marketing price and profit performance also measured with the past ten years' price and profit data through the interviews of marketing channels. In addition to these findings, this study has found that several business-related issues such as maintaining low cost production methodology, chemical free production, lack of modern technology, and value adding methods targeting export and local business, etc. This study will help to policy decision makers of this rice business sector.

**Keywords:** *Rice, Production, Marketing Chain, Rice Framers, Rice price, Amapara District*

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## **The Issues and Challenges Faced by Women Entrepreneurs in Sri Lanka**

T. Jayawardane<sup>1\*</sup>

Entrepreneurship has been considered as a male-dominated vicinity for many years, but in today's society there are many women running their respective businesses as outstanding and inspirational entrepreneurs. With the economic changes and globalization, women entrepreneurship has been gaining higher importance in Sri Lanka. Legislations have been created with laws and by-laws to support motivating entrepreneurship, encouraging education and training for potential entrepreneurs. Literature confirms that there are many successful stories of female business entrepreneurs in Sri Lanka. As observed in countries like Japan and Spain, the development and nurturing of women entrepreneurs would be a value addition to the development and prosperity of the whole country. Many women leave their respective employment for various reasons. Such women can be encouraged to be entrepreneurs who will contribute to the income of their family as well as the development of the country. Women entrepreneurs provide a strong, empathetic and supportive role in the society while demonstrating unique characteristics when faced with challenges in running their businesses. All these reasons, created the motivation for the researcher to study this area. This article intends to identify the various issues and challenges faced by women entrepreneurs of Sri Lanka and the competencies they exercise to overcome them. This research was undertaken using qualitative methodology in a chosen sample of 24 women entrepreneurs based in Colombo, Sri Lanka. In conclusion the outcomes identified the challenges and issues faced by the women entrepreneurs along with the unique ways they faced and overcame these obstacles. It was further reiterated that these women entrepreneurs were highly capable in motivating employees, retaining customers, creating job opportunities and they invested most of their earnings for the betterment of their family and country.

***Keywords:*** *Women Entrepreneurs, Issues, Challenges, Competencies, Sri Lanka*

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## Exploring Different Perspectives of Strategic Entrepreneurship Construct

C. R. Mudiyansele<sup>1\*</sup>, M. W. Madurapperuma<sup>2</sup>

In recent years, both academics and practitioners have given increasing attention on the question of how to integrate strategic and entrepreneurial management to achieve a better balance between advantage-seeking and opportunity-seeking behavior. However little consensus exists over the meaning of concept of “strategic entrepreneurship” (SE), its constituents and operations. The study examined the literature on entrepreneurship, strategic management and SE to ascertain locus of integration lies between advantage -seeking and opportunity-seeking behaviours and observed factors emerge at the interface SE. The study mainly occupied literature review and the study utilized developmental configuration approach, which is a powerful method for building detailed models consisting of several domains illustrating complicated and interrelated relationships among large number of variables. Investigators framed different components discussed in the literature and empirical model implied that firms which employed an entrepreneurial mind set to explore for opportunities, manages its resource and applies creativity to exploit opportunities strategically and entrepreneurially. The empirical results further supported that SE fully mediated the relationship between entrepreneurial orientation and organizational performance. The study emphasized that it is necessary to consider both the integration and interdependency of its components to synthesize SE at the creation of a framework that could be applied by entrepreneurial managers and established firms to structure and refine their business architecture. Resource management and application of creativity was a main consideration in the literature, and an additional issue was what triggers the process of SE on the one hand and what factors push the firm to pursue innovation as a product of the SE process, on the other. Literatures have remained a gap of results for different level of innovation as a significant factor in constituting SE and firm performance. The review of literature addressed time and spatial considerations associated with “balance” between strategic behaviour simultaneously in a process of SE, ambidextrously using both at the same time, or, do firms draw on entrepreneurial behaviours when necessary to be followed by strategic advantage-building activities and vice-versa. SE facilitates organizational selection processes to evaluate the outcomes of new activities along new performance dimensions and organizations’ resource allocation along established performance dimensions. Empirical studies implicitly explicated managing resources strategically to create competitive advantages. Based on the broad range of components associated with SE and the common themes it shared with literature in the disciplines of entrepreneurship and strategy conceptualization, it was realized that development of SE construct as an unsettled matter.

**Keywords:** *Strategic Entrepreneurship, Innovations, Resource base view, Strategic behavior, Entrepreneurial behavior.*

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## **The Relationship Between Liquidity and Profitability: Empirical Evidence from Banks in Sri Lanka**

N. Madhushani \*, N. Wellappuli

Banking sector plays a crucial role in the financial system of a country and provides significant contribution to the development of the economy. Importantly, this study investigates the relationship between liquidity and profitability of banks in Sri Lanka for the period of five years from 2011 to 2015. Moreover, this study attempt to find significant differences in liquidity and profitability among the selected banks. Data was gathered from annual reports of 10 selected banks in Sri Lanka. For data analyzing it employed descriptive statistics, multiple regression analysis, and ANOVA analysis. This study used current ratio and cash ratio as liquidity measures while profitability was measured by return on assets and return on equity. Further firm size was used as control variable. The findings of this study revealed that there is a significant and positive relationship between liquidity and return on assets while liquidity has an insignificant and positive relationship with return on equity. The impact of firm size on profitability is significant and positive. Moreover, there are significant differences in liquidity, profitability and firm size among the selected banks in Sri Lanka. These findings reveal that banks should pay attention in liquidity management and adopt efficient liquidity management techniques to maintain adequate liquidity level for maximizing its profitability.

**Keywords:** *firm size, liquidity, profitability, Liquidity management, Banks, Sri Lanka.*

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## **Productivity Growth of Insurance Industry in Sri Lanka: A Malmquist Productivity Analysis**

T. Selvamalai<sup>1\*</sup>

This study examined total factor productivity change of Insurance Industry in Sri Lanka. For this study, a total premium of insurance companies was chosen to as an output variable, while total assets and shareholders fund were chosen as input variables. Input-output data of 18 insurance companies were collected in Sri Lanka over the study period 2010-2015. The study applied methods of Malmquist Productivity Index (MPI) based on Data Envelopment Analysis (DEA) to measure the total factor productivity growth (TFPG). The Malmquist Productivity Index (MPI) decomposes total factor productivity growth into technical efficiency change and technological change. The results of this study indicate that total factor productivity of insurance industry decreased over the period of study in Sri Lanka. Five among the insurance companies had progressive productivity growth and the rest of the insurance companies had regressive productivity growth in Sri Lanka.

**Keywords:** *Insurance Company, Total Factor Productivity Growth, Malmquist Productivity Index (MPI), Data Envelopment Analysis, Insurance Industry.*

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# Computing and Technology

## **Efficacy of Blogs in Erudition of Computer Programming among Undergraduates**

S. Pathiratne<sup>1\*</sup>, P. A. B. H. Amarathunga<sup>2</sup>

The use of blogs in an educational setting produces several benefits which include the promotion of critical and analytical mentally conceiving, incremented access and exposure to quality content and an accumulation of solitary and gregarious interactions with peers. Blogs are personal journals written as a reversed chronological hawser of text, images or multimedia, which can be watched in a web page and are made publicly reachable on the web. Blogs typically enclose text in the form of a “blog post”, offer the capability for readers to comment or deliver feedback, comprise archives to past blog posts, and link to other blogs and bloggers (Anil Madaan, 1998). The present study found out the efficacy of educational blog in erudition of Computer Programming among Undergraduates. The study was conducted to develop an educational blog for the methods of teaching Computer Programming and experimentation the same with a set of students studying for the B.Tech. In Multimedia and finding out its efficacy over the orthodox technique of instruction. Two equivalent group experimental-designs are engaged for this research. Researcher has chosen 46 B. Tech in multimedia, students for the study. From the Marks attained of pre-test, 23 students were selected as control group and 23 students were selected as experimental group. According to the findings of t-test the experimental cluster students were better than the control cluster students in their gain scores. Finally, the Researcher concludes that; (a) There was substantial variance between control and experimental group students in their gain scores. That is the experimental cluster students are ameliorated than control cluster students in their gain scores. (b) There was consequential distinction between control and experimental group students in their gain scores for procurement of the cognizance, understanding, and application objectives.

**Keywords:** *blogs, Computer Programming, orthodox technique, Undergraduates*

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## **Study about Utilization of ICT Teaching – Learning Tools, Among Lecturers of National Colleges of Education in Sri Lanka**

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Science and technology play an important role in the new millennium. Tremendous explosion of knowledge in science and technology has changed the life style of people. Without science and technology we cannot go forward. CT Teaching – Learning Tools, the term will still most likely be utilized to reference out of classroom and in-classroom inculcates experiences via technology, even as advances perpetuate in regard to contrivances and curriculum. Solicitation of ICT environments progressively accommodate as paramount infrastructural features of colleges that enable edifiers to provide students with different representations of erudition and to enhance interaction between edifiers and students and among students themselves. Edifiers are essential players in promoting quality inculcation and no edification reform is liable to prosper without the active participation and ownership of edifiers. Edifiers must be able to incorporate Application of Digital Technology with the traditional learning and competent enough in Web Predicated Teaching. Ergo, Lecturers' of Teachers Training Collages Should equipped with opportune underrating about the ICT implements. Research in this context has never been carried out in Sri Lanka afore. Main objectives of this study are to determine the Utilization of ICT Teaching – Learning Tools among Lecturers of National Colleges of Edification in Sri Lanka and to compare the utilization of ICT Tools predicated on gender. Withal to determine the Utilization of ICT Tools between English and Sinhalese Medium Lecturers and Compare the Utilization based on subject stream (Arts and Science). A Sample consists of 100 Lecturers from Four Sinhala Medium and 200 Lecturers from English Medium National Colleges of Education in Western and North Western provinces of Sri Lanka. Stratified random sampling technique was followed for culling the National Colleges of Education. There are a number of college edifiers in each college. Only Arts and Science edifiers were culled following purposive sampling technique. Findings reveal that the Lecturers of National Colleges of Education in Sri Lanka are more propitious to Utilize ICT Teaching – Learning tools and male Lecturers are more propitious than Female Lecturers. Withal it was found that, there is no paramount distinction between the mean scores of Sinhala Medium and English Medium College Lecturers towards Utilization of Teaching – Learning tools and there is consequential distinction between the mean scores of Arts and Science stream among Lecturers towards Utilization of ICT Tools in Education. In Conclusion this study contributes an incipient teaching learning in the form of assessing the caliber of cognizance and Utilization of ICT Teaching – Learning Tools because the desideratum of the day is to make edifiers realize their capabilities and amend upon capabilities to avail solve the quandaries of their life through Utilization of ICT tools. Special efforts should be made in order to develop Utilization of ICT tools cognizance among the Arts Stream Lecturers and Female Lecturers. This study will be of immense use for the scholastic administrators, which will throw light upon the posture of edifiers of Higher Inculcation towards Utilization of ICT Implements.

***Keywords:*** ICT, Learning, Lecturers, Teaching, Tools, Utilization

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## T-Moms for Restaurants

Y.A.U. Medhavi<sup>1\*</sup>, M. C. Wijegunasekara<sup>1</sup>

The aim of this study was to identify the drawbacks of a restaurant order management system and suggest a solution. Several such systems were studied and it was identified that customers waiting time to receive an order is considerably high. This is because during peak hours the waiter staff is not sufficient and the service offered is not to the required standard. In addition, the paper menus can be flimsy, hard to navigate, and outdated. To reduce customer's wait times, management must ensure sufficient staff to present during peak hours and that they are properly trained to provide excellent customer service. These staffing issues can lead to substantial costs for the business. As a result, the Tablet based Menu and Order Management System (T-MOMS) was implemented to resolve these problems using mobile devices. The T-MOMS contains four systems, a mobile application for customers and three web based systems for the admin panel, kitchen and cashier. The order is taken by a mobile device namely, a tablet placed on the restaurant table which acts as a waiter. The mobile application is started by a waiter by logging into the system and assigning the table number and a waiter identification. The waiter identification and table number are saved in the application until that particular waiter logs out. The mobile application has four subsystems namely, display subsystem, assistance subsystem, commenting subsystem and ordering subsystem. The display subsystem displays the complete restaurant menu by categories, special offers' information and allows the customer to browse all the currently available menu items by category. The assistance subsystem allows the customer to call a waiter for any assistance needed. The commenting subsystem allows customers to create user accounts for adding comments and share experience on Facebook/Twitter. The ordering subsystem allows to select the desired items and make the order. Once the customer makes the order, first he will be able to view the order information that he has ordered including the payment with/without tax and service charge. After the customer confirms the order, the order is transmitted to the kitchen department via Internet for meal preparation. The kitchen web system displays all order information that are received from the tablets. This include the customer details, table number, the waiter identification and the details of the order. After the order is prepared, the waiter will deliver the order to the customer. At the same time, the cashier web system receives the details of the delivered order and the bill is prepared. The web based admin panel system allows the restaurant's management to add/view/remove/ update menu items and waiters, view reservation information and their cooking status/payment status, update service charge/tax, viewing revenue information over a time period. The T-MOMS system consists of a central server and a database. All ordering and expenditure information is stored in a central database. Eclipse and PHPStorm used as the IDEs. Mainly used languages are HTML, JavaScript, PHP, JAVA, XML. The menu application is designed to be used on 7" tablets as well as it will be supported on smaller screen sizes. As future development, features such as restaurant statistics should be implemented, paying the bill directly through the menu application should be created.

**Keywords:** Android application; Android digital Menu; Android food ordering system; Android Mobile Application; Restaurant Mobile Application

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## Optimization of SpdK-means Algorithm

R.P.T.H. Gunasekara<sup>1\*</sup>, M. C. Wijegunasekara<sup>2</sup>, N. G. J. Dias<sup>2</sup>

This study was carried out to enhance the performance of the  $k$ -mean data-mining algorithm by using parallel programming methodologies. As a result, the Speedup  $k$ -means (SpdK-means) algorithm which is an extension of  $k$ -means algorithm was implemented to reduce the cluster building time. Although SpdK-means speed up the cluster building process, the main drawback was that the cumulative cluster density of the created clusters by the SpdK-means algorithm was different from the initial population. This means some elements (data points) were missed out in the clustering process which reduces the cluster quality. The aim of this paper is to discuss how the drawback was identified and how the SpdK-means algorithm was optimized to overcome the identified drawback.

The SpdK-means clustering algorithm was applied to three datasets which was gathered from a Ceylon Electricity Board Dataset by changing the number of clusters  $k$ . For  $k=2, 3, 4$  did not give any significant difference between the cumulative cluster density and the initial dataset. When the number of clusters were more than 4 (i.e., when  $k \geq 5$ ), there was a significant difference on cluster densities. The density of each cluster was recorded and it was identified that the cumulative density of all clusters was different from the initial population. It was identified that about 1% of elements from total population were missing after clusters were formed.

To overcome this identified drawback the SpdK-mean clustering algorithm was studied carefully and it was identified that there are elements which had equal distances from several cluster centroids were missed out in intermediate iterations. When an element had an equal distance to two or more centroids the SpdK-means algorithm was unable to identify to which cluster that the element should belong and as a result the element is not included in any cluster. If such element was included into all the clusters that had an equal distance and if this process is repeated to all such elements the cumulative cluster density will be highly increased from the initial population.

Therefore, the SpdK-means was optimized by selecting one of the cluster centroids which had equal distance to one element. After many studies of selection methods and their outcomes, it was able to modify the SpdK-means algorithm to find suitable cluster to an equal distance element. Since, an element can belong to any cluster it is not possible give any priority to select a belonging cluster. As all centroids had equal distances from the elements, the algorithm will select one of the centroid from all equal centroids randomly.

The developed optimized SpdK-means algorithm successfully solved the identified problem by identifying missing elements and including them in to the correct clusters. By analyzing the iterations when applied to the datasets, the number of iterations was reduced by 20% than the former SpdK-means algorithm. After applying optimized SpdK-means algorithm to above mentioned datasets, it was found that it reduces the cluster building time by 10% to 12% than the SpdK-means algorithm. Therefore, the cluster building time was further reduced than the former SpdK-means algorithm.

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## Implementation of VoIP in University of Kelaniya

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In many enterprise level environment, it was a habit to inherit Private Branch Exchanges or PBX to reduce telephone costs by not using public switched telephone networks (PSTN) for internal voice calls. Earlier days traditional POTS (Plain Old Telephone System) PBX served this purpose. In modern technical era, calling through Internet or Internet Protocol (IP) Telephony or Voice-over IP (VoIP) is a technology that allows delivery of audio and other multimedia content over the Internet. With the advances of Internet and VoIP systems, many enterprises are migrating from POTS PBX to VoIP PBX as those systems promises high quality voice transferring plus many added services like video conferencing, MMS, Chat, easy billing, monitoring, etc. With new additions of multi-story buildings and with the high data speed network implementations it was a mere truth that incorporating VoIP will further reduce costs in implementing and maintaining voice call systems.

This paper describes the implementation of a VoIP based communication solution designed for University of Kelaniya. It is quite evident that larger portion in university budget is accounted as the PBX maintaining charges. But with introduction of VoIP, we can use the existing Local Area Network and the single network connection terminating at the user premises for connecting both telephone handset and the computer. Therefore, avoids the cost for cabling of new connections and maintenance. Additionally, the quality of the calls would be significantly elevated.

As the main component of this proposed system, an free and open source Asterisk based SIP system was compiled on an existing Ubuntu server, here SIP or Session Initiation Protocol refers to a signaling protocol designed to create, modify and terminate a multimedia session over the internet protocol. Basic requirement to initiate SIP PBX is to identify a suitable numbering plan which can be used with future provisioning, therefore a four-digit number system was utilized for the task. Also the customization of Asterisk according to University needs, implementation of Interactive Voice Responses and user metering was done. Then the system was connected to the traditional PBX through an E1 trunk so that it will enable users to call within two systems. Softphones were used between IT staff, as they allowed roaming capability if used in a wireless network. Hard wired phones were also used for testing. After the implementation the only costs accounted were, for the new hard phones and E1 trunk.

In its implementation we had to focus on performance, quality of service, reliability and availability, scalability, obsolescence and service life, security and regulatory issues, electricity and backup power, network traffic and bandwidth.

When looking at the financial benefits to university, maintaining traditional PBX cost more than using this stated system as it totally depends on the existing LAN. Because of the maintenance is done by the university IT staff as their daily duty, no additional costs will apply for installing, commissioning and maintaining of VoIP system. Even though the initial costs will be high, it is an added advantage that VoIP users are able to call freely within the National Research and Education Network if they are connected in such a method. But all outgoing calls to the PSTN will still be billed as we are legally bound not to route voice calls through commodity Internet.

**Keywords:** *Voice over IP, SIP server, Implementation of VoIP, High Definition Voice Calls, Asterisk*

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## **Impact of Advance Computing and Technology to Manage Energy Resources**

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Electricity, the essence of life. It is one of the important supplement to run our lives, in the modern world. In the past, electricity used only to power up equipment we tend to use. Eventually Its lead to change with modern life style. Electricity currently (presently) not only use for power up homes or Industry, it is started to use for multiple energy sector too. With this peak electricity usage, energy efficiency is critical in proper household and Industry management. Hence the Sri Lankan government tend to find out various methods to generate more electricity. By researching author able to identify the massive increase of electricity consuming when comparing with past years and every year consumption increase. Consuming energy increases day by day, the Government not able to provide sufficient electricity requirement to the country and it can lead country to some anonymous difficulties. As a consumer, consumers should also take responsibility to adapt and understand the situation. Locally higher percentage of the consumers are not aware new advance technologies available for them to use to manage the electricity usage much better ways than the present methods they used. As an example, most of the electricity consumers use government or privet sector generated electricity and they end up with high expenses for the electricity. While researching author identifies present world there are many options consumers can implement to reduce their consumption, but most consumers not aware about the available solutions and possibilities they have. One example consumers are unaware that they are able to set up solar panels to generate electricity and the generated electricity could set against with the consumed electricity by the user. Applying this method, consumers are able to save money and also be able to support to save natural resources. Furthermore, the major issue is local consumer's lack of knowledge about their unwanted electricity usage and the available methods to use for manage their electricity usage appropriately. Local consumers are unaware the technology used by the developed countries to make their life easy and effectively manage the limited resources. By research author recognize available solutions to track down or control electric appliances such as time sensitive switches, sensor switches, smart switches. Some of the solutions are grouped and used to achieve the outcome consumers expecting. Furthermore, these solutions been more developed and thus adapt to the modern world technologies such as control the appliances using mobile devices. These advanced technologies already in used in globally. As an example, Home Automation Systems in developed countries are popular technology used for manage their day to day life electricity consumption. Using this technology, consumers are able to monitor the equipment consuming electricity and manage the consumption level even they are not in the premises. Hence, there will not be mismanage an electricity usage. Due to unknown of this Advance Computing Technologies by the local consumers, leads to critical in proper household and Industry management. Considering all these factors found while researching, Author recommend to local consumers to begin with these new Advance Computing technologies to manage energy efficiency and reduce their life complexity.

**Keywords:** *Advance Computing, Electricity, technology, efficiency, consumer*

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## **Enhance the Information Flow in Farming Life Cycle Using Participatory Sensing Concept**

R. S. I. Wilson<sup>1\*</sup>, Anusha Walisadeera<sup>2</sup>

The study analyses an enhancement technique in a farming life cycle to address the identified issues in the agriculture sector in Sri Lanka. The issue in agriculture sectors to be addressed to sustain a robust economic growth of a country. The government of Sri Lanka identified that providing solutions to agricultural issues is an important aspect to make the better economy in Sri Lanka. The lack of real-time information flow related to farming and farming life cycle will make more complicated issues in agriculture. The existing studies tell that the farmer-centered information flow will enhance the information flow better and help to make effective decisions for problems. The literature furthermore discusses the readiness and effectiveness of using smart devices to improve the information flow in the farmers' community. In this study, the sensory information of farmers about their farming life cycle is used to make effective information flow. Further, the study analyses the use of participatory sensing concepts to improve the information flow model. The improvement in the information flow model will enable farmer's better decision making for their issues. The network of farmer community is created using this model. In any critical situation during the farming life cycle, the sensory information such as location, time, feeling, image about the problem will be shared via smart devices through the network of farmers. The problem faced by the farmer will be easily solved with the expert and experienced farmers' comments. The image with the meta-tag will make comfortable the members in the community to make better suggestions towards the issue shared. The perfects comments and multiple suggestions may help to derive the efficient decision to the farmer who shared the problem in the proposed system. Meanwhile, the verified decision and suggestion about the problem will be updated in the knowledge-based which can be used for future references. The knowledge-based can be used by the farmer who involved in the system and it will easily disseminate information in the future very quickly without other insolvent and discussion. The system will be implemented using a mobile application which makes the farmers very easily share their problems with images and meta-tags to others in the network. Farmers can find solutions to their problems in an effective manner through this mobile application. The proposed system may lead to better economic growth through improved agriculture.

**Keywords:** *Participatory sensing, Mobile-based application, Agriculture, Information flow model, Ontology*

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## **Development of A Chaos Based Image Encryption and Decryption Algorithm for Color Images**

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Image encryption and decryption are important in secure transmission and storage of digital images. Image encryption and decryption algorithms are basically categorized into three categories, i.e., traditional ciphers, chaos based techniques and visual cryptography. The goal of this research is to implement an efficient image encryption and decryption algorithm for color (RGB) images, by using chaos based techniques, while analyzing the issues prevailing in the existing chaos based algorithms. In recent years, many chaos based algorithms have been developed, as their suitability in image encryption and decryption is significant. Prior research studies have highlighted the different methodologies in using chaos based techniques, to encrypt and decrypt images, while identifying the issues in them.

The research study was conducted as an experimental study. A new technique was proposed to generate the key, which was based on random mathematical permutation. The proposed key was a combination distinct keys for red, green and blue panels of an image. Pixel intensity values were replaced separately in the three panels, based on the key that was generated. Moreover, block transformation was introduced, to be performed, subsequently after replacing the pixel intensity values. The block transformation had three different patterns for three color panels. Finally, encrypted image was received by combining these three layers. Decryption was the reverse process of the encryption process. The algorithm was tested for its accuracy and its validity. Encrypted images provided a flat histogram, which demonstrated the validity. Application of noise removal filter on the encrypted image, did not provide the plain image. Key space of the proposed method was  $8.578177753 * 10^{506}$  for one panel, and the key file was a combination of 3 distinct keys of the given nature, which was larger and complex than the other methods. Average execution time (in seconds) for encryption and decryption are 0.012 and 0.014 respectively, which is lower than the other methods. Correlation coefficient between the plain image and cipher image were lower than the existing techniques, and thus this method demonstrated satisfactory results compared with the existing chaos based image encryption and decryption algorithms.

**Keywords:** *Image encryption, Image decryption, Chaos, RGB images, Block transformation*

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## New Processing Model for Operating Systems

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The computer plays a vital role in executing programs to solve problems. Further, for each and every such program, a process must be created, and all the required resources should be allocated to the process. In fact, the management of these processes is one of the most important jobs to be accomplished by an operating system. Moreover, by observing different behaviours that the processes display, the researchers have introduced variety of processing models such as two-state model, three-state model, five-state model, and seven-state model to increase the processing power of the computer. Here, the state of a process is related to the current task that the process does, and the term use for a state can be changed from one operating systems to another. Although, they have gained improvements, so far they have failed to produce a processing model to fully utilize the underline hardware architecture. Meanwhile, we made some observations on real world scenarios which revealed that how the human mind works is rather different from how the processing models incorporated in to the computers work till then. Furthermore, the human mind conditionally evolves with the time by drawing associations among the existing and newly arriving data and instructions. Having this insight, the research we conduct introduces a new eight-state processing model, which executes continuously depending on the presented conditions to enhance the processing power of the system. There, one additional state with the name "Terminate" with four new actions such as Ready-to-Ready, Ready-to-Terminate, Exit-to-Ready/Suspend, and Exit-to-Ready have been introduced to the existing seven-state processing model. In addition to those, two of the existing actions such as New-to-Ready/Suspend and New-to-Ready have been modified. In doing these changes, a set of fifteen from twenty four causal relations in Buddhist theory of mind, which can be exploited in explaining any phenomenon, has been applied. In order to depict the changes on each and every action, and to do the experiments, particular algorithms have being designing and these algorithms are to be integrated to the Kernel of the operating system. After doing these implementations, new processing model can be compared with the existing model by executing the same program for multiple times in the operating system with and without the new model and recording the time take in each round. Then the dependent two sample t-test which is more powerful and descriptive, can be applied on the results. Further, to check the quality of the new model a parametric test can be applied on the results of a survey conducted on a single group of users who has worked on the operating system with and without the new processing model.

**Keywords:** *Processing Model, Operating System, Kernel of Operating System, Twenty Four-Causal Relations, Eight-State Model*

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## **A Review of Data Mining Methods for Educational Decision Support**

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Data mining is a computer based information system which is devoted to scanning huge data repositories, generate information and discover knowledge. It attempts to uncover data patterns, organize information of hidden relationships, structure association rules and many more operations that cannot be performed using traditional computer based information systems. Therefore, data mining outcomes represent a valuable support for decisions making in various industries and education is one domain that can benefit from data mining. Application of data mining in education is living in its spring time and preparing for a hot summer season. Educational data mining emerges as a paradigm oriented to design models, tasks, methods, and algorithms for exploring data from educational settings. Educational Data Mining develops and adopts statistical methods, machine- learning and data mining methods to study educational data generated basically by students and educational instructors. The main goal of applying data mining in education is largely to improve learning by enabling data driven decision making for improve current educational practices and learning materials. Educational knowledge discovery, in data mining point of view can be seen as a similar process of applying the general knowledge discovery and data mining process and in experimental point of view, it can be seen as an iterative cycle of hypothesis formation, testing and refinement which not just turn data into knowledge but, also to filter the mined knowledge for decision making. There are many applications in education arena that have been resolved using data mining. There are more research studies have also been conducted under various educational problem categories and also there are a number of frequently used data mining methods use in Educational Data Mining. Various open source and commercial tools are available to apply data mining methods on the educational data. This study focuses on the identification of various educational problem domains where data mining methods can be applied and to study the suitability of the available data mining methods and the tools to perform Educational Data Mining in Sri Lankan Educational Institutes. The knowledge discovered by this review is expected to generate meaningful insight and provide guidance for important decisions made by educators.

**Keywords:** *Data Mining, Educational Data Mining, Machine Learning, Educational Knowledge Discovery, Tools*

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## **Teachers' Perspective on Language Learning through Virtual Learning Environment in Distance Education**

A. Gamage<sup>1\*</sup>, W.W.M.H.W.U.I. Wickramasinghe<sup>1</sup>

The last decade witnessed a significant growth in Information Technology and Communication and it has influenced the language learning in various ways. By the 21<sup>st</sup> century, Computer Assisted Language Learning (CALL) reshaped the language learning process. (Hardisty & Windeatt: 1989). Therefore, it can be seen how the human computer interaction has become a prominent place in language learning process. Previous research findings show that the activities done in a CALL classroom reduce the stress and it motivates the students to participate attentively and actively in language learning (Hee- Jung) and online learning environment has a significant effect on the academic improvement. (Hewagamage: 2012) With the rapid development of technology, Virtual Learning Environment (VLE) and Learning Management Systems (LMS) were used in order to overcome geographical challenges and it has become a phenomenal phase in language learning. Although there is substantial amount of research on various types of CALL with regard to improving four skills; reading, writing, listening and speaking in English as a Second Language, but much of the research is conducted considering a single skill at a time. Thus this research focuses on both writing and speaking skills which can be identified as productive skills. This paper tries to investigate how the usage of Virtual Learning Environment affects the academic performance of language learners in distance education. Thus this study explores the effect of VLE in improving distance learners' writing and speaking skills in learning English language and whether teachers are satisfied with the academic performance of distance language learners. For this qualitative study, ten teachers will be interviewed from a government university which is situated in western province. This research mainly uses semi- structured interviews in order to collect data. The collected data is analyzed considering the teachers' perspective on the academic performance of distant language learners who learn English language through Virtual Learning Environment. The results of this research bring out that VLE plays a major role in improving writing skills whereas that significant effect cannot be seen in improving speaking skills.

**Keywords:** *Virtual Learning Environment, Computer Assisted Language Learning, English as a Second Language, Distance Education, Human Computer Interaction, Teachers' Perspective*

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## **The Importance of Non-Technical Human Skills for the Software Engineering Education**

S. A. D. S. S. Senadheera<sup>1\*</sup>

A Software Engineering graduate, in general acquires technical skills and theoretical knowledge, throughout the time they spent at the university. However, )Rivera-Ibarra, et al., 2010( states that “A competency framework defines a set of knowledge, skills, and behaviors that professionals must have to excel in their careers .” This justifies, to excel in their carrier, they also require a set of non-technical human skills) NTHS) .(IEEE & ACM, 2015( states, interpersonal relations play a central role in many software engineering activities . Communication skills, ability to work in a team, problem-solving skills, planning and organizational skills, ability to obtain and process information, and ability to analyse quantitative data are the most desired characteristics that industry has scaled . Nevertheless, this area in the tertiary education system is not focused enough to fulfill the necessity, though it is a career deciding requirement.

Therefore, it is a timely need to achieve the balance )Comber, et al., 1996( in curricula designing . Though the Software engineering field emerged five decades ago, this gray area in software engineering education was given less attention by the researchers, which limited its progress) .Malik & Zafar , 2012 (states, inadequate curriculum for software engineering is considered to be one of the most common software risks . Although, the increasing demand of software engineering professionals in government and business sector has increased pressure on academic institutes to produce greater number of competent software developers, still there is a considerable gap between the topics taught to students in university courses and the skills and practical knowledge required by the industry . Due to this gap, companies have to provide an extra training to fresh graduates before assigning actual jobs to them . Furthermore )Mannan, 2014 (emphasise, the importance of NTHS ensures the success of career .

For this research purpose, conducted interviews with key decision making personalities of prominent software developing companies in Sri Lanka . Also, analysed the Sri Lankan prominent tertiary education providers’ web sites to examine the structure of the Software Engineering undergraduate course . To analyse the research area, mainly depended on the primary data, due to the lack of information available on this research area in Sri Lanka.

Findings justify the graduates are not aligned with the industry requirements at the time they enter . Therefore, companies are compelling to spend a considerable time to train them to assign an actual job . On the other hand, tertiary education providers ’website analysis evidenced that the tertiary education system in Sri Lanka has not filled the gap in creating software engineers . The course content does not support or does not have a continuous learning method or module to acquire this crucial need .

This research finding concludes that, Sri Lanka as an emerging Software exporting nation )Malik & Zafar , 2012 (it is the best time to re-think for a curriculum change, to make more productive and employable graduates for the industry.

**Keywords :** Tertiary Education, Software Engineering Education, Non-Technical Human Skills, Career requirement, Curriculum Change.

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## **The Impact of Organization Culture on “ITIL Project Implementations” of ITSM in Sri Lanka**

Padmika Herath<sup>\*</sup>, Jayani Prabhashini, Gayan Kanika Katepearachchi

Many IT organizations adopt industry framework to guide, standardize, fine-tune, streamline IT service delivery process. Information Technology Infrastructure Library (ITIL) is one of the industry frameworks in IT Service Management (ITSM). In fact, industry experts often suggest the ITSM organizations to start with configuration, implementation, and deployment of ITSM projects, whilst people factor was neglected!

Integrated system implementations are change initiatives of organizations (Hong, 2002). Changes to seek better process improvements and will call optimize service delivery to achieve agreed service level. Making changes to current business processes is hard due to this people factor (Hong, 2002). Dharmasiri (2015) found organization or corporate culture is the pattern of values, norms, beliefs, attitude and assumptions that may show people factor of project implementation.

Today, cultural change in every organization is imminent. Being in the IT industry many of us associated experience cultural changes with the IT service enabled organizations. What is the best method for getting your team’s support as a success factor of project implementation is the paramount need for successful ITSM project.

Therefore, study on how “people” impact ITSM business process implementations were started with checking, “is it true, organization culture influence ITIL project implementations?”, 95% of sample confirmed that organization culture influence ITIL project implementations. Furthermore, Literatures were found “Emphasis and Learning, Openness and Involvement, Fit between requirement and achievement” are the variables (Kampmeier, 1998) of organization culture.

Three business cases were analyzed to reveal how organization culture impact on project successes: found nothing but negatively impacted on three business cases! And three project failure due to poor support from the end users!

***Keywords:*** ITIL / ITSM, IT Project Implementation, Organization Culture, People

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## **An improved method to isolate Vehicle License Plate**

M.K.B. Ashan<sup>1\*</sup>, N. G. J. Dias<sup>1</sup>

In a License Plate Recognition (LPR) system, vehicle license plate isolation is one of the major tasks. By sending this isolated vehicle license plate image into an Optical Character Recognition (OCR) system, the license plate can be recognized. Locating the license plate in a vehicle image, the non-uniformity of license plates and the captured images which consists of skewed license plates are the key problems when it comes to the license plate isolation problem. The work proposed in this paper is a solution to the vehicle license plate isolation problem.

The first phase of license plate isolation process is the conversion of the input image into grayscale. This may help to reduce the luminance of the colour image. As the second phase, the boundaries of the objects in the image will be improved by filling any unwanted holes. This filling process is called dilation.

Next the, edge processing is performed on the dilated image both horizontally and vertically and, by drawing histograms for these two processing, the probable candidates for the license plate locations are identified. However, there may be consecutive columns and rows which consists of drastically changing values in the histograms. These are smoothed in the next phase. Now, the low histogram value regions are identified as the unwanted regions and by removing these, the probable candidate regions are identified. The most probable candidate which may contain the license plate is considered to be the highest histogram valued region. Closely located line of letters in the license plate with a plain background colour causes to generate such higher histogram values rather than in other regions.

Finally, our algorithm work on different levels of illumination and skewed images. The efficiency of our algorithm is significantly increased and it is around 80%.

**Keywords:** *LPR, License Plate Isolation, Matlab R2014*

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## Comparison of Part of Speech taggers for Sinhala Language

Manoj Jayaweera<sup>1\*</sup>, N. G. J. Dias<sup>2</sup>

Part of Speech (POS) tagging is an important tool for processing natural languages. It is one of the basic analytical model used in for many Natural language processing applications. It is the process of marking up a word in a corpus as corresponding to a particular part of speech like noun, verb, adjective and adverb. Automatic assignment of descriptors to the given tokens is called Tagging. The descriptor is called a tag. The tag may indicate one of the parts of speech category and the semantic information. So tagging is a kind of classification. The process of assigning one of the parts of speech to the given word is called parts of speech tagging. It is commonly referred to as POS tagging. In grammar, a part of speech (also known as word class, lexical class, or lexical category) is a linguistic category of words (or more precisely lexical items), which is generally defined by the syntactic or morphological behavior of the lexical item in the language. Each part of speech explains not what the word is, but how the word is used. In fact, the same word can be a noun in one sentence and a verb or adjective in another. In most of the natural languages in the world, noun and verb are common linguistic categories among others. Almost all languages have the lexical categories noun and verb, but beyond these there are significant variations in different languages. The significance of the part of speech for language processing is that it gives a significant amount of information about the word and its neighbours.

There are different approaches to the problem of assigning a part of speech tag to each word of a natural language sentence. The most widely used methods for English are the statistical methods that is Hidden Markov Model (HMM) based tagging and the rule based or transformation based methods. Subsequent researches add various modifications to these basic approaches to improve the performance of the taggers for English. In this paper we present a comparison of the different researches that was carried out of POS tagging for Sinhala language. For Sinhala language, there were 4 reported work for developing a POS tagger. In 2004, a HMM based POS tagger was proposed using bigram model and reported only 60% of accuracy. Another HMM based approach was tried out for Sinhala language in 2013 and reported a 62% of accuracy. In 2016, another research was reported 72% of accuracy which was a hybrid approach based on bi-gram HMM and rules based approach in predicting the relevant tag for unknown words. The tagger that we have developed is based on a trigram based HMM approach, which used the knowledge of distribution of words and parts of speech categories in predicting the relevant tag for unknown words. The Witten-Bell discounting technique was used for smoothing and our approach gave an accuracy of 91.50% with a corpus of 90551 annotated words.

**Keywords:** *Sinhala language, Natural Language Processing, Part of Speech tagging, Hidden Markov Model, Hybrid Tagging Approach*

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## **Identity Management and Data Privacy Protection in IoT Paradigm**

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Internet of things is a concept which has changed along with time. In this concept services can be provided using either centralized or distributive architecture. In centralized form a central entity will collect, store and process information whereas in distributive architecture information will be shared and processed collaboratively in a dynamic manner. These entities or 'Things' will have counterparts which can be either a human or another entity. Even though this concept provides a wide vision for organizations, implementing a single strategy to protect this paradigm is not feasible. In centralized approach entities which are located on internet will acquire information from entities which are located in other networks and provides these information as raw data or as processed to other entities. The data shared by these devices in distributed Internet of Things concept is creating a threat of identity theft and privacy violation. This paper will propose a trust management framework which will use identity as service and we articulate whether such approach is beneficial on improving security between devices. The issues in IoT framework are explored and discussed through use case scenarios, and a suitable framework will be proposed. A simulation of a food nutrition analysis will be used to show that by using trust, the analysis error can be reduced.

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## **A Framework to overcome disability digital divide in Sri Lanka**

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The term *digital divide* was introduced in the 1990s to define the gap between those who have access to new forms of information and communication technologies (ICTs) from those who do not have access. Due to a disability some people are getting disadvantage of accessing Information Technology. This problem is known by the disability digital divide. Disability is a main issue in Sri Lanka due to 30 years of civil war in the country. Therefore disability digital divide is a pertinent research problem for Sri Lanka. Researcher has proved with two initial surveys with including 314 and 180 sample set Sri Lanka is having a disability digital divide problems. First phase of these study two set of samples were interviewed to identify the current disability digital divide in the country. Initially 314 participants were interviewed and in the second set of sample including with 180 disabled participants. Findings indicated that an ICT technology used by the differently abled community is low in Sri Lanka. Therefore this study proposes a framework to overcome disability digital divide in the country. This framework consists with different dimensions to overcome the disability digital divide such as Technology consideration, Government intervention and Policy implementation, Social and Cultural intervention and economical intervention. Propose solutions are including with web site standard development and implementations, user friendliness of software development, Infrastructure development issues, Social and cultural changers, Financial support for specially people having with disability. In addition to that training and development on technology will be helpful to overcome disability digital divide.

**Keywords:** *Digital Divide, Disability, disability Digital Divide, Technology Adoption*

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## Virtualization for small and medium-size businesses

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People were talking about virtualization all the time. They're usually talking about enterprises and data centers and they usually mean server virtualization. But desktops can be virtualized too, it can be helpful to small and medium-size businesses. In here researcher was consider desktop virtualization. Desktop virtualization, as many firms look to extend the benefits of virtualization to their end users.

Computer virtualization is a method of partitioning a computer hardware and in return presents multiple virtual machines on the computer platform providing the ability to run multiple operating systems and configurations without requiring multiple standalone computer systems. The study was thoroughly under taken by the researchers by focusing on the problem of the complex desktop environments, security and compliance issues. One of the original forms of computer virtualization on a centralized architecture model was used with mainframe technology. Virtualization and its unique architecture have many characteristics and advantages over traditional non-virtualized machines. This paper efforts to recognize the above-mentioned issues, risks, and differences caused by traditional non-virtualized machines. The system has been developed using VMs applications.

server virtualization has been around for more than 10 years and while issues such as storage and I/O bottlenecks can still rear their head, the multi-faceted advantages offered by virtualization are real and attainable even if people run a small business and since them competitors may not have discovered the benefits of the technology yet they may gain a significant competitive advantage.

**Keywords:** *Virtualization, data Centers, non-virtualized machines, centralized architecture, standalone computer systems, VMs*

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## **Intelligent Personality Detection System Using Linguistic Features Based on Social Media Data**

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With the advancement of the technology the transition from forum and blog-based Internet communication among users to social networking sites such as Facebook and Twitter, allow users to create and share content related to different subjects, which expose their activities feelings and opinions. The purpose of this research article is to provide a web application in order to detect one's personality using linguistic feature analysis. The personality of a person is classified according to Eysenck's Three Factor model including Extrovert - Introvert, Neuroticism - Emotional Stability, and Psychoticism - Tender. The proposed technique is based on ontology based text classification, linguistic feature-vector matrix using LIWC (Linguistic Inquiry and Word Count) features and semantic analysis using supervised machine learning algorithm named Naïve Bayes. The extracted data provides extraordinary information about the personality of a person under human feelings and social interaction. It conveys who the users are and what their qualities are. This is vital for the areas such as HR management systems, R&D Psychologists and all the other API users. Considering HR management sector this would be an advantage in recruiting process, salary increments and providing allowances. R&D Psychologists will gain the advantage of the dynamic ontology to make their research result in a more efficient manner. System will be exposed as an API for universities, sports and social clubs when recruiting individuals to those organizations. According to the test results the proposed system is in an accuracy level of 91% when tested with a real world questionnaire based application. Experiments have been carried out comparing with a real world personality detection questionnaire based system and results demonstrate that the proposed technique can detect the personality of a person with acceptable accuracy and a speed.

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## **Intelligent Sorting System for Curriculum Vitae using Natural Language Processing**

Tharindu Weerasooriya<sup>1\*</sup>

Natural language Processing (NLP) has undergone tremendous development over the past few decades. The logic behind sentence analysis plays a vital role in NLP applications. The present study makes use of Stanford CoreNLP, an NLP tool that enables Parts-of-Speech (POS) tagging and NamedEntity Tagging to extract the essential information from a curriculum vitae (CV), followed by ranking the best candidates according to the information included in the CV. The system design is as follows: the proposed system initially categorizes the candidates according to the post applied. The second step checks for the basic qualifications required by the company. If the basic requirements are not met, the CV is rejected. The third step uses POS tagging to interpret and assign marks for each section in the CV. The extracurricular activities section is grammatically ambiguous as it contains achievements in sports, clubs and societies. The research was aimed at classifying the extracurricular activities using a mix of rule based parsers and the NamedEntity Tagger. Firstly, the sentence is passed through the rule based parser, which classifies it as a sport or a club activity (using a word match specific to each group). The category which has the highest match is given  $\frac{3}{4}$  mark of the decision. The NamedEntity tagger searches the sentence for any sports or organizations, and the classification is given a  $\frac{1}{4}$  point in the decision. The sentence is categorized into the relevant category depending on the highest score. During testing, in a CV which contained 28 extracurricular activities, the system classified 14 achievements in Sports and 14 achievements in Clubs and Societies. However, the correct classification should be 17 in Sports and 11 achievements in Clubs and Societies. The methodology would succeed in sorting ambiguous sentences, where a corpus based method would fail (i.e. "Compered at Kelani Hockey 6's"). The keyword of the sentence is Hockey, but it is not an achievement in sports). Being an adaptable system using NLP, it could be customized to assign a weighted score for specific keywords depending on the requirement of the organization. The fourth step is to assign a total score to the CV. At the end of the cycle, the system would output the list of the top 50 CVs qualified for the post. This system was tested with a sample data set from the CV bank of the Career Fair 2015 (CF) of the University of Kelaniya. The manual CV sorting process of the CF required at least 2 minutes per CV and each CV was sorted individually. The system was less time consuming, more organized and efficient.

**Keywords:** *Natural Language Processing, Parts-of-Speech Tagging, NamedEntity Tagger, Curriculum Vitae, Keyword Classification*

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## **To Review Safety of the Internet and Privacy of New Production Methods**

L. C. P. Perera<sup>1\*</sup>, E. M. P. M. B. Ekanayaka<sup>1</sup>

At present 40% of the world population use internet daily. The percentage keeps on increasing day by day. According to the Alexa ranking, Google.com, youtube.com, facebook.com, Baidu.com, Yahoo.com, and Wikipedia.org are the widely used websites and search engines today. Moreover, there are uncountable number of active accounts existing in the internet. At times, apart from personal details of users, those accounts also include sensitive data. Several policies of creating passwords such as using number of digits, using symbols, using upper case letters and lower case and need to update passwords within several period of time are in use throughout the world. The main objective of this is to prevent and minimize the chances of attacks such as Hacking, Hijacks, Trojans and Key loggers. Nevertheless, there are high risks of account passwords being hacked and gaining unauthorized access to accounts due to some practices of users which include saving passwords on the browsers and using very simple and guessable passwords. Most of the time users tend for these practices due to the difficulty in remembering complex passwords and unwillingness to type passwords over and over again. This issue could be addressed through high security password encryption and decryption software and developing high security Password Saver Software (All in one Password).

***Keywords:*** *Internet, accounts, security, password, software, privacy*

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# Humanities



## **A Study of Prepositional Errors in Writing in English as a Second Language**

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A research study was undertaken to identify the prepositional errors in writing in English made by the undergraduates of the Faculty of Agriculture, Rajarata University of Sri Lanka and to find out the reasons why they commit such mistakes and to recommend remedial measures to overcome the problem. A pre-test, an intermediate test and a post-test were administered during the survey period. The pre-Test was conducted as soon as the students entered the Faculty of Agriculture and an intermediate test after one week of the first semester and the post test at the end of the studies in the first year.

A questionnaire survey was undertaken among the sampled group of 42 students as well as 5 students in the Faculty of Agriculture, 19 English teachers in two schools in the Anuradhapura District, and 4 Lecturers and 2 Instructors in English of Rajarata University of Sri Lanka. Frequencies and percentages of each category were computed for categorical variable and differences between categories were tested using Chi-square Kit. The results revealed the problematic areas of learning prepositions, and other relevant information with regard to the learning area and the external factors. However English in the surrounding, lack of English teachers, teaching methodology and classroom environment were identified as some of the problems the students have had.

**Keywords:** *Preposition, Teaching Methodology, Remedial Measures, External Factors Classroom environment*

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**ප්‍රාන්ස් කඟ්කාගේ කතා කලාවේ දේශපාලන මුහුණුවර**

රෂිකලා ලසිකා \*

විශ්ව කීර්තිධර කතුවරයකු වූ ප්‍රාන්ස් කඟ්කාගේ (1883 - 1924) කතා කලාවේ දේශපාලන මුහුණුවර පිළිබඳ ඔහුගේ ප්‍රකට කෙටිකතාවක් වූ 'රූපාන්තරණය' (The Metamorphosis) ඇසුරින් අධ්‍යයනය කිරීම මේ පර්යේෂණයේ අරමුණයි. යථාර්ථවාදී කතා රීතිය අතික්‍රමණය කළ, අධියථාර්ථවාදී සහ නූතනවාදී සාහිත්‍ය ප්‍රවණතාව වර්ධනය කළ ලේඛකයකු වශයෙන් ප්‍රකට වූ ප්‍රාන්ස් කඟ්කාගේ නිර්මාණ අරභයා විවිධ විචාර ධාරාවන් ගොඩනැගුණේ ය. විශේෂයෙන් ම ඔහුගේ The Trial සහ Metamorphosis යන නිර්මාණ පදනම් කරගෙන විචාර ඉදිරිපත් කළ ඇතමුන් ඔහු ව හැඳින්වූයේ පුද්ගල හුදෙකලාව, හුදෙකලාවේ ශාපය පිළිබඳ ලියවකු වශයෙනි. එහෙත් ඔහුගේ කෘති අධ්‍යයනයේ දී කඟ්කා හුදෙක් පුද්ගල හුදෙකලාව පමණක් කතා කළ කතුවරයකු නොවන බව පෙනී යයි. පුද්ගල, සමාජ, දේශපාලන සහ ආර්ථික පරිසරයන්, එහි සංකීර්ණ තත්ත්වයන් පිළිබඳවත් ගැඹුරු කතිකාවක් ඔහුගේ නිර්මාණවල යටිපෙළ අරුතක් සේ සාකච්ඡාවට ලක් කෙරේ.

'රූපාන්තරණය' මඟින් සහ එහි ප්‍රධාන වර්තය ඇසුරින් කඟ්කා මතුකරන දේශපාලන මුහුණුවර වශයෙන් විශේෂයෙන් හඳුනාගත හැකි වන්නේ අධිම ධනවාදයේ එක් ප්‍රතිඵලයක් වූ නිලධාරීවාදය සහ කාර්යාලයීය ජීවිතයයි. සමාජවාදී විචාර සිද්ධාන්ත ඔස්සේ සලකා බලන කල ධනවාදයේ බිහිසුණු බව, අයුක්තිය, අසාධාරණය සහ නීති පද්ධතිවල ඇති දුර්වල තැන් පිළිබඳ මතුකරන දේශපාලන දර්ශනයක් මෙහි දී ඉස්මතු කෙරේ. එහෙත් මිලාන් කුන්දේරා වැනි විචාරකයෝ මේ තත්ත්වය හඳුනා නොගනිති. ඒ අනුව මෙම අධ්‍යයනය මගින් සිදු කෙරෙන්නේ ප්‍රාන්ස් කඟ්කා මතු කළ දේශපාලන යථාර්ථය රූපාන්තරණය ඇසුරින් විග්‍රහ කිරීමයි. රූපාන්තරණය නම් වූ කෙටිකතාව ඇසුරින් රූප විපර්යාසයකට ලක්වන පුද්ගලයකු පිළිබඳ අධියථාර්ථවාදී ප්‍රතිනිර්මාණයක් සිදුවේ. කඟ්කා දේශපාලන කතිකාවක් ගොඩනගන්නේ එකී ප්‍රතිනිර්මාණ ක්‍රමයේ ම යටිපෙළ අරුතක් වශයෙනි. මේ පර්යේෂණය සඳහා ප්‍රාථමික මූලාශ්‍රයක් වශයෙන් The Metamorphosis කෘතියේ සිංහල පරිවර්තනය 'රූපාන්තරණය' සහ කඟ්කාගේ නිර්මාණ අරභයා ගොඩනැගුණු විචාර ආශ්‍රය වේ.

**ප්‍රමුඛ පද :** ප්‍රාන්ස් කඟ්කා, රූපාන්තරණය, පුද්ගල හුදෙකලාව, දේශපාලන යථාර්ථය, අධියථාර්ථවාදය

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## **Parallel Structure: An Influential Tool in Newspaper Editorial Headlines**

N.D. Ranasinghe<sup>1\*</sup>

The editorial of a newspaper is fabricated on an argument causing the reader to think accordingly. It also promotes critical thinking and at times makes the reader react to an issue. Hence, an editorial is defined as an opinionated piece of news. Therefore, creating a standout phrase as the headline of an editorial is of vital importance to persuade the reader to read the editorial. Among syntactic tools, this research determines the use of the rhetorical device, parallel structure, also known as parallel construction or parallel syntax, and their effects in headlines of newspaper editorials. The aim of this research ascertains the use of parallel syntax to emphasize the central theme the writer attempts to convey, and the objectives are to identify and analyze parallel structures in a corpus of sixty editorial headlines of two Sri Lankan Sunday newspapers: The Sunday Times and Sunday Island. Adopting the theory of parallelism, this research identifies parallel structures of word orders and phrases. Such headlines comprise of coordinating joining words: prepositions, adverbs, (be) verbs and conjunctions. The phrases also have varied features, such as, elements of comparison and contrast. Faulty parallelism or exceptions without the accepted elements of parallel syntax were also noted in this analysis. The identified features of parallel structures in the headlines of newspaper editorials lead to effects, such as, rhythm, economy, clarity, equality, emphasis and delight. Utilization of such effects creates a balanced and smooth flow of information, persuades and emotionally appeals the reader. Nevertheless, the findings of this research specify that parallel structures are used as a tool of advantage, only in 43% of the headlines of newspaper editorials.

**Keywords:** *newspaper editorial, headline, rhetorical device, parallel structure, influence*

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## **Learner Beliefs on Learning English as A Second Language: A Study of Undergraduates in The University of the Visual and Performing Arts**

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A large body of research has been conducted in the area of language learning beliefs, across the world. Beliefs inevitably matters in the pragmatic aspect of language learning. If learners are driven by misconceptions of language learning, the performance in class might be really low. Teachers' consciousness about English language teaching is also reflected in the methods utilized in class. Research indicates that individual students differ considerably in their use of learning strategies. Elaine Horwit, who developed the Beliefs About Language Learning Inventory (BALLI) was the first to conduct a systematic research into the nature of language learning beliefs. The theoretical framework of BALLI is based on five major components pertaining to language learning; foreign language aptitude, the difficulty in language learning, nature of (English) language learning, learning and communication strategies and motivation. In order to collect data, a questionnaire survey was conducted with a group of 30 ESL learners in the University of the Visual and Performing Arts. The sample group is little exposed to English since their medium of instruction is Sinhala and most of them come from rural backgrounds. The gathered data was statistically analyzed and several significant findings were revealed. According to the survey, it was found out the subjects believe that it is easy to learn a foreign language at a young age. The majority agreed that they have the ability to achieve proficiency in English. All the female participants believe that women are better than men at learning. Most of the subjects maintain a neutral opinion on learning English grammar. All the participants agreed that they want to learn English and believe that they will have better job opportunities if they learn English well. However, all the participants agreed that it is not necessary to be able to speak in English to live in Sri Lanka. It appears that this questionnaire is a valid instrument that can be applied to the Sri Lankan context to a great extent, despite its limitations. In order to make it more applicable to the Sri Lankan context, slight modifications should be done to make sure that the questions mirror the role played by culture, social background, discipline of study and field of work, in shaping beliefs of English language learners in Sri Lanka.

**Key words:** *The BALLI(Beliefs about Language Learning Inventory), Learner Beliefs, undergraduates, English, Learning a Second Language*

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**කථාවත්ථුප්පකරණයේ පුද්ගල කථා පරිච්ඡේදයේ සංගෘහිත වාද ක්‍රමය පිළිබඳ අධ්‍යයනයක්**

දිල්ශාන් මනෝජ් රාජපක්ෂ<sup>1\*</sup>

බෞද්ධ මූලාශ්‍රය අධ්‍යයන පාර්ශ්වයෙහි ලා අවධානය යොමු කෙරෙන මෙම පර්යේෂණයේ දී මූලික ව යොමු වන්නේ කථාවත්ථුප්පකරණය කෙරෙහි වන අතර එහි ද පුද්ගල කථා පරිච්ඡේදයේ සංගෘහිත වාද ක්‍රමය කෙරේ සීමා වෙමින් අධ්‍යයනය සිදු කෙරේ. ඒ අනුව කථාවත්ථුප්පකරණයන් එහි අටුවාවක් මේ සම්බන්ධයෙන් රචනා වී ඇති ද්විතීයික මූලාශ්‍රයන් පරිශීලනය කෙරේ. ක්‍රි.පූ. 255 දී රචිත කථාවත්ථුප්පකරණය නම් වූ පාලි ආහිධම්මික ග්‍රන්ථයේ එන සංවාද සොක්‍රටික ක්‍රමය ද ඉක්මවා යන වඩාත් සාර්ථක අපෝහක ක්‍රමයක් විශද කරන අවස්ථාවක් ලෙස පෙන්වා දිය හැකි ය. එමෙන් ම කථාවත්ථුප්පකරණයෙහි අඩංගු තාර්කික ක්‍රමවේදය පිළිබඳ ව අධ්‍යයනය කරන විට මොග්ගලීපුත්ත නිස්ස හිමියන් අනුගමනය කරන තාර්කික ක්‍රමවේදය සමකාලීන සමාජයේ හා බෞද්ධ උගතුන් අතර ජනප්‍රිය ව පැවති එකක් බවට කිසිදු සැකයක් නැත. කෙසේ නමුත් මෙහි දී මොග්ගලීපුත්තනිස්ස හිමියන්ගේ ප්‍රයත්නය වූයේ කිසිදු තර්ක ක්‍රමයක් අනුගමනය නො කර දෙපක්ෂයට ම තම තමන්ගේ භාෂාව යොදා ගැනීමට අවසර තබා එයින් කවරක් බුදුන් වහන්සේගේ දර්ශනය හා ගැළපෙන්නේ ද? යන්න පැහැදිලි කිරීමට යි. ඒ බව ථෙරවාදයෙන් මිථ්‍යා දෘෂ්ටි ලෙස බැහැර කෙරුණ ද කථාවත්ථුප්පකරණ විවාදයේ දී ථෙරවාදියා හෝ පුද්ගලවාදියා ජයග්‍රහණය හෝ පරාජය භාරගත් බවක් සඳහන් නො කිරීමෙන් ද පැහැදිලි වේ.

කථාවත්ථුවේ මතවාදයන් සියයකට වඩා විග්‍රහ කරන ලද නමුත් ඒවා අතර ඇත්තේ **පුද්ගලවාදය, සර්වාස්තීවාදය, ලෝකෝත්තරවාදය** යන ප්‍රධාන මතවාදයන් තුනක් පමණකි. එම මතවාද අතරින් පුද්ගලවාදය කෙරේ කථාවත්ථුප්පකරණයෙහි සුවිශේෂ අවධානයක් යොමු වන්නේ එය පළමු කොට ම පළමු පරිච්ඡේදයේ දී ම දක්වන නිසා පමණක් ම නොව පරවාදී-සකවාදී විවාදය පුළුල් ලෙස හා සම්පූර්ණ ලෙස කථාවත්ථුප්පකරණයෙහි භාවිත වන තර්ක ක්‍රමවේද සියල්ල අන්තර්ගත වන බැවිනි. කථාවත්ථුප්පකරණයේ අනෙකුත් පරිච්ඡේදවල පොයාල ක්‍රමයට දක්වා ඇති විවාදය සම්පූර්ණ විස්තර සහිත ව දැක්වෙන්නේ පුද්ගලකථා පරිච්ඡේදයේ අන්තර්ගතය තුළ වන බැවිනි. පුද්ගල කථා පරිච්ඡේදයේ සකවාදී පරවාදී විවාදය තුළ තර්ක ඉදිරිපත් වන අයුරු අදාළ සංකල්පය පිළිබඳ විග්‍රහයක් පදනම් කරගෙන තර්ක කිරීම, සූත්‍රාගත කරුණු උපුටා දක්වමින් තර්ක කිරීම හා පරිච්ඡේදය අවසන් වන විට සංකල්ප පිළිබඳ දුර්වල දුරු කිරීම සඳහා පද සංකලනය තුළින් තර්ක කිරීම යනාදී ලෙස තුන් ආකාරයකින් දැකිය හැකි ය.

**ප්‍රමුඛ පද:** කථාවත්ථුප්පකරණය, තර්කය, පුද්ගලකථා පරිච්ඡේදය, පුද්ගලවාදය, මොග්ගලීපුත්තනිස්ස හිමි

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**බෞද්ධ චතුෂ්කෝටික හා අමරාවික්ඛේපවාදීන්ගේ පංචකෝටික තර්ක ක්‍රම පිළිබඳ කුලනාත්මක අධ්‍යයනයක්**

දිල්ශාන් මනෝජී රාජපක්ෂ<sup>1\*</sup>

සංශයවාදය යන්න සඳහා සංදේහවාදය යන්න ප්‍රධානතම පර්යායක් වන අතර පාලි සාහිත්‍යයට අනුව භාරතීයයන් මේ සඳහා ව්‍යවහාර කර ඇත්තේ අමරාවික්ඛේපවාදය යන පදය යි. අමරාවික්ඛේපවාදය පිළිබඳ කරුණු අන්තර්ගත මූලික ම පාලි මූලාශ්‍රය වනුයේ දීඝනිකායේ එන සාමඤ්ඤඵල සූත්‍රය හා බ්‍රහ්මජාල සූත්‍රය මෙන් ම එම සූත්‍රවල අටුවා ය. මෙහිදී මූලික අවධානය යොමු කෙරෙන්නේ පෙළෙහි අමරාවික්ඛේපවාදීන්ගේ පංචකෝටික නය හා බෞද්ධ චතුෂ්කෝටික තර්ක ක්‍රම පිළිබඳ කුලනාත්මක අධ්‍යයනයක් සිදු කිරීම කෙරේ ය. දීඝනිකායේ බ්‍රහ්මජාල සූත්‍රයට අනුව අමරාවික්ඛේපවාදය නමින් හැඳින්වූ ගුරුකුල සතරක් පැවතුණු අතර ඡඩ ශාස්තෘන් අතරින් සංශයවාදී චින්තනය මෙහෙය වූ සංජය බෙල්ලට්ඨිපුත්තයන් වනාහි ඉහත කී ස්වකීයීය අඥානභාවය පදනම් කරගෙන සංශයවාදය මෙහෙය වන ලද ගුරුකුලයේ නායකයා නැතහොත් සාමාජිකයෙක් විය යුතු ය. සත්‍යක්ෂණය කළ නොහැකි මරණින් මතු පැවැත්ම ආදී අධිභෞතික කරුණු හා හොඳ, නරක ආදී ආචාර විද්‍යාත්මක කරුණු කෙරේ ඔහුගේ අවධානය යොමු වී ඇති අතර එහි ප්‍රතිඵලයක් ලෙස පංචකෝටික නය හෙවත් පංචකෝටික තර්ක ක්‍රමයක් භාවිත වූ බව පෙනේ. දීඝනිකාය අටුවාවට අනුව මෙම පංච භංගී නයෙහි එක් එක් ප්‍රස්තුත කෙරෙත් අපේක්ෂා කරන ලද අරමුණු ද වේ. කිසිසේත් සත්‍යක්ෂණ කළ නොහැකි හෝ සත්‍යක්ෂණය කළ හැකි නමුත්, එසේ කිරීමෙන් ඵලක් නැති හෝ සත්‍යක්ෂණය කළ හැකි නමුත්, තවමත් සිදු නො කළ යමක් පිළිබඳ විය හැකි යැයි සැලකිය හැකි මෙම භව්‍යතා සංජය මෙන් ම අනෙක් සංශයවාදී ගුරුකුල තුන ද පංචභංගී නය භාවිත කර ඇත්තේ තමන් කිසිදු ආකාරයක අන්තවාදයක් නොදරන බව ප්‍රකට කිරීමට බව පෙනේ.

අමරාවික්ඛේපවාදීන්ගේ පංචභංගී නයෙන් බෞද්ධ චතුෂ්කෝටියේ විශේෂත්වය වන්නේ ප්‍රස්තුත සතර අතරින් සැවමට ම එකක් පමණක් සත්‍ය වන බව පෙන්වා දීමෙනි. ප්‍රස්තුත සතර ප්‍රතික්ෂේප කරනුයේ අධිභෞතික යැයි සැලකෙන විෂය සම්බන්ධයෙන් පමණි. බුදුදහම චතුෂ්කෝටික නය හුදෙක් භාෂා මෙවලමක් ලෙස සලකා ඇත්තේ උපයෝගිතා පදනමකින් නිසා පරිපූර්ණ සත්‍ය ප්‍රකාශක වාචකයක් ලෙස එය උපයුක්ත කර ගැනීම සම්බන්ධයෙන් සඳහනක් කිසිදු තැනක දක්නට නොමැත. මෙහි දී අපගේ මෙම කාර්යයට චතුෂ්කෝටික තර්ක ක්‍රමය සැලකිල්ලට භාජනය වනුයේ මෙමගින් බුදුදහම සාරවාදය (*Essentialism*) හා ඒකාන්තවාදය (*Abosolutism*) ප්‍රතික්ෂේප කරන බැවින් එම සංකල්ප මත පදනම් ව ඇති සත්‍ය හා අසත්‍ය යන ද්වාවිධකරණයන් යුතු තර්ක ක්‍රමය ද බැහැර කරන ආකාරය පෙනී යන නිසා යි. අන්තවාදයකට නොවැටී, අන්තවාදවල නොගැටී දාර්ශනික මධ්‍යස්ථතාව පිළිබිඹු කිරීම අතින් බෞද්ධ චතුෂ්කෝටිකය හා අමරාවික්ඛේපවාදීන්ගේ මෙම පංචකෝටික නය සමාන්තත්වයක් පිළිබිඹු කරන අතර එම අගය සදාචාරාත්මක වශයෙන් ද ඇගයීමට ලක් කරන විට බෞද්ධ චතුෂ්කෝටික පදනම තවදුරටත් විශේෂ වන්නේ එයින් ගැඹුරු ආධ්‍යාත්මික පදනමක් ද අවධාරණය වන බැවිනි.

**ප්‍රමුඛ පද:** සංශයවාදය, අමරාවික්ඛේපවාදය, ඥාන විභාගය, පංචභංගී නය හෙවත් පංචකෝටික නය, තර්කණ ක්‍රම

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය ශ්‍රී ලංකාව \*dilshanmanojrajapaksha@gmail.com

**පවිත්‍රත්වය පිළිබඳ බෞද්ධ විග්‍රහයන් පැහැනන විශිෂ්ටතාව: දාර්ශනික අධ්‍යයනයක්**

දිල්ශාන් මනෝජී රාජපක්ෂ<sup>1\*</sup>

පුද්ගලයාගේ කායික හා මානසික ප්‍රසන්න පැවැත්ම උදෙසා බුදුසමය භාවිත කරන ප්‍රධාන සංකල්ප දෙකක් හඳුනාගත හැකි ය. එනම්, විසුද්ධිය හා විමුක්තිය යි. පවිත්‍ර වීම, පවිත්‍ර කිරීම, වමරසසෙජ්චසදබ්\* යන අර්ථයන්හි යෙදෙන “විසුද්ධි” යන පදය තුළින් අපවිත්‍ර කාරක තුළින් පිරිසිදු කිරීම” යනුවෙන් සරල අර්ථයෙහි භාවිතා වේ. නිදහස් වීම, නිදහස් කිරීම (freedom, emancipation, liberation) යනාදී අරුත් “විමුක්ති” යන පදයෙන් ගම්‍ය වේ. බුදුසමය මෙම පද දෙකෙන් ම පුද්ගලයාගේ කායික හා මානසික යන අංශ දෙක ම සාකච්ඡා කර තිබෙන්නේ ලෞකික හා ආධ්‍යාත්මික පදනමක් තුළ බව සඳහන් කළ යුතු ය. බුදුරදුන් නොපැහැදුනුවන්ගේ ප්‍රසාදය පිණිසත්, පැහැදුනුවන්ගේ ප්‍රසාදය වැඩි දියුණු වීම පිණිසත් හික්ෂුවගේ බාහිර පැවැත්ම සකසා ගැනීම උදෙසා දෙසු ශික්ෂා රැසක් විනය පිටකයෙන් හමුවේ. කායික පවිත්‍රතාවය මෙන් ම විසුද්ධිය හා විමුක්තිය යන පද තුළින් බුදුරදුන් පුද්ගලයාගේ මානසික පවිත්‍රතාවය ද අවධාරණය කර තිබේ. ඇතැම් විට පෙළෙහි සුද්ධි හා විමුක්ති යන පද නිර්වාණය හැඳින්වීම සඳහා පර්යාය කොට තිබෙනු දැකිය හැකි ය. ඒ අනුව මෙම පර්යේෂණයේ දී සාකච්ඡා කෙරෙනුයේ පවිත්‍රත්වය පිළිබඳ බෞද්ධ විග්‍රහයන් පැහැනන විශිෂ්ටතාව වන අතර මෙම අධ්‍යයනය මූලාශ්‍රය මත පදනම් වන්නකි.

කොතරම් කැපවීමෙන් පවිත්‍රත්වය අරමුණු කෙරෙහි හුදු භෞතික මාධ්‍යවලින් පමණක් පවිත්‍රත්වය ලැබීමට නො හැකි බවත් ඒ සඳහා සිය ආධ්‍යාත්මික කැපකිරීමක් ද කළ යුතු බවත් එය වනාහි හුදු ප්‍රාර්ථනාමය පදනමින් ඔබ්බට ගිය වරණාත්මක පදනමක් බව බෞද්ධ විග්‍රහය යි. පවිත්‍රතාව පිළිබඳ සංකල්පය තවදුරටත් පුද්ගල මානසික අංශය තුළින් ඉදිරියට ගෙන යන බුදුසමය අභ්‍යන්තර විශුද්ධිය නොහොත් විමුක්තිය සලසන විශුද්ධි මාර්ගයක් නොහොත් විමුක්ති මාර්ගයක් අවධාරණය කරයි. අපවිත්‍ර, කිලිටි යන අරුත්හි යෙදෙන එය පෙළ දහම තුළ වඩාත් අවධාරණය වන්නේ සිතෙහි ක්‍රියාකාරිත්වයට සෘණාත්මක බලපෑම් කරන ප්‍රබල සාධකයක් ලෙස ගෙනහැර දක්වමිනි. ශරීරය රෝගාතුරු වුව ද සිත රෝගාතුරු වීම බරපතල කරුණක් ලෙස බුදුසමය පෙන්වා දෙන්නේ කෙළෙස් නිසා දුෂ්‍ය වන සිත කරණ කොට ගෙන මිනිසුන් ද අපිරිසිදු වන බව යි. සිතෙහි පවිත්‍රතාවට බාධා පමුණුවන කෙළෙස් ස්වභාවය අනුව විවිධාකාරයෙන් හැඳින්වෙන අතර එම කිලිටි ලක්ෂණවලින් සිත පිරිසිදු කර ගැනීම, නිදහස් කර ගැනීම තුළින් එය උත්තරීතර බවටත්, නිර්මල බවටත් පත් වේ. බුදුරදුන් පුද්ගලයාගේ චිත්ත පාරිශුද්ධිය සඳහා අනුගමනය කළ ප්‍රතිකාර ක්‍රම දෙකක් පෙළ දහමේ ආර්ය වමනය හා ආර්ය විරේචනය යනුවෙන් සඳහන් වෙයි. ප්‍රසන්නවත් පැවැත්මක් සඳහා කායික පාරිශුද්ධිය අවධාරණය කරන බුදුසමය නිර්වාණගාමී ප්‍රතිපදාව විෂයෙහි සංසාරගත දුක ප්‍රභාණය කිරීමට කෙළෙස්වලින් සිත මුදවා ගත යුතු බව පෙන්වා දෙයි. මේ යටතේ අපවිත්‍ර කාරකවලින් සිත පිරිසිදු කර ගැනීම විශුද්ධිය යන පදය තුළින් ද අපවිත්‍ර කාරකවලින් සිත නිදහස් කර ගැනීම විමුක්ති යන පදය තුළින් ද විග්‍රහ කර තිබෙන අයුරු දැකිය හැකි ය. පරම නිෂ්ටාව අභිප්‍රාය කොට ගත් පුද්ගලයා පවිත්‍රත්වය අතරින් ද මනසට විශේෂ තැනක් ලබා දිය යුතු ය. එබැවින් පවිත්‍රත්වය විෂයෙහි බෞද්ධ සංකල්පය තුළින් බුදුසමය මිනිස් මනස පිළිබඳ අතිශය ගැඹුරු විග්‍රහයක් සිදුකර ඇති බව මෙයින් පැහැදිලි වේ.

**ප්‍රමුඛ පද:** පවිත්‍රත්වය, විශුද්ධිය, විමුක්තිය, ක්ලේෂ (කෙළෙස්), බුදුදහම

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය ශ්‍රී ලංකාව \*dilshanmanojrajapaksha@gmail.com

## **The Impact of Mahayana Buddhism on Indian Music (1st AD -3rd AD)**

C. Kumara<sup>1\*</sup>

The basis of this project is to identify how Mahayana Buddhism has been impacted in a positive way to develop Indian music. Many researchers have generally examined the combination of Hinduism and Indian music from Vedic to Modern Period. However, they do not pursue fundamental ideologies about Buddhist evidences on the Indian music of the ancient period. Apparently, Buddhist literature- JATAKA stories in particular, Buddhist sculptures and inscriptions provide evidence supporting the impact of Buddhism on Indian music. This particular concept is contradictory to the Theravada Buddhist concept since it did not encourage the adherents to engage in music i.e. 'geeta- vaadita' which were considered derogatory and were forbidden by the precepts. It is the Mahayana Buddhism that changed the prevailing attitude and as a result the ceremonies with singing and playing instruments connected with Buddhism became popular. Therefore, the present study focuses on identifying the various aspects and factors of Mahayana Buddhism that stimulated the Indian music during the ancient period (1<sup>st</sup> AD-3<sup>rd</sup> AD). The study involves a survey of literature and examination of archaeological evidence.

**Keywords:** *Buddhism, Indian Music, Theravada Buddhism, Precepts, Mahayana Buddhism,*

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**සමාජ විශ්වලේඛනයන්හි හුවමාරු සාධාරණත්වය නමැති සංකල්පයෙහි විකසනය පිළිබඳ අධ්‍යයනයක්**

ක්‍රිෂානි පෙරේරා<sup>1</sup>

සාධාරණත්වය පිළිබඳ සමාජ දැක්ම විමසීමේදී 1891 වර්ෂයේ පටන් ඇරඹුණු සමාජ විශ්වලේඛනයන්හි මූලිකව දැකිය හැකි වනුයේ ඇරිස්ටෝටෙලියානු සම්ප්‍රදායානුගතව විග්‍රහයට ලක් කරන ලද තෝමස් ඇක්වයිනාස්ගේ සාධාරණත්වය පිළිබඳ අර්ථකථනයයි. එය පොදු සාධාරණත්වය (general justice - legal justice) සහ වෛශේෂික සාධාරණත්වය (particular justice) ලෙස වර්ග කළ හැකි අතර වෛශේෂික සාධාරණත්වය ද නැවතත් ව්‍යාපි සාධාරණත්වය (distributive justice) සහ හුවමාරු සාධාරණත්වය (commutative justice) යනුවෙන් බෙදා දැක්වේ. මෙම පර්යේෂණයේදී මූලික අවධානය යොමු වනුයේ කතෝලික සහ සමාජ විශ්වලේඛන මඟින් හුවමාරු සාධාරණත්වය පිළිබඳ ඉදිරිපත් කර ඇති වින්තනය සම්බන්ධවය. වදන් විශ්ලේෂණ විග්‍රහය නැතහොත් සාහිත්‍ය විචාරය (literary criticism) යන ක්‍රමවේදයට අනුගතව සිදුකෙරෙන්නාවූ මෙම පර්යේෂණයේ අරමුණ වනුයේ 1891 වර්ෂයේදී xiii ලියෝ පාප්තුමා විසින් ප්‍රකාශයට පත්කරන ලද වෙහෙසෙන මිනිස්සු (Rerum Novarum) සමාජ විශ්වලේඛනයේ සිට එයට වසර සියයක් පිරීම නිමිත්තෙන් 1991 වර්ෂයේදී ii ජුවාම් පාවුළු පාප්තුමා විසින් ප්‍රකාශයට පත් කරන ලද සියක් වසර (Centesimus Annus) සමාජ විශ්වලේඛනය දක්වා වසර සියයක් පුරාවට හුවමාරු සාධාරණත්වය නමැති සංකල්පය විකසනය වූ ආකාරය විග්‍රහයකට ලක් කිරීමයි. මෙම පර්යේෂණ මාතෘකාව සම්බන්ධව සාහිත්‍ය විචාරානුකූල අධ්‍යයනයක් මෙතෙක් සිදුවී නොමැති අතර දේවධර්මවේදීන් වන ඩේවිඩ් හොලන්බැක් (David Hollenbach) සහ චාල්ස් ඊ.කරන් (Charles E. Curran) සාධාරණත්වය නමැති සංකල්පය සමාජ විශ්වලේඛනයන්හි යෙදී ඇති ආකාරය පිළිබඳ අධ්‍යයනයට ලක්කොට ඇතිමුත්, හුවමාරු සාධාරණත්වය පිළිබඳ සාහිත්‍ය විචාරානුකූල විග්‍රහයක් ඉදිරිපත් කර නැත. එම පර්යේෂණ රික්තය සම්පූර්ණ කරලීම අරභයා මෙම අධ්‍යයනය වැදගත් වේ.

**ප්‍රමුඛ පද :** තෝමස් ඇක්වයිනාස්, පොදු සාධාරණත්වය, වෛශේෂික සාධාරණත්වය, සමාජ විශ්වලේඛන, හුවමාරු සාධාරණත්වය

<sup>1</sup> හටහිර සම්භාව්‍ය සංස්කෘතික අධ්‍යනය හා ක්‍රිස්තියානි අධ්‍යන අංශය

## **Usage of Resources to Facilitate English Language Teaching and Learning in Government Schools in The Gampaha District**

N. Rajapakse<sup>1\*</sup>

Even though every child commences to learn English from their nursery, even after thirteen years of education of the English language, there are students who are unable to pass the General English Language paper at the Advanced Level examination. Thus in the process of teaching and learning any language, according to the evaluation report done by the Department of Examination (2013), using resources to facilitate the process is suggested as one of the key aspects for an effective teaching and learning process in English. This study provides an insight into the usage of resources to facilitate English language teaching and learning in five government schools in the Biyagama Divisional Secretariat in Gampaha district. The purpose of this study is to examine whether the present English language teaching methodology uses resources to facilitate the teaching and learning process that makes English language teaching at government schools effective. The study adopts a mixed method approach, comprising of both qualitative and quantitative data: student and teacher questionnaires and lesson observations. Both the data collecting methods are carried out to investigate whether the government English teaching classrooms still follow traditional teaching methods regardless of utilizing the resources that are more beneficial when teaching a communicative language like English. Thus the research sample consists of fifty eight participants; fifty students from nine classes and eight teachers who teach English for the selected classes. The findings of the study indicate that other than the text book or any other supplementary book given by the Ministry of Education, resources such as Internet and audio cassettes, videos and games are not at all incorporated when teaching English in these selected government schools. Thus the government should guide the English language teachers to use more resources to make the lessons that are taught, interesting and meaningful.

**Keywords:** *English Language Teaching, resources, facilitate, government schools*

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## **Perceptions of ESL Learners and Teachers Towards the Corrective Feedback**

W. A. P. Udeshinee<sup>1\*</sup>

Over the last few decades, the role played by the corrective feedback (CF) in Second Language Acquisition has become a highly controversial issue. As a facilitator in ESL classroom, the researcher has also noticed both positive and negative aspects of corrective feedback on speaking. Some students correct their errors after receiving the corrective feedback while some make the same error repeatedly. Thus, it can be assumed that sometimes students do not consciously note their errors in speaking. The researcher observes this situation as a new research avenue in Sri Lankan context, which should further be explored. In this context, this study aims to investigate the effectiveness of corrective feedback on speaking through the perceptions of ESL learners and teachers. The research study was carried out among two randomly selected groups of first year IT undergraduates of Sri Lanka Institute of Information Technology (SLIIT). One group was from the Elementary Level (N= 30) while the other group was from the Advanced Level (N= 30). The objective of selecting two different ability groups was to investigate whether the students' perceptions towards the efficacy of corrective feedback is affected by their performance level. Data was also collected from lecturers (N= 6) who teach the first year undergraduates of SLIIT to find out their perceptions towards the effectiveness of corrective feedback. Quantitative data was collected through well-structured questionnaires and analysed using SPSS. Classroom observations are made to obtain a better picture of the perceptions of students. The findings of this research show different perceptions of Sri Lankan ESL learners and teachers towards the efficacy of corrective feedback. Most of the teachers and students believe that corrective feedback is certainly effective. Repetition is the most preferred type of corrective feedback among students of Elementary Level while implicit corrective feedback and explicit corrective feedback are the most preferred type of corrective feedback among students of Advanced Level. Moreover, this research identifies key factors that can be investigated in further research. Thus, this research has important implications for second language teaching and learning in Sri Lankan context.

**Keywords:** *Corrective Feedback, Efficacy, ESL, Perceptions, Second Language Acquisition*

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**A Critical Analysis of Gender Roles Discussed in Ediriweera Sarachchandra's Sinhala Play 'Maname' and Jaishankar Prasad's Hindi Play 'Dhruvsvamini'**

P.V. Sashini Chandrasekara<sup>1\*</sup>

Traditional gender roles were strongly upheld in South Asian society. In ancient India, women were discriminated against by means of religion and culture. Similarly, Sri Lankan society considered women as treacherous, fickle and short sighted beings who should always keep under the patriarchal dominance. Ediriweera Sarachchandra is a significant Sri Lankan dramatist who wrote '*Maname*' (1956) to critique gender related issues in Sri Lankan society. Sri Lankan drama was influenced by folk dramas such as *Nāḍagam* and *Jathaka stories* which emphasize the capriciousness of women. Jaishankar Prasad is an Indian writer who belongs to the Romantic period (1920-1936) of Hindi Literature. He was critical of the way women were treated during that period. He wrote '*Dhruvsvamini*' (1933) to criticize deferent gender roles of that society. This paper attempts to examine how gender issues were discussed by Sarachchandra and Prasad through their plays: '*Maname*' and '*Dhruvsvamini*'. The study is in the form of a literature survey and the primary sources are '*Dhruvasvamini*' and '*Maname*'. Sri Lankan scholars such as Jayanetti, D., Kumarasinghe, K. and Jayasinghe, S. have worked on '*Maname*' before. Though Jayasinghe, S., (2013) mentions in '*Maname In Retrospect 1956-2013*' that Sarachchandra tries to discuss the psychology of men towards women, this paper emphasizes that Sarachchandra goes beyond that and tries to discuss the psychology of men towards men and also their masculinity. The Indian scholars Narayana, B., Nagendra (1981) in their scholarly work '*Hindi drama and Stage*' mention that '*Dhruvasvamini*' has been influenced by the realistic stage presentation of Ibsen and that the author moves towards a deeper probe between the relations of a husband and wife. But this research paper emphasizes that Prasad also paid his keen attention to the psychology of women: those who have been used by men to fulfill their desires without getting married. This paper also highlights that both of these play writers were influenced by the teachings of Buddhist Philosophy such as; *Five Precepts*, '*Parabhava Sutta*', '*Mahaparinibbana Sutta*' and '*Dasa Raja Dhamma*'. The above outcome of this research contributes to a better understanding of both Sinhala and Hindi dramas and gender roles discussed in them.

**Keywords:** Gender roles, Sinhala drama, Hindi drama, Buddhist Philosophy, patriarchy

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## **Examine Students' Attitudes and Preferences Towards Sole English Medium Instruction (EMI) In Social Sciences**

P.N Gardihewa<sup>1\*</sup>

The objective of the present study is to examine the students' attitudes and preferences towards sole English medium instruction (EMI) in Social Sciences. The nexus of University education to employment is crucial. It is a direct cause for the surge of unemployment and underemployment mainly among the graduates in the Arts stream (Kottahachchi, 1992). In Social Sciences the authorities have made EMI optional, those who wish to learn their subjects in English medium continue their education in English medium. Yet, the undergraduates who chose the vernacular face a major crisis in their future career. The study is based on mixed method, both qualitative and quantitative data. For this retrospective study, primary data was collected through interviews and questionnaires selecting Sabaragamuwa University. Interviews were conducted with 8 selected members of the academia and questionnaires were given to 100 undergraduates from Sinhala and English mediums. Data was analyzed by thematic analysis. The findings suggested that the students are indeed generally in favor of using English exclusively in this setting, and their preference is positively related to their own English proficiency. Although some students came up with certain issues, most of them expressed their high interest and preference towards sole EMI. Indeed the effect of EMI on the learning of subject content remains unclear; most of the students surveyed agreed that English instruction will help them improve their English language proficiency. The results also revealed that Core English courses ought to concentrate on providing English for Academic Purposes rather than general purposes. Finally through this study it was observed that there is a possibility for sole English medium instruction in Social Sciences. And through such a transformation it will positively affect the undergraduates' future career.

**Keywords:** *English medium Instruction, optional, language proficiency, Core English courses, English for Academic Purposes*

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## **Yogācāra Viññānavadins' Attitudes Towards the Existence of the Empirical World**

Ven. Karapikkada Sobitha<sup>1\*</sup>, Ven. Ampe Wimaladhamma

*Yogācāra viññānavada* was one school of Buddhism that originated during 04 B.C. They emphasized a very specific philosophical point of view on the existence of environmental facts. *Yogācāra* school of Buddhism looked at the world as a mere representation of the consciousness. It means that the world and its surrounding is only a concept created by man in his mind. For example, the person who is suffering from eye disease sees the ball of hair as a moon circuit. In the same manner, the man who adheres to defilements looks at the external world and atmosphere as real. This is called mere representation of the consciousness (*viñaptimātratā*). This matter was explained by *Yogācāra* depending on the early Buddhist causality. According to *Yogācāra* there are three evolutions of mind as *pravurti viññāna*, *manana viññāna* and *ālaya viññāna*. The dynamic process of these three evolutions of mind cause to create mere concepts on the external world and the defilements that originated through the above process exists throughout the *Samsāra*. Further, *Yogācāra viññānavadins* emphasized three natures of all the phenomena. They are 1) *parikalpita*, 2) *paratantra* and 3) *pariṣpanna*. In this category *parikalpita* means universal nature of phenomena or appearance of phenomena. *Paratantra* means understanding of fact that cause the origin of above phenomena and *pariṣpanna* means realization of true nature of phenomena (environmental fact) as mere representation of consciousness. Thus according the above factors *Yogācāra viññānavadins'* attitudes toward the environmental fact is, that every phenomenon is a mere concept created in the mind itself. Through this teaching they emphasized non-substantiality of the individual and non-substantiality of elements. Therefore they are known as *Dharmavadins*.

**Keywords:** *environmental fact, viñaptimātratā, dharma, non-substantiality of individual, non-substantiality of elements*

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## **The Portrayal of Women as A Hidden Weapon in World War One Graphic Art Propaganda**

B. M. S. Cooray<sup>1\*</sup>

The war propaganda campaign during the First World War from 1914- 1918 is known as the first war in history, in which both the allies and the axis have devoted massive resources to producing propaganda systematically, in which mass media and propaganda have played a significant role in sustaining military campaign. Numerous print media, such as postcards, posters, comics, cartoons, Flyers, Newspapers, Paintings and magazines were published to keep the civilians informed about the occurring in the battlefield, while maintaining their morale and generating interest in war savings, loans and bonds while recruiting soldiers to the military. The role of women changed dramatically with the starting of the war, by recruiting them in to the jobs vacated by the men. With this Transformation of roles, women were used in war propaganda as victims of rape, torture and violence, as homemakers, as national allegories and as active participants of war applying moral and sexual pressure on men to be recruited in to the regiments. The Objective of this research is to examine the motifs of both allies and axis behind the portrayal of women in the graphic art war propaganda of the world war one. This research is based on selected war posters from both the allies and axis and on comparing how women were used in posters by each nation to achieve their military goals. According to the findings of the research, it was evident, that the propaganda campaign was subjected to a specific audience of the society. Therefore, the role of the women used in posters and the slogans were selected carefully, to appall the conscience of the audience with numerous subject matters, in which the most common were exploiting the mistakes made by the enemy, justifying war to the civilians, recruitment to the army forces, rewarding the sacrifices of the soldiers and conjuring up the feelings of required patriotism.

**Keywords:** *world war one, weapon, propaganda, portrayal of women, print media*

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## **Effective Study Skills Instruction in English for Academic Purpose (EAP): Facilitating Positive Mindset for Student-Centered Learning in Tertiary Education**

N. Edirisinghe<sup>1\*</sup>

Transition from secondary education to tertiary education pose a major challenge to many students who undergo not only a change in the medium of instruction but also a pedagogical shift from traditional Teacher Centered Learning (TCL) in the classroom to Student Centered Learning (SCL). In Sri Lanka, English language, generally perceived negatively as ‘kaduwa’, being the current Academic Lingua Franca further discourages many students who have previously studied in their mother tongue, Sinhala or Tamil. Particularly, during the first semester of the academic year, as cited in Hassanbeigi et al (2011), students often encounter problems related to concentration, memory, note taking, test strategies, test anxiety, motivation and attitude, reading and selecting major ideas, organizing and processing information and time management which result in underachievement and failure. In this context, the research aims to determine the implications of effective Study Skills instruction to foster positive academic mindset towards SCL in First-year students.

In this action research, a sample group of 150 first-year students from Higher National Diploma in English course of Advanced Technological Institute- Kegalle, a statutory tertiary education body, were selected from two batches. Initially a Study Skills self-assessment test was given to the participants followed by a series of lectures conducted on note taking, critical reading and essay writing and presentation skills. Simultaneously, scores of two assignments given for two course modules in the first-year first semester were evaluated. The same procedure was repeated for the participants for the next batch followed by practice sessions with more emphasis on collaborative learning. At the end of each semester, a post self-assessment test was conducted along with face to face interviews with six lecturers of the particular modules. Majority of the participants perceived Study Skills as a positive step in enhancing academic performance and self-confidence of students. While Study Skill instruction with lectures failed to bring a significant change in the assignment scores, with practice sessions including collaborative learning activities the participants managed to improve considerably. Therefore, it was evident that Study Skill instruction coupled with collaborative learning is more effective in creating a positive attitude towards learning in SCL environment and enhancing academic performance of the students in their first semester of the academic year.

**Keywords:** *Study Skills, Student Centered Learning, English for Academic Purpose, Positive Mindset, Tertiary Education*

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## **Impact of Integrating Content and Language Integrated Learning (CLIL) For Sri Lankan ESL Students at Tertiary Level (With Special Reference to Reading Skills)**

P. Alahakoon<sup>1\*</sup>

Keppetigoda and Chandradasa (2015) highlighted that the theoretical framework of bilingual education is the Content and Language Integrated Learning (CLIL), a new approach in language education as students learn both target language and content in target language (Cross, 2014). However, majority of the undergraduates are exposed to education totally in an environment where L2 is used after their learning in monolingual stream in L1 (Sinhala and Tamil) and bilingual stream (only a few subjects are taught in L2) at schools. To address this issue, the universities conduct compulsory ESL courses for the first year students. Sri Lanka Institute of Information Technology too conducts an ESL course which needs a revision of the existing syllabus. The researcher introduces CLIL method to upgrade the existing syllabus. Thus this study examines the impact of implementation of Content and Language Integrated Learning for Sri Lankan ESL students at tertiary level with special reference to reading skills.

Two hypotheses were identified; CLIL group performs better than ordinary ESL group in terms of reading skills and application of CLIL methods in reading comprehension at tertiary level increases students' ability to use reading skills strategies. The sample consists of two groups: experimental and controlled and they are given a pre-test. After weeks of teaching the groups are exposed to a post test. Metacognitive Awareness of Reading Strategies Inventory by Mokhtari and Reichard (2002) is employed to examine the use of comprehension strategies by students. The findings are analyzed through SPSS. The research findings show the degree of improvement in reading skills of the sample and their metacognitive awareness after being exposed to CLIL. The study further provides factors to be investigated in future research in order to enhance English language competency of ESL students in Sri Lankan Universities.

***Keywords:*** *ESL, CLIL, Reading Skills, Metacognitive Awareness*

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## **Linguistic Features in Child Language Acquisition: A Case Study of a Child Acquiring Sinhala as The First Language**

V. Weerawardhana<sup>1\*</sup>

First Language Acquisition is an innate process which reveals the connection between language and the mind. Cognitivists believe that human begins acquire the first language with the help of the Language Acquisition Device (LAD), an ability unique to them. According to the Critical Period Hypothesis, children from the age of six months to three years, children internalise their mother tongue from the language environment they are exposed to. The acquisition process is a totally creative one in which universally identified common features and patterns can be recognised. This paper is an effort to find out the linguistic features related to the first language acquisition of a child who acquires Sinhala as his mother tongue. It is a study of language development of an infant in a linguistic point of view. The research problem is to identify the linguistic features of child language acquisition. Data were collected electronically and manually in transcription. The paper discusses the structural linguistic features such as phonology, morphology, syntax and semantics in the acquisition process. In addition, theories of generative transformational grammar such as competence, performance and overgeneralisation are also discussed. Grammatical phenomena, namely simplification, addition, omission and substitution are observed as special features in the acquisition process. The findings of the study are important to psycholinguists, language therapists and researchers interested in applied linguistics.

***Keywords:*** *acquisition, child language, first language, psycholinguistics, Sinhalese*

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## **A Comparative Study of Motivational Strategies in Buddhist and Western Educational Psychology**

W. K. D. Keerthirathne<sup>1\*</sup>

Motivation is an important psychological concept in both Buddhist and western education psychology. These two traditions have commonalities in their teachings regarding the motivational strategies which we practise in classroom education. Hence, the main objective of this paper was to offer a comparative examination of motivational strategies in Buddhist and western educational psychology. When conducting this research study, it was expected to do it from critical and analytical perspectives in combination with descriptive and explanatory methods from the study of teachings in *SuttaPitaka*. Furthermore, research papers, books, keynote addresses and papers presented in local and international conferences by previous scholars regarding motivation and motivational strategies in Buddhist and western education psychology were examined as secondary sources to direct the research paper towards a more critical approach. According to research findings it can be argued that while the concept 'motivation' in western education psychology is somewhat similar to its Buddhist counterpart, there are some lessons that can be derived from Buddhist psychology to direct motivational theories in western psychology towards a more fruitful approach. Moreover, most of the motivational strategies used in western education psychology can be identified in Buddhist psychology too. Therefore, it suggests that some motivational methods in western psychology were not introduced by western psychologists. Moreover, it is possible to explore ways in which motivation in Buddhist and western education psychology can inform each other and enrich each other's insights. This study contributes to the enhancement of knowledge among teachers, principals, curriculum developers, theory makers and psychologists, at both the theoretical and the practical level, to use motivational strategies in an effective way and improve the quality of education to ensure that children receive a sound education and to prevent them from dropping out of school.

**Keywords:** *Buddhist psychology, education psychology, learning teaching process, motivation, motivational strategies*

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**ශුන්‍යතා සංකල්පය බිහිවීමෙහිලා විෂයාගත වූ මූලික සූත්‍රාගත මූල බීජ පිළිබඳ විමර්ශනාත්මක අධ්‍යයනයක්**

පියුම් දිසානායක\*

මහායාන සම්ප්‍රදායේ ආරම්භක නිකාය ලෙස මධ්‍යමක ගුරුකුලය හැඳින්විය හැකි ය. මෙම සම්ප්‍රදාය බිහිවීම සඳහා මහාසාංඝික සම්ප්‍රදායේ ඉගැන්වීම් මූලබීජ වූ බව කිව හැකි ය. එහෙත් මහායානය දර්ශනයක් ලෙසට ක්‍රි.පූ. 01 වන සියවස වනවිට ඉදිරිපත් කිරීමේ ගෞරවය හිමිවන්නේ ආර්ය නාගර්ජුන පාදයන්ට ය. එතුමා එකල පැවති ආත්මවාදය බණ්ඩනය කිරීමට බෞද්ධ අනාත්ම දර්ශනය දෙසට නොහැරී සාපේක්ෂකවාදයෙහි ඉගැන්වෙන ප්‍රතිත්‍යාසමුත්පාදය පදනම් කර ගත්තේය. එබැවින් බෞද්ධ දර්ශන සම්ප්‍රදායන් අතර මධ්‍යමක දර්ශනය නමින් දැක්වෙන්නේ ප්‍රතිත්‍යාසමුත්පාදය පදනම් කර ගත් සාපේක්ෂකවාදය යි. නාගර්ජුනපාදයන් මධ්‍යමක දර්ශනය ගොඩනගන්නේ බුද්ධ දේශිත ප්‍රතිත්‍යාසමුත්පාදයෙනි. මේ අනුව සත්ත්වයාගේ හා ලෝකයේ ස්වභාවය විවරණය කිරීමේ දී ස්ථවිරවැදිත්ගේ හා ආහිධම්මිකයන්ගේ විවරණය අනුව බලන විට පැරණි බුදු සමය පුද්ගල නෛරාත්මවාදයක් හා ධර්ම අනිත්‍යත්ව වාදයක් ලෙස සංක්ෂිප්ත ව දැක්විය හැකිය. එහෙත් මේ අයුරින් ධර්ම විවරණය කිරීමේ දී බුද්ධ මතය ඉදිරිපත් නොවන බව සැලකූ මධ්‍යමකයෝ “ශුන්‍ය” යන වචනයට අවධානය යොමු කළහ. සත් - අසත් යන ශාස්වත, උච්ඡේද අන්තචලට නොවැටී බුද්ධ වචනය ව්‍යාඛ්‍යාන කරන්නට විය. ඔවුහු නිරන්තරයෙන් සත්ත්වයාගේ හා ලෝකයේ ස්වභාවය හේතුඵල සම්බන්ධය, සංසාරය, දුක ආදී නිවනින් මෙපිට ඇති කවර කරුණක් වුව ද ඔවුහු පටිච්චසමුප්පාදයට අනුගතව ම විග්‍රහ කරති. මධ්‍යමක දර්ශනයට අනුව ශුන්‍යතාව ලෝකෝත්තර සත්තාවක් නොවේ. ශුන්‍යතා සංකල්පය වුව ද පැනෙන්නේ ශුන්‍යතා අර්ථයෙනි. ශුන්‍යතා සංකල්පයෙන් අපේක්ෂිත අරමුණු වන්නේ, ධර්ම නෛරාත්මතාව, පරස්පරාපේක්ෂිත බව ප්‍රකට කිරීම ය. මෙකී සංකල්පය ප්‍රභවය වීම ආකස්මිකව සිදු වූවක් නොවේ. බුදුන් වහන්සේ ජීවමාන සමයේ දී ම මේ සඳහා පසුබිම සකස් කර ඇති දැයි අධ්‍යයනය කිරීම මෙම පර්යේෂණයේ අරමුණයි. මූලික සූත්‍ර දේශනා පදනම් කර ගනිමින් මෙම පර්යේෂණය සිදු කිරීමට අපේක්ෂා කෙරෙයි.

**ප්‍රබ්ධ පද - ශුන්‍යතාව, ප්‍රතිත්‍යාසමුත්පාදය නාගර්ජුන පාදයන්, මධ්‍යමක දර්ශනය, මුල් බුදුදහම**

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## **An Investigation into The Origin and The Naming of Uggal Aluthnuwara Katharagam Devalaya**

I. Madumali<sup>1\*</sup>

Uggal Aluthnuwara Katharagam Devalaya is situated in the village of Aluthnuwara in the Imbulpe Divisional Secretariat Division represented by the Balangoda Urban Council area of the Rathnapura District. A historically important national heritage site, there are many legends and archaeological determinants regarding the origin and naming of this Devalaya. So far no study or arriving of any specific conclusion has been conducted on this significant legacy. Therefore, the objective of this research is to investigate the origin and naming of this Devalaya. “Seemasankara Winodanee Puskolapotha”, “Piruwana Pothwahanse” and “Deva Varnana Kavya” and other archaeological factors were used as primary sources. In addition to scholarly texts, newspaper articles, and web sites, interviews were conducted with villagers and the official staff of the Devalaya for the purpose of gathering secondary and tertiary data. As no research with clear conclusions has not been conducted so far on the origin and the naming of Uggal Aluthnuwara Katharagam Devalaya, it is expected that this research will facilitate many archaeology lovers to gain an enhanced knowledge of these areas related to this Devalaya.

**Keywords:** *Katharagam Devalaya, Origin, Naming, Uggal, Aluthnuwara*

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## A Comparative Study of Words in Tamil Baby Talk

W. M. Wijeratne<sup>1\*</sup>, Subajana Jeyaseelan<sup>2</sup>

This research study is aimed at identifying similarities and differences of baby words in Tamil. Baby talk (BT) is the language used by infants aged below five or six years to talk to each other or to talk to parents or care givers. BT is also used with adult intimates as well as pets to show affection. Sometimes it is used with adults to show contempt. Baby talk is referred to as caretaker speech, infant-directed speech (IDS), child-directed speech (CDS), motherese or parentese. BT is found in any language, and Sinhala and Tamil are not exceptions. In Tamil it is called "koiy". BT may differ from place to place and from person to person. This phenomenon is seen in Tamil Baby Talk as well. Thus data was collected from northern part of Sri Lanka, namely Vavuniya, Mannar, Trincomalee and Jaffna with the help of mothers and caretakers of five children. Direct observation was also carried out. Transcribed data was analyzed structurally to identify similarities and differences. It is found that BT words are not the same everywhere and have some variations depending on the place and person. In some instances the whole word is different, in other instances the phonemic shape or the morphology differed significantly.

**Keywords:** *caretaker speech, infant-directed speech (IDS), Child-directed speech (CDS), motheries, Tamil Baby talk, "koiy".*

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## **The Accuracy of the Usage of the 'Subject and Verb Agreement' by the Learners of English as a Second Language**

Ramani Jayasinghe<sup>1\*</sup>

Subject -verb agreement is a basic rule of English grammar which states that subjects and verbs must agree in person and number. Therefore, singular subjects need singular verbs whereas plural subjects need plural verbs. At tertiary level, Sinhala speaking ESL (English as a second a language) learners very often get confused with the nuances of the rules of subject -verb agreement. For example, compare, *the jury (a collective noun) is walking to the courtroom* and *the jury (refers to many people as individuals) are discussing among themselves*. According to Bock and Miller (1991), elicited sentence productions show that the occasional errors of subject-verb agreement that speakers make are more likely to occur when a singular head noun is followed by a plural as in *The producer of adventure stories have arrived* than when a plural head is followed by a plural (Nicol, Foster & Veres, 1997). The objective of this study is to analyze the tertiary level Sinhala-speaking ESL learners' accuracy patterns of the usage of subject -verb agreement in their writing tasks in order to find out relevant methods to facilitate the teaching of subject -verb agreement in English Language. A sample of 50 first year undergraduates who are randomly selected from the University of Kelaniya participated in this study. The research tool of this experimental study is a sentence battery consisting of gap-filling tasks where the learners have to use the correct verb according to the given subject. Excel spread sheets and SPSS will be used for data analysis. Two way ANOVA will be run and the Post Hoc Tukey HSD Test will be computed to compare the significant differences in the accurate use of each sub rule of subject and verb agreement. Findings of these accuracy patterns can be applied to teach subject -verb agreement in the ESL classrooms more effectively. The findings of the study will also inform syllabus design, lesson materials and lesson plans on the use of tenses in English grammar.

**Keywords:** *Subject verb agreement, subject, verb, accuracy, ESL, Tertiary level*

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## **Teachers' Perspectives on Using Modern Audio-Visual Aids to Teach English Literature**

S. Wijekoon<sup>1\*</sup>

A twentieth century Chinese philosopher stated that one picture is worth a thousand words (Ashaver and Iguve, 2003). By proving this statement, previous studies have documented that the modern audio visual aides have a significant impact on teaching, bringing a highly productive learning environment for students. Due to its significance, in Sri Lanka, the Ministry of Education has provided audio visual equipment and has conducted training programmes under several projects for government school teachers to exploit them in the teaching process. Yet, most teachers of English Literature have not paid much attention to using modern technology. This study was conducted to explore the teachers' perspectives on this area. Four teachers who teach English Literature as an optional subject for grade ten students were selected from four government schools; St' Anthony's Girls' College, Hemmamali Girls' College from Kandy district, and Government Science College and Sirimavo Bandaranaike Modal School from Matale District were selected as the participants of this study. Data was gathered through semi structured interviews and this qualitative data was analysed thematically. The analysis revealed that teaching English Literature using audio-visual aids is partially successful. However, it is not very practical due to the lack of educational facilities within the classrooms, the absence of pedagogical knowledge and skills to teach with digital equipment, the lack of instructional material and organizational conflicts. The findings suggest the need for further teacher training programmes particularly on the effective use of the equipment and for effective instructional material.

**Keywords:** Audio-visual aids, Literary Competence, English Literature, Teachers' Perspectives, Teaching Strategies

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## **The Significance of the Rhyme Scheme in Poetry Translation**

J. De Silva<sup>1\*</sup>

In poetry there is much focus on formal elements than one normally finds in prose. With regard to the translation of poetry, which has to be carried out with the intention of affecting the target audience in the same way that the original affects its first hearers, focus on both form and content is of paramount importance. However, it is generally believed that only rarely do both the content and the form of a poem are reproduced with equal focus in a translation, and that the formal elements are usually sacrificed for the content. This study, taking the above views as its basis, examines the significance of the formal element of the rhyme scheme in translating poetry. Data are collected by observing the manner in which the rhyme scheme has been negotiated in various poetry translations. According to the findings of this study, it is apparent that sacrificing the rhyme scheme is preferred by many translators as a way of making their task easier. However, this does not appear to be an always-go-to solution since there are poems in which the rhyme scheme plays an important role in reinforcing the content. On the other hand, despite the negative views on the reproduction of formal elements in a different language, it is perhaps an exaggeration to consider it an impossible task since there do exist poetry translations in which the exact rhyme scheme of the original has been maintained.

**Keywords:** *content, formal elements, poetry, rhyming scheme*

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## **A Review On Paintings of Monasteries in The Anuradhapura Era as Illustrated in Buddhist Literature**

A. Y. Munasinghe<sup>1\*</sup>

This study explores the political significance of ancient temple paintings in Anuradhapura through an examination of classical Buddhist literature. While ancient cave and temple paintings are acknowledged as a significant element in the history of Sri Lankan paintings, representing distinct traditions of art of different ages, the blossoming of Sri Lankan art is strongly associated with the Anuradhapura era. However, little is known of the sociocultural and political significance of the paintings of this time which influenced the different painting traditions. As archaeological factors alone are inadequate to identify such influences on ancient art, this study attempts to enrich this inquiry by examining written sources such as the Mahavamsa, Vamsathappakasini, Visuddhimargaya, Samanthapasadika, Thupavanshaya and Mahabodhivanshaya of the thero Fa-Hien.

**Keywords:** *Art, Period of Anuradhapura, literature, Buddhist Temple, Tradition*

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## Common Characteristics of Sri Lankan English Love Poetry

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Sri Lankan English literature has evolved considerably since independence, gaining the attention and contribution of many literary critics. Even though Sri Lankan English Literature has been explored in diverse ways, a sustained scholarly discussion on Sri Lankan English love poetry is still to be developed. It is in this context that the researchers examine the common characteristics of Sri Lankan English love poetry. In this regard, selected love poems of four poets, Patrick Fernando, Lakdasa Wikkramasinha, Vihanga Perera and Vivimarie VanderPoorten will be examined as they display a cross chronology. The main objective of this study is to make a comparison of the selected poems in order to identify their common characteristics in terms of the perspective and cultural milieu and diction. Moreover, the study also aims to investigate whether these poems reflect the respective sociocultural background. Previous research on Sri Lankan English literature has attempted to discern the relationship between the native and the foreign cultures and the usage of Sri Lankan English to portray various themes of Sri Lankan English poetry. The analysis of common characteristics of Sri Lankan English love poetry has not gained much attention in research, a gap which this study attempts to address. In analyzing the poems, content analysis and literary survey will be employed as the methodology. Studies of this nature will contribute to a scholarly discussion on the love poetry of Sri Lankan English Literature.

**Keywords:** *Sri Lankan English Literature, love poetry, common characteristics*

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## Usage of Mobile Applications as a Resource in Teaching Phrasal Verbs

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Popularity of the usage of smartphones is widely observed among young undergraduates, who are increasingly dependent on these devices (Yu, 2012). Although commonly used in written and oral discourses, phrasal verbs are often omitted if their correct usage poses a hurdle to the English as a Second Language (ESL) learners. As a substitute for the use of phrasal verbs, ESL learners tend to use single word units (Imrose, 2013). This negligence of the use of phrasal verbs is surmised as an issue in the ESL teaching/ learning process. Thus, utilising the omnipresent smart devices, this research aims at promoting a novel method to determine the effectiveness of teaching phrasal verbs by the use of one of the popular mobile applications designed for communication. Thirty undergraduates were selected for this experimental study. Pre- and post-tests consisting of 40 commonly used phrasal verbs in a study carried by Liu (2011) based on two corpora – The Corpus of Contemporary American English and The British National Corpus were conducted. The first test was given without any instructions on the phrasal verbs and the post test was carried out after instructions. The experimental group comprising 50 per cent of the selected undergraduates were instructed in phrasal verbs using the selected mobile application throughout a period of eight days while the controlled group was given traditional classroom instructions within one hour. A comparative analysis of the results of both tests revealed that the experimental group outperformed in the post test than the controlled group highlighting the use of mobile applications in the English Language Teaching (ELT) process as an effective recourse in the teaching/ learning process of phrasal verbs.

**Keywords:** *Phrasal Verbs, Mobile applications, Effectiveness, English Language Teaching (ELT), English as a Second Language (ESL)*

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## **The Changing Composition: Are Young SLE Speakers Familiar with Youtube Slang?**

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Sri Lankan English (SLE) has been widely used by native SLE speakers for several decades. So far, SLE was believed to be influenced by the vernacular languages of the country, which consists of, but not limited to, Sinhala, Tamil and Malay. However, of late, the composition of the language has been changing and the vocabulary is one area where the change is seen distinctly. The researcher has focused on the use of slang by young SLE speakers for the current study. Slang terms usually make a trending entry into the vocabulary. In terms of SLE, the researcher has observed that there is an influence of slang used internationally on the slang terms used by the young SLE speakers, as SLE speakers are 'connected' to the world and come in contact with online slang terms. For the purpose of the study the domain of YouTube was selected, as it gives access to unscripted clips of speech. This quantitative study investigates if the young SLE speakers are familiar with some of these slang terms. The data for the study was collected from YouTube videos from the channel named HigaTV. It is the vlog channel (video log channel) of Ryan Higa who is the nineteenth most subscribed YouTuber. The slang terms selected from the videos were used in a questionnaire. The survey was administered online among 150 participants and 75 responses were used for the data analysis. The respondents expressed their familiarity with each word in the questionnaire, which was measured using a three point Lickert scale with the choices very familiar, familiar and not at all familiar. From a total of 19 words, eight were very familiar to more than 50% of the population while six others were marked 'very familiar' by more than 35% of the population. In a further analysis of the meanings of the words 'duct tape' and 'legit', more than 50% of the respondents stated that they knew the words. However, some meanings they associated with the words were not the same as the meanings in the videos. The majority of the respondents were from Colombo and suburbs. Hence it was concluded that, within the population, the young SLE speakers are familiar with some slang terms used by YouTubers and some of those terms are even used by the SLE speakers in their conversations. The research is however limited to identifying the speakers' familiarity with the slang terms and does not provide an in depth analysis of the use of these terms. Future work on the topic could explore the familiarity of the slang terms among other age groups and also of speakers from different geographical locations.

***Keywords:*** Sri Lankan English, YouTube, Composition, Slang Terms, Young SLE Speakers

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**සිනමාවක 90 දශකයෙන් පසු සිනමාවේ නිරූපිත ජනවර්ගික අර්බුදය (සිනමා අධ්‍යක්ෂකවරුන් දෙදෙනෙක් ඇසුරින්)**

ප්‍රභාශ්වර නිශ්ශංක<sup>1\*</sup>

1947 දී ඉන්දීය සම්භවයෙන් ඇරඹී ලාංකේය සිනමාව 1956 දී ලාංකේය ප්‍රස්තුත හසුකර ගනිමින් ලාංකේය අන්‍යෝන්‍යවක් නිර්මාණය කරගනු ලබන්නේ 1956 ටේබ්ලට් සිනමා කෘතියක් සමඟ ය. ඉන්පසු දේශීය තේමා සිය නිර්මාණ ඔස්සේ ප්‍රකාශයට පත් කිරීමට ලාංකේය අධ්‍යක්ෂකවරුන් උත්සාහ දරා ඇත. 1948 පෙබරවාරි 4 දින බ්‍රිතාන්‍යයන්ගෙන් රට දේශීය පාලකයන්ට පැවරීමෙන් අනතුරුව 1971, 1989, 2009, ආදී වසරවල රටෙහි භීෂණ / කැරලි / විප්ලව / සිවිල් යුද්ධ පැවතිණ. මේ සිවිල් අරගල කෙලවර සනිටුහන් වනුයේ බොහෝ මානව ජීවිත ප්‍රමාණයක් විනාශ වීමෙන් ය. මේ අතරින් වසර 30 ක් පුරා පැවති යුද්ධය ප්‍රධාන වේ. මෙම තේමාව කෙරහි කලාකරුවන් අවධානය යොමු කර ඇතත් මානව සන්නිවේදනයේ ප්‍රබල ම අංගයක් වන සිනමාව තුළින් යුද්ධය යන ප්‍රස්තුතය සැලකිය යුතු මට්ටමකින් සාකච්ඡා කර ඇද්ද යන ගැටලුව ඇත. ‘යුද්ධය’ ප්‍රස්තුතය මනෝරාජ්‍යව මෙන්ම ශුද්ධ ද සිනමා ක්ෂේත්‍රයට ඇතුළු වී ඇත. ලංකාවේ සිවිල් යුද්ධය ආරම්භවීම, අවසන්වීම සහ වසර තිහක කාලයක් තුළ මිනිස් ජීවිත විශාල ප්‍රමාණයක් විනාශ වීම, මානව සංතෘණයේ සිදු වූ බිඳ වැටීම් යුද්ධයේ දී ආනුභූතික පෙන්නුම් කිරීම් ය. මෙම බේදයන් ශ්‍රී ලාංකේය සංදර්භය තුළ කුඩා දරුවාගේ සිට මහල්ලා දක්වා ගොදුරු කර ගන්නා බව පෙනෙයි. මෙම ආනුභූතිකයන් ලාංකේය කලාකරුවන්හට ගෝචර වූයේ ද? එසේනම් එම ගෝචරවීම ප්‍රකාශන වීම සිනමාව තුළ කවර වූ ස්වරූපයක් ගත්තේ ද? යන්න හඳුනා ගැනීම මෙම රචනාවේ අභිමතාර්ථයයි. එහි දී පර්යේෂණ පහසුව සඳහා 90 දශකයෙන් පසු බිහි වූ සිනමා නිර්මාණ සහ ප්‍රධාන අධ්‍යක්ෂකවරුන් දෙදෙනෙකු පමණක් පර්යේෂණයේ අවධානයට පත්කරමින් ඔවුන්ගේ ප්‍රධාන සිනමා කෘති එක බැගින් සන්සංදනාත්මකව හඳුනාගැනීමට උත්සාහ කරමි. අශෝක හඳගම අධ්‍යක්ෂකගේ ‘මගේ සඳයි’ සිනමා කෘතිය සහ විශ්වනාත් බුද්ධි කර්තව්‍ය මහතාගේ ‘මාතා’ සිනමා කෘතිය මෙහි දී විමසා බැලීම ඇරඹුණයි. කලාවේ කාර්ය පිළිබඳ විවිධ කතාකාවන් තිබුණ ද කලා නිර්මාණයන්හි සන්දර්භය සකස් වීමේ දී පොදු මහත් බහුතරයක් මුහුණ දී ඇති ගැටලු කෙරෙහි සංවේදනය වීම කලා කරුවකුගේ වගකීමකි. යුද්ධය නැමති තේමාව පිළිබඳව දේශීය නිර්මාණකරුවන් කොතරම් දුරට තේමාත්මකව සිය නිර්මාණ ඔස්සේ තම වගකීම ඉටු කෙරුවේ ද? යන්න මෙහිදී අවධානය යොමු කළ යුතු ය. ලංකේය සිනමාවක් ලෙස සිනමාවේ දිශානතියේ එලෙස ගතිකත්වයක් හඳුනා ගත්තේද? එම හඳුනා ගැනීම ප්‍රකාශ මානයේ දී දැක්වූ විශේෂතා නව ප්‍රවණතාවක් හෝ අන්‍යෝන්‍යවක් ලෙස ලාංකේය සිනමාව නව ශාතර හෝ උපශාතරයන්ගේ ප්‍රභවයක් සිදු වූයේ ද? යුද ශාතර සිනමාව ලෝකය තුළ නව අත්හදා බැලීම් සහ නව සිනමා උප ශාතර බොහෝ ප්‍රමාණයක් සඳහා පාදක වූ බව යුද සිනමා ඉතිහාසය කියා දෙයි. කාලය හා අවකාශය ජයගැනීම සිනමාවේ ප්‍රබල අභියෝගය යි. සිනමාවට හිමි මව් භාශාමය ගුණය අතින් සිනමාව ලාංකේය භූමිය මත යුද්ධය පැවති වසර තිහක තුළ ලංකේය සිනමා භාෂාවක් පිළිබඳ හෝ යුද්ධය අවසන් වී වසර කිහිපයක් ගතවී ඇති අද දවස දක්වා සිනමා න්‍යායක් පිළිබඳව නිරීක්ෂණයෙන් හඳුනාගත හැකි ද? ඒ සඳහා භාවිතා කර ඇති න්‍යායාත්මක මැදිහත් වීම් සහ සිනමා භාශාමය මැදිහත් වීම් මොනවා ද? මේ පිළිබඳව සොයා යෑම දේශීය සිනමාවක ගමන් මග සහ දේශීය සිනමා කරුවාගේ ආස්ථානය කෙබඳු වී දැයි පරීක්ෂා කිරීමකි. තමා දී ප්‍රධානතම තර්කය ගොනු වනුයේ එවැනි භාෂාත්මක හෝ න්‍යායාත්මක ලක්ෂණයන්ට දේශීය අන්‍යෝන්‍යවක් බිහි වී නැත යන්නයි. එය සනාත කිරීම මෙහි දී මාගේ අභිප්‍රායයි.

**ප්‍රමුඛ පද:** සිනමාව, ශාතරය, උපශාතරය, සිනමා භාෂාව, යුද සිනමාව, ලාංකේය සිනමාව

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව \*prabhashwara6@gmail.com

**හින්දු තර්කයෙහි සහ යෝගාවාර විඥානවාදී න්‍යායෙහි එන ප්‍රත්‍යක්ෂය පිළිබඳ සංසන්දනාත්මක විමසීමක් (තර්කසංග්‍රහය හා න්‍යායබින්දුව ඇසුරින්)**

මුචපැට්ගෙවල පඤ්ඤාලෝක හිමි<sup>1\*</sup>

ප්‍රත්‍යක්ෂය යනු ඉන්ද්‍රියාර්ථ සන්නිකර්ෂයෙන් හෙවත් ඉන්ද්‍රියයන්ට අරමුණු හමුවීමෙන් ඇති වන ඥානය බව (ඉන්ද්‍රියාර්ථ සන්නිකර්ෂ ජන්‍යං ඥානං ප්‍රත්‍යක්ෂම්) භාරතීය හින්දු තර්ක ශාස්ත්‍රයෙහි පිළිගැනීමයි. මහායාන, යෝගාවාර විඥානවාදී බෞද්ධ ගුරුකුලය නියෝජනය කරන න්‍යාය ශාස්ත්‍රය එය නිර්වචනය කරනුයේ කල්පනා හා ඉන්ද්‍රිය භ්‍රාන්ති යන දෙකෙන් වියුක්ත වූ ශුද්ධ සංවේදන මාත්‍රය ම ප්‍රත්‍යක්ෂය නම් වේ (තත්‍ර ප්‍රත්‍යක්ෂං කල්පනාප්‍රෝච්චානිකම්) යනුවෙනි. තථ, අවිතථ, සත්‍ය, යථාභූතඥාන හා සමයග් ඥාන යනාදී නම්වලින් හැඳින්වෙන නිවැරදි ඥානය ලබා ගැනීමේ මාර්ග පිළිබඳව යථෝක්ත සම්ප්‍රදායද්වයයේ පිළිගැනීම් එකිනෙකට වෙනස් ය. හින්දු තර්ක ශාස්ත්‍රය නියෝජනය කරන ග්‍රන්ථයක් වන තර්ක සංග්‍රහයේ ඥානෝපාය මාර්ග හතරක් (ප්‍රත්‍යක්ෂ, අනුමාන, උපමාන, ශාබ්ද) පිළිගන්නා අතර බෞද්ධ න්‍යාය ශාස්ත්‍රය නියෝජනය කරන න්‍යායබින්දුවෙහි පිළිගනු ලබනුයේ ප්‍රත්‍යක්ෂය හා අනුමානය යන ක්‍රම දෙක පමණකි. කෙසේ වුවත් ප්‍රත්‍යක්ෂය නමැති ඥානෝපාය මාර්ගය මෙම සම්ප්‍රදාය දෙකෙහි ම පිළිගැනේ. එහෙත් ප්‍රත්‍යක්ෂය විවරණය කිරීමේ දී තර්කසංග්‍රහයෙහි හෙවත් හින්දු තාර්කිකයන් නිර්විකල්ප ප්‍රත්‍යක්ෂය හා සවිකල්ප ප්‍රත්‍යක්ෂය යනුවෙන් ප්‍රත්‍යක්ෂයෙහි ප්‍රභේද දෙකක් දක්වන අතර නෛය්‍යායිකයෝ ප්‍රභේද හතරක් මගින් එය විවරණය කරති. තව ද ඉන්ද්‍රිය වෙත අරමුණ ගැටුණු පමණකින් එය ප්‍රත්‍යක්ෂයක් නොවන බව දක්වන න්‍යායබින්දුව ආශුභ්‍රමණය, නෞයානාදියෙහි ගමනය හා ආභ්‍යන්තරික ගුණ සංකෂෝභයක් සිදුවූ විට ලැබෙන ප්‍රත්‍යක්ෂය විකෘත වූවක් බව පෙන්වා දෙති. තව ද තාර්කිකයන්ගේ ප්‍රත්‍යක්ෂ ප්‍රභේද අතර එන සවිකල්පය ද න්‍යායවාදීහු සහේතුක ව බැහැර කරති. මෙසේ හින්දු සහ යෝගාවාර විඥානවාදී බෞද්ධ ගුරුකුලය විසින් යථාර්ථවත් දැනුම ලබා ගැනීමේ ක්‍රමවේදයක් වශයෙන් පිළිගනු ලබන ප්‍රත්‍යක්ෂය පිළිබඳ විග්‍රහයෙහි ආකෘතිකමය හා සන්දර්භීය විෂමතා පරීක්ෂා කොට ඒවායේ සාධනීය හා නිෂේධනීය ලක්ෂණ සංසන්දනාත්මක ව අධ්‍යයනය කිරීම අභිප්‍රාය යි. මෙම ප්‍රස්තුතය තර්ක න්‍යාය හා දර්ශන අධ්‍යයන ක්ෂේත්‍රය සඳහා පුළුල් ශාස්ත්‍රීය ගවේෂණයකට මඟ පාදනු ඇත.

*ප්‍රමුඛ පද: තර්කසංග්‍රහ, න්‍යායබින්දුව, ප්‍රත්‍යක්ෂ, යෝගාවාර විඥානවාදය, සමයග්ඥානය*

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව \*ven.muwapetigewela@gmail.com

## **An Error Analysis of the Acquisition of Chinese Modal Verbs by Sri Lankan Students**

W. Kariyawasam<sup>1\*</sup>

Chinese is one of the most spoken language in the world next to English. Every sound in Chinese phonetic transcription system pinyin has four distinct pronunciations and its characters and grammar is also considered as difficult to learn. In addition, syntactical structures among modal verbs in Chinese consist of complex grammar patterns. The purpose of this study is to examine the common errors made by the Chinese learners of the University of Kelaniya when using ten modal verbs *hui, neng, yao, xiang, keneng, yuanying, yinggai, keyi, gai, and de*. The significance of this study has implications for both the Chinese learning students and for the Chinese language teachers who will be able to recognize the common errors in using modal verbs. Teachers have the opportunity to improve their teaching methodology, learning materials as well as new strategies in lesson planning to avoid the identified errors and to facilitate the effective learning of Modal Verbs in teaching Chinese. Data was collected through the distribution of questionnaires among both students and teachers, classroom observations and semi structured interview sessions. According to the above survey, the common errors made by the students in using modal verbs in learning Chinese were identified. These errors types consist of omission, redundancy, word order and misuse, justifying the theory that the modal verbs are ahead of functional category. Furthermore, the study indicated that the reason behind the commonly made errors of using modal verbs was the negative transfer of the learners' mother tongue as well as learning strategies, teaching methodology, teaching materials.

**Keywords:** *Sri Lankan students, grammar, Chinese, modal verbs, error Analysis*

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## Methods to Substantiate the Concept of Applied ELT

A. Muthulingam<sup>1\*</sup>

The objective of this research is to illuminate the concept of life syllabus, presenting it as a new research agenda for second language studies. Pishaghadam and Mirzaee (2008) proposed Applied ELT where we should transcend discussions over language and linguistics, entering into life issues regarding life qualities. The most important aspect of applied ELT is that it goes beyond the typical linguistic syllabus. It is a kind of syllabus which considers life issues as its first priority. In this new syllabus, language learning is more purposeful and educational, revolving around more important issues of life. A language learning class must be a class in which life issues are noted and taken into consideration. The native speaker could not be seen as representative of an acceptable yardstick to follow anymore. The violation of British and American pronunciation and structures were allowed. The significance of this study is that it explores how to design a life syllabus in the ELT field. Two types of studies can be targeted: Firstly, ELT researchers are expected to reflect on how ELT findings can be utilized in other fields of studies. Secondly, the researchers are supposed to figure out how to design a life syllabus for English language learning classes. It means that language must be at the service of enhancing life qualities. In conclusion, language must be at the service of enhancing life qualities. ELT teachers should move beyond issues related to content and form of languages, exploring the dynamics of this new challenge. In order to achieve this objective, a quantitative and qualitative methodology is undertaken. Questionnaire, pre and post evaluation tests, classroom observations and interviews were carried out. This research was carried out in the Faculty of Agriculture, University of Jaffna. Implementing the idea of applied ELT, paves the way for better teaching and learning strategies. The current study will have significant implications for language teachers, supervisors, L2 learners, lesson planners, material developers, syllabus designers, design makers, and the language scholars. However, the challenges were also identified. It is difficult to set impartial learning objectives where there is a heterogeneous population of students. Overcrowded classrooms, lack of resources and insufficient time can negatively affect the implementation of Applied ELT.

**Keywords:** *substantiate, life-syllabus, Applied, qualities*

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## **The Influence Acquired by Simon Nawagattegama from The Locution of Franz Kafka's Short Stories**

C. Perera<sup>1\*</sup>

Simon Nawagattegama is viewed as a significant composer of stories who was engaged in experimentation in order to create an alternative narrative for the Sinhala prosaism. It could be precisely determined through investigations that he was influenced by the literary tradition of Franz Kafka. Franz Kafka was a German-language writer of novels and short stories who is widely regarded as one of the major figures of 20<sup>th</sup> century literature. The objective of this research paper is to analyze the manner in which Simon Nawagattegama was influenced by the established conventional practice in narratives of Franz kafka. In this context, this research is limited to the short story titled 'Metamorphosis' composed by Franz Kafka and the short story composed by Simon Nawagaththegama titled 'Sagara Jalaya Madhi Henduwa Oba sanda'. At this stage special attention is paid towards language and life's vision. Accordingly, it could be concluded that Simon Nawagaththegama has not been influenced by the prose style of Franz Kafka.

**Keywords** - *Simon Nawagattegama, Franz Kafka, Metamorphosis, influence, life vision*

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## **An Analysis on Mnemonic Methods of Japanese Kanji Characters**

B. M. U. S. Balasooriya<sup>1\*</sup>

Kanji are ideographs which mean that the whole character conveys a meaning rather than just a sound as in the case of Hiragana and Katakana. Most of the Kanji characters were originally drawn as pictures from nature but gradually transformed to more generalized representations. There are 75,963 kanji currently encoded in Unicode available today. Kanji characters have become one of the main obstacles for students who learn Japanese in Sri Lanka, because there are a large number of Kanji characters to remember and the period of time is mostly too short to remember those characters, (for an example students have to remember around 2000 kanji characters within 2, 3 years of their Japanese language education) when compared with Japanese native students. Most of the students receive much better marks for Kanji character tests but their writing and reading skills are very poor. They especially make many errors when they write Kanji characters. So this study focuses on identifying mnemonic methods of Japanese Kanji characters. The data was collected by conducting a questionnaire survey for 2<sup>nd</sup> year students reading for a Japanese Language Special Degree at the University of Kelaniya. The findings highlight the fact that most of the students tend to memorize full Kanji characters by the radicals of each Kanji character. For example, the 「氵」 sign usually comes with Kanji characters which indicate liquids. Also students use the Chinese reading method to memorize Kanji characters in their syllabus.

**Keywords:** *Kanji characters, Stroke order, Japanese, Error analysis, mnemonic methods*

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**මහනුවර යුගයේ සමාජ - සාමයික තොරතුරු හඳුනා ගැනීමෙහිලා කුසලානුක්‍රියා සන්දේශයෙහි' ප්‍රාමාණිකත්වය පිළිබඳ විමසුමක්**

එම්. බී. බී. ජයසුන්දර<sup>1\*</sup>

'කුසලානුක්‍රියා සන්දේශය' හෙවත් 'පුණ්‍යක්‍රියා සන්දේශය' යනු මහනුවර රජ පැමිණි කීර්ති ශ්‍රී රාජසිංහ රජතුමා (ක්‍රි. ව. 1747 - 1781) විසින් ස්වකීය පාලන සමයේ දී කරන ලද පුණ්‍ය කටයුතු විස්තර කරමින් රචිත ගද්‍ය ලේඛනයකි. සිය මුත්තණුවන්ට ගෞරව නාමයක් සහිතව කීර්ති ශ්‍රී රාජසිංහයන් විසින් කුම්පනේ ගම ප්‍රදානය කිරීමේ ප්‍රීතිය පළ කරනු වස් මේ කෘතිය රචනා කර ඇත්තේ විල්බාගෙදර මොහොට්ටාලගේ මුණුපුරෙකි. අන්තර්ගතය කෙරෙහි අවධානය යොමු කිරීමේ දී කුසලානුක්‍රියා සන්දේශය පින්පොතකි; රාජසිංහ ප්‍රශස්තියකි. කතුවරයාගේ අභිමතාර්ථය හා බැඳුණු එකී ලක්ෂණ අභිභවමින් මේ කෘතියෙන් ප්‍රතිඵල වනුයේ ශාසනික වංශකථාවක ලක්ෂණ ය. එසේ වුව ද මේ ගද්‍ය ලේඛනය මහනුවර යුගයේ ඉතිහාසය හදාරන්නන්වුන්ගේ ප්‍රාමාණික අවධානයට ලක්ව නැත. එබැවින් මහනුවර යුගයේ සෙසු සාහිත්‍ය මූලාශ්‍රයන්හි දැක්වෙන ශාසනික තොරතුරු පිළිබඳව ද සාවධාන වෙමින් තත්කාලීන සමාජ - සාමයික තොරතුරු හඳුනා ගැනීමේ දී කුසලානුක්‍රියා සන්දේශය මූලාශ්‍රයක් වශයෙන් භාවිත කිරීමේ හැකියාව පිළිබඳ විමසා බැලීම මේ පර්යේෂණයේ අරමුණ විය. එහි දී අනාවරණය වූ පරිදි ශ්‍රාවණමෝචසම්පදාව පිහිටුවීමෙහිලා අනුග්‍රහය දැක්වීම හැරුණු විට එක ම දිනෙක රෙදි වියා කරන ලද විශේෂ කඩින පූජාවක් හා අනුරාධපුරය, පොළොන්නරුව ඓතිහාසික නගරයන්හි දාගැබ් ප්‍රතිසංස්කරණය ආදී කීර්ති ශ්‍රී රාජසිංහ රජුගේ ශාසනෝපකාරී ක්‍රියාවන් රැසක් මෙහි වර්ණනාවට බඳුන් වේ. එසේ ම විල්බාගෙදර මොහොට්ටාල 'ශ්‍රී රාම රත්නායක රාජකරුණා සෙනෙවිරත්න පණ්ඩිත මුදලි' යන ගෞරව නාමයෙන් පිදුම් ලද බව ද මල්වතු විහාරයට 'ධම්මිකාරාමය' යැයි නම් තැබූ වග ද යනුවෙන් මෙහි ඇතුළත් තොරතුරු සමකාලීන වෙනත් කෘතියක නොඑන දුර්ලභ ගණයේ තොරතුරු ලෙස හඳුනා ගත හැකි විය. ඒ අනුව, පිංපොතක ස්වරූපයෙන් රචනා වූ රාජ ප්‍රශස්තියක් වන කුසලානුක්‍රියා සන්දේශය මහනුවර යුගයේ සමාජ - සාමයික තොරතුරු අධ්‍යයනයේ දී වැදගත් මූලාශ්‍රයක් බව තහවුරු වෙයි.

**ප්‍රමුඛ පද:** කුසලානුක්‍රියා සන්දේශය, කීර්ති ශ්‍රී රාජසිංහ, වංශකථා, පිංපොත, රාජ ප්‍රශස්තිය

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව \*buddhisinh@gmail.com

## **Ruwanweli Mahaseya: The Greatest Representation of King Elara, King Duttagamini's War**

S. Ranasinghe<sup>1\*</sup>

Ruwanwelimahaseya is known as the best creation in the history of Sri Lankan pagoda construction. This, which is venerated with a lot of piety, was also called Swarnamali Mahachethiya, Hemamali, Swarnamali, Ruwanmali, Rathnamali, Rathnawaluka, Suwannamali, Hemawaluka, Rathanawaluka and Rathanamali. This pagoda, unlike the first biggest pagoda Thuparama, Mirisawetiya, Abayagiriya, and Jethawanaramaya, was not reconstructed. It is 120 cubits in height. This pagoda which contains Lord Buddha's paribogika (relics of objects used by Buddha), uddesika (remembrance relics), and sharirika (body relics), is venerated by Buddhists with a lot of respect. When reviewing the discourses related to Ruwanweliseya, we can see how it deals with diverse religious and cultural aspects. This pagoda which was constructed in the 2nd century, silently exhibits the skills and spirituality of the ancient Sri Lankan craftsmen. The main intention of this research is to analyze the nature of this great king's social service as depicted by this pagoda. Also the researcher attempts to analyze if this is a mere artistic creation or an epitome of the ancient artists' spirituality. The scholars attempt to emphasize that the respect people have towards the incomparable emperor Duttagamini is one reason why this pagoda is outstanding among the others. One who looks at this creation from a perspective based on power and authority may consider this as an outcome of a mere political and religious mission. Scholars reveal various interpretations about the construction of Ruwanweliseya. However, they have not taken the time, space, and structure of the pagoda into consideration. The information gathered by the field researchers who conducted research about Ruwanweliseya will be analyzed in the study. Also literary and archeological sources would be comparatively analyzed. Thus, the main target is to conduct a historical and archeological study on the impact of this pagoda on people's spiritual and moral reformation. The information gathered by the field researchers who conducted research about Ruwanweliseya will be analyzed in the study. Also literary and archeological sources would be comparatively analyzed. Thus, the main target is to conduct a historical and archeological study on the impact of this pagoda on people's spiritual and moral reformation.

**Keywords:** *Ruwanwelimahaseya, Spirituality, Duttagamini, Elara, War*

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**අද්භූතය ඇසුරින් දේශපාලනික යථාර්ථය නිරූපණය සඳහා සිංහල පන්සිය පනස් ජාතකකතා රචකයන් සතු වූ සාමර්ථය**

හෙට්ටි ආරච්චිගේ ගිහාන් මදුශංඛ<sup>1\*</sup>

කුරුණෑගල යුගයේ දී පාලි ජාතකට්ඨකථාව ඇසුරින් සිංහල පන්සිය පනස් ජාතකකතා පොත සිංහලට පරිවර්තනය විය. ඒ සඳහා කථික මණ්ඩලයක දායකත්වය සැපයුණු බව අද්‍යයන විද්වතුන්ගේ ප්‍රමුඛ මතයයි. මෙම කෘතියේ අඩංගු වන්නේ බුද්ධභාෂිත සේ ලියවුණු දෘෂ්ටාන්තකථා සමූහයකි. ජාතකකතා භෞතික හා අභෞතික වශයෙන් විවිධ නිර්ණායකයන්ට අනුව අගය කළ හැකියි. පුද්ගල මානසික ශ්‍රේෂ්ඨතා, දුර්වලතා මෙන් ම මනෝ මූලික ව්‍යාධි පිළිබඳ ව ද අවධානය යොමු කරන ජාතකකතාකරුවෝ සමාජීය අංශයෙන් වැදගත් අන්තර් සබඳතා මෙන් ම ආර්ථික, සමාජ බලවේගයන්හි ගොදුරු බවට පත් වන මානවයන් ගැන පුවත් ද සිය දෘෂ්ටාන්තයන්හි ඇතුළත් කළෝ ය. ජාතකකතා රීතියෙහි එන සුවිශේෂ ලක්ෂණයක් වන්නේ අද්භූතය ඇසුරු කරමින් ඒ ඔස්සේ සමාජීය යථාර්ථ පක්ෂය තියුණු අවධානයට යොමු කරවීමයි. අද්භූතය වනාහි ප්‍රකෘති ජීවන තත්ත්වයේ දී ඇදහිය නොහැකි අයථා ප්‍රභවයකි. පසුකාලීන සාහිත්‍යයේ දී අද්භූතයට එදිරි ව ගොඩනැගුණු විචාර සංකල්පයක් ලෙස යථාර්ථය හඳුනා ගැනුණ ද හුදු යථාර්ථය සාහිත්‍යික ප්‍රතිනිර්මාණයේ දී ප්‍රමාණවත් නොවන බවට කතිකාවක් ගොඩනැගී ඇත. ජාතකකතාකරුවන් දේශපාලනික මැදිහත්වීම උදෙසා අද්භූත සංකල්ප පරිභාවිත කිරීම පිළිබඳ ව ද මීට සමීප ව විග්‍රහ කළ හැකි ය. එහි දී ඉදුරා විචේචනය කිරීමෙන් රාජ උදහසට ලක්විය හැකි පරිපාලනමය දුබලතා මෙන් ම දේශපාලන ප්‍රතිසංස්කරණවල අවශ්‍යතාව ද අද්භූත ලක්ෂණ උපයෝගී කර ගෙන ජාතක රචකයන් සුක්ෂ්ම ව පෙන්වා දුන්හ. උම්මග්ග, ගණ්ඩතින්ද්‍ර, රාජෝවාද හා කුක්කුර යන ජාතකකතා, පර්යේෂණ සීමාව වශයෙන් සලකමින් ජාතක රචකයන් දේශපාලනික යථාර්ථය නිරූපණය කිරීම උදෙසා අද්භූත ලක්ෂණ පරිභාවිත කළ ආකාරය හා එහි සාර්ථක-අසාර්ථක භාවය මෙහි දී අධ්‍යයනය කෙරෙයි.

*ප්‍රමුඛ පද: කුරුණෑගල යුගය, දෘෂ්ටාන්ත කථා, අද්භූතය, සමාජ යථාර්ථය, දේශපාලන ප්‍රතිසංස්කරණ*

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව \*gihansinhala@gmail.com

## **Beliefs and Rituals of the Sinhalese Associated with Rain and Drought**

S. B. A. K. Kularathna<sup>1\*</sup>

It is a well-known fact that ever since the founding of the Sinhalese civilization, whose members to this day form the bulk of the island population, the main occupation of survival has been agriculture. Buddhism, the religion of plurality, was ushered into the island in 3<sup>rd</sup> century B.C. and has endured as the faith of the people shepherding their corporeal and incorporeal being and has additionally contributed remarkably towards the unique culture known as the Sinhala Buddhist culture. After the introduction of Buddhism the agrarian life of the island gained new life. People's beliefs about nature are an amalgamation of the primitive cults and the newly introduced denomination. Based on the theme of Sinhalese Buddhist beliefs about rain and drought, this study attempts to analyze the data from the historical chronicles as well as folklore to gain insights into the gradual evolution of the belief system.

**Keywords:** *Beliefs and Rituals, Chronicles, folklore, Agrarian culture.*

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## The Establishment of the Main Door

U. Rewatha<sup>1\*</sup>

The planning of the door is a key factor in vāstuśāstra. Generally, the door is established in order to provide adequate ventilation inside the building. Techniques with reference to door planning are expounded considerably in each Sanskrit vāstuśāstra text. Different types of techniques that are employed for door planning even today in Sri Lanka are based on primary Sanskrit texts such as Viçvakarmaparakāça - vāsturatnāvali - Mayamata. However, many architects who consult house construction only have the conventional knowledge. Architects who maintain the traditional adeptness cannot go through the primary Sanskrit texts due to lack of acquaintance of Sanskrit. On the other hand, it is apparent that house construction in Sri Lanka has been critically revolutionized due to the various invasions. Accordingly, in Sri Lanka it is not practiced in the perfect way of planning the door which has resulted in enormous dilemmas. Number, place and direction are central points of door planning. Importance should be given to the variables of paicabhūta and the four main directions when the door is planned. It is believed that door planning facing to the western direction procreates bad effects. However, this is entirely a devious aspect in the track of the techniques in primary sources. The main door that can be planned in each main direction has the foremost identity. Vital dimensions such as length and width in addition to the distinctive characteristics of the main door are discussed in vāstuśāstra texts. In this paper the attempt is made to get to the bottom of this problem on the basis of primary texts.

**Keywords:** Architect, Dimension, Direction, Door, Vāstuśāstra

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## Exploring the Meaning of Life: A Buddhist Approach

T. Wickremathilaka<sup>1\*</sup>

The question of whether there exists a meaning or a purpose to the existence of human life has been a much debated topic through the ages. Since the early Greek and Roman civilizations, many great thinkers within philosophical, theological, scientific and metaphysical contexts have tried to provide an adequate answer to this dilemma. With the emergence of science in the later centuries, people have turned more and more away from the philosophical and religious pursuits in life, and have been drawn to materialistic lifestyles. However, in order to be fully aware of the potential of our lives, it is crucial that we explore the nature of life and understand the purpose of our existence. Even though most of the religions in the world fail at this aspect of providing scientifically compatible, sensible and accurate answers to this question, Buddhism gives clear cut, comprehensive facts and advice about the reality of human life. Over 2500 years ago, Lord Buddha had successfully offered an answer to this existential crisis people face in the modern era. Unlike the scientific approach to examining the purpose of human existence, where the external parameters are observed for the experimental processes, the Buddhist approach involves gaining understanding and insight into one's own mind through introspection and meditation to find the answers to this problem. Buddhism also gives explanation about the continuous existence of beings in the *samsara*, and most importantly it provides us knowledge of the reality of existence, human or otherwise. In a manner none of the other approaches have used, Buddhism gives us the opportunity to see the true nature by ourselves and take necessary steps to reach our maximum potential as humans by our own will. In this paper, the perspective portrayed by Buddhism on the question of the purpose of human existence will be discussed, presenting the *suttas* and other literary sources from the *Pali* canon. It is the purpose of this paper to provide an all-inclusive answer to this dilemma and methods to alleviate the existential crisis experienced by people, within the Buddhist context.

**Keywords:** *Meaning of Life, Buddhism, Existential Crisis, Human Life, Philosophy*

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## **An Investigative Study of the Conflict Resolution Approaches Included in Dhammapada**

Ven. Karandagolle Sobhitha<sup>1\*</sup>

People of the many countries in the world are involved in internal and external conflicts that are interpersonal and ethnic, economic and social. Therefore, modern scholars have introduced so many conflict resolution theories, such as Human Need theory, Principled Negotiation theory, Community Relation theory, Identity theory, Inter-Cultural Miscommunication theory and Conflict Transformation theory to avoid those conflicts.

The Lord Buddha has always paved the way to solve problems that are interpersonal and ethnic economic and social throughout his preaching. In the Dhammapada there are ways and methods which help to resolve conflict for the purpose of benefitting society. Especially the Lord Buddha has composed the stanzas attractively, regarding resolving the conflict which has raised interpersonal conflicts between various people, groups and states. Those methods help to experience happiness, do day-to-day activities with an awakened mind, not be shaken by sadness and be involved in winning and losing. So, we can understand that Dhammapada highlights conflict resolution rather than giving advice. For an example,

*“Nahi verena verāni-sammantīdha kudācanaṃ*

*Averenacasammanti-esadhammo sanantano” (Yamaka Vagga 5 stanza)*

*‘Hatred never ceases through hatred in this world, through love (mettā) alone they cease. This is an eternal law.’*

Two women avenged themselves in the course of two successive births. In their third birth however, they were compelled to meet the Buddha, who pacified them by preaching to them and advising them not to retaliate. On that occasion Lord Buddha solved that conflict as mediator by using a transformation approach. It is the same as the modern approach called conflict transformation theory. In that way we can find out the conflict resolution approaches in Dhammapada.

I specifically try to show that the approaches in Dhammapada are similar to traditional and modern approaches or filled with concepts and theories which can be used for conflict resolution beyond traditional and modern approaches. I examine the Dhammapada to try to adduce optimum treatments and ways to avoid conflicts raised in society and understand primary sources of conflicts. In addition one of the main purposes of this research is to use the Dhammapada to investigate new approaches which help to prevent people from engaging in conflict and suffering.

**Keywords:** *Conflict Resolutions, The Lord Buddha, Modern approaches, Dhammapada*

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## **An Analysis of Speech Competency of English as a Second Language among Students Who Learn in Mother Tongue Based Bilingual Education in Sri Lanka**

J. A. M. B. Karunarathna<sup>1\*</sup>

Bilingual Education was introduced to the Sri Lankan education system in the recent past since 2001. Compared to other countries, the difference in bilingual education of Sri Lanka is that few selected subjects are taught in second language (L2). Other subjects are taught in first language (L1), which is either Sinhala or Tamil. Thus, it is identified as mother tongue based bilingual education. In the Sri Lankan context, students who learn under bilingual curriculum are considered more fluent in L2 than monolingual students. However, in class room observations, such considerations cannot be generalized, which of course is against the expectations of bilingual education programme in Sri Lanka. Hence, the objectives of the research are to find out the difficulties faced by bilingual students in speaking L2 and to investigate reasons related to the fluency of L2 among bilingual students. Accordingly, 68 students who learn under bilingual education curriculum in Grade 10 and 20 teachers who teach the subjects in English from 03 schools governed under provincial councils in Gampaha district were given questionnaires and the interviews to collect primary data. Book research was conducted to collect secondary data. Primary data was analyzed qualitatively and quantitatively using the descriptive data analysis method. Thus, the findings prove that the demotivating social factors, misconceptions of L2 among the students and deficiencies of pedagogical process in teaching English as a second language and bilingual education system have neglected the L2 spoken aspect.

**Keywords:** *Bilingual education, Speaking, English as a second language, pedagogy*

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## **The Impact of Media Reporting on Child Abuse and Neglect in Sri Lanka**

N. Thilakarathne <sup>1\*</sup>

“Informed, sensitive and professional journalism is a key element in any media strategy for improving the quality of reporting concerning human rights and society. The daily challenge to journalists and media organizations is particularly felt in coverage of children and their rights” (International Federation of Journalists (2002). In the past few years, media reporting on child abuse in Sri Lanka has been a broadly discussed topic. One of the aims of this research is to identify the impact of media reporting on child abuse in Sri Lanka in creating awareness of the incident, understanding children’s rights and media ethics.

In order to achieve the objective, secondary data were collected and analyzed from print media reports (200). Additionally, interviews and discussions were conducted with 20 professionals on media and child protection. Data was collected via self-administered questionnaire from random samples drawn from the population. The researcher followed a quantitative method and data analyzed by IBM SPSS 20.0 version.

Research findings proved that there was a lack of awareness of media ethics and child rights on reporting a child abuse case. Additionally, it was also discovered that there was a general lack of investigation and reporting on a case and a dependence on one source to have correct information. Child protection has been neglected due to unethical reporting of abuse and there are several cultural barriers that need to be overcome in the future of the child. The researcher proposes to establish formalized awareness programs on media ethics and child rights on reporting child abuse to protect children who have faced abuse.

**Keywords:** *child abuse, neglect, child rights, media ethics, reporting and awareness*

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## **An Investigatory Study on Literary Characteristics of Sinhala "Thupavansaya"**

Kusum Herath<sup>1\*</sup>, I. Madumali<sup>1</sup>

Sinhala Thupavansaya is a literary work translated into Sinhala language during the Kurunegala period. This chronicle written according to Pali Thupavansaya is a creation of Sri Parakrama Panditha. Although this is a translation, the translator has introduced creative and literary features into it superseding its chronicle characteristics. The objective of this research is to investigate into the facts related to literary characteristics included in the Sinhala Thupavansaya translation. The significance of this study is the ability to study the nature of the translation on Sinhala Thupavansaya and about the changes effected in the course of translation while identifying the literary characteristics of chronicle literature. The research problem of this study is to ascertain as to whether Sinhala Thupavansaya is a text that has superseded the chronicle characteristics and literary features. The methodology of the research is to study about facts from books through primary and secondary sources.

Sinhala Thupavansaya, Pali Thupavansaya and other chronicles which were translated into Sinhala during the Kurunegala era were viewed as primary sources, and discursive texts composed by post classical authoritative erudite about chronicle literature were recognized as secondary source texts. As the results of this research reveal, Sinhala Thupavansaya was identified as the translated text that comprises of the most number of literary characteristics among other chronicle texts. It was also identified that in the course of translation, the facts which were presented briefly in Pali Thupavansaya have been illustrated in detail and creatively in the Sinhala translation which demonstrates that it consists of literary characteristics. According to this research, it could be concluded that Sinhala Thupavansaya is a chronicle that is enriched with nutriment efficacy of literary sustenance.

**Keywords:** *Sinhala chronicles, Thupavansaya, translation methodology, literary characteristics.*

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**මහාසමයසූත්‍ර වර්ණනාවෙහි අන්තර්ගත නිර්විශේෂාර්ථ බහුරූපී පාඨ: සිංහල, ඉංග්‍රීසි හා බුරුම ත්‍රිපිටක සංස්කරණ ආශ්‍රයෙන් සිදුවන ශාස්ත්‍රීය අධ්‍යයනයක්.**

ලෙල්ලාවල අරියදම්ම හිමි<sup>1\*</sup>

දීඝනිකායේ මහාවග්ගයෙහි සංගෘහිත මහාසමය සූත්‍රය, ඓතිහාසික වටිනාකමකින් යුක්ත, ශාස්ත්‍රීය අධ්‍යයනයන්හි දී ප්‍රාථමික මූලාශ්‍රයක් වශයෙන් සම්භාවිත, එසේ ම විවාදාපන්න මතවාදවලට ප්‍රස්තුත වන සූත්‍රයකි. ථෙරවාදී සාම්ප්‍රදායික පිළිගැනීම මහාසමය බුද්ධභාෂිතයක් වශයෙන් වුවත්, දේවභාෂිත සම්බුද්ධානුඥාන සූත්‍ර පයඝීයක් වශයෙන් ද (අබේනායක, 2009, 152 - 153 පිටු.) කිසියම් මහායානික ආවායඝීවරයෙකු විසින් සංස්කෘත භාෂාවෙන් රචනා කරන ලදුව මාගධී භාෂාවට පරිවර්තන ව නිකාය ග්‍රන්ථාන්තර්ගතයට සංගෘහිත වුවත් වශයෙන් ද (බුද්ධදත්ත, 2010, 32 පිටුව) විද්වතුන් විසින් හඳුනා ගනු ලැබ ඇත. සංස්කෘත ආභාසය සහිත සූත්‍රයක් වීම, වෛදික බලපෑම තුළින් අන්තර්ගතයට එක් වූ දේවනාමාවලියකින් සමන්විතවීම, උපයුක්ත භාෂා ශෛලිය විවිධතා ආදී සහේතුක කරුණු යථෝක්ත හඳුනා ගැනීමවලට හේතු වී ඇතැයි සිතිය හැකි ය. මහාසමය සූත්‍රයෙහි අර්ථවර්ණනාව සුමඛිගලවිලාසිනී දීඝනිකායටිඨකථාවෙහි 'මහාසමයසූත්තවණ්ණනා' නමින් අන්තර්ගත වේ. සූත්‍රාර්ථ විවරණ සැපයීම් විෂයයෙහි ක්‍රියා කළ අට්ඨකථාවාර්ගයන් වහන්සේ හමුවෙහි ද මෙම ගැටලු ඉස්මතු වී තිබුණු බවට සාධක තවදුරු වර්ණනාවෙන් ම පිළිබිඹු වේ. පාලි අට්ඨකථාකරණයේ දී ත්‍රිපිටකයෙහි ඓතිහාසිකත්වය, ස්වාධීනත්වය හා ප්‍රාමාණිකත්වය සුරක්ෂිත කිරීම ථෙරවාදී සම්ප්‍රදායයේ ප්‍රමුඛ කාර්යයක් වූ බැවින් මහාසමය සම්බන්ධයෙන් වූ යථෝක්ත ගැටලු නිරාකරණය, අසීරු කරුණක් වන්නට ඇත. මහාසමයසූත්‍රයෙහි විවිධ සමයාන්තර පද පාඨ භාවිත වී තිබීම, සංස්කෘත භාෂා ආභාසය, වෛදික දේවනාම මහාසමයට ඇතුළත් ව තිබීම අර්ථකථන සංකීර්ණතා මතු වීමට බලපා ඇති බව පෙනේ. මේ ගැටලු අවම කිරීම වශයෙන් පාලි අට්ඨකථා අනුගමනය කොට ඇති එක් ක්‍රමවේදයක් වන්නේ නිර්විශේෂාර්ථ බහුරූපී පද පාඨ භාවිතයයි. විශේෂයෙන් ම දේවනාමයන් සඳහා විවරණ සැපයීමේ දී සංස්කෘත භාෂාවට, වෛදික දේවනාමයන්ට, නිකායාන්තරික පද පාඨ හඳුනා ගැනීමවලට අනුගත ව මෙන් ම පාලි ක්‍රමයට ද අනුරූපී ව සාමාන්‍යාර්ථ බහුවිධ පද පාඨ මහාසමය සූත්‍ර වර්ණනාවෙහි භාවිත කොට ඇත. එහි ඇතැම් දේවනාමයන්ට "ජනෙසභෝති ජනවසභො දෙවපුත්තො" යනුවෙන් සෘජු අනන්‍යතා ද ඉදිරිපත් කොට ඇත. එසේ ම ඇතැම්විට "පාලියම්පන කට්ඨකා වානි ලිඛන්ති" යනාදී වශයෙන් පාලි ක්‍රමය ද යෝජනා කොට ඇත. මෙසේ සුමඛිගලවිලාසිනී දීඝනිකායටිඨකථාවේ මහාසමය සූත්‍ර වර්ණනාවෙහි විද්‍යමාන වන නිර්විශේෂාර්ථ බහුරූපී පද පාඨ භාවිතය, ශාස්ත්‍රීය අධ්‍යයනයක් මගින් ගවේෂණය කිරීම මෙම පර්යේෂණ පත්‍රිකාවේ ප්‍රමුඛ අපේක්ෂාවයි.

**ප්‍රමුඛ පද :** මහාබලා, වෙටෙඬු, කට්ඨකා, ජානිනාමා, ජනෙසභො, චිත්තසෙනො.

<sup>1</sup> පාලි හා බෞද්ධ අධ්‍යයන අංශය \* ven.ariyadhamma@yahoo.com

## **The Village as Seen in The ‘43 Group’ Projected on the Silver Screen by Lester James Peiris**

A. de Zoysa<sup>1,2\*</sup>

Lionel Wendt is accepted as the founder and only photographer of the ‘43 Group’. This presentation poses the question, if the ‘43 Group’ had any expression in the medium of film. The other question is if there is any visual relationship in Lionel Wendt’s photography and the cinematography of Lester James Peiris as seen in ‘Rekawa’ (1956).

‘Rekawa’ (the Line of Destiny) came at a momentous time with the Bandaranaike government coming to power. Sinhala was fast replacing English and Sarachchandra had turned a new leaf in Sinhala theatre with ‘Maname’. LJP had quit the Government Film Unit and was shooting his first feature film ‘Rekawa’. The presentation is based on some in-depth interviews with LJP in January 2014 and archival material from the ‘Sapumal Foundation’, Colombo.

Identifying the main features of ‘Rekawa’, one may say that it was a feature film shot on location (outside) and not in studios, this in keeping with Italian ‘Neorealismo’ of Rossellini, De Sica and Visconti. LJP’s “Village” disturbed the audience. Critiques said that ‘Siriyaala’ where the story is located, as narrated by LJP was not a Sinhala village. The allegations made on LJP of creating an eroticized village for the English speaking audience was similar to those aimed at members of the ‘43 Group’ like Richard Gabriele. Ivan Peries, the greatest artist of landscape of the group, was LJP’s brother and LJP was a member of the group at some point. It is the visual imagery of the 43 Group, featuring an exotic Sri Lanka, filmed open-air and camera angles that were inspired by Lionel Wendt, that provide strong evidence that ‘Rekawa’ can be regarded as the only film of the ‘43 Group’. The discussion revolves around the conception of the “village” among the new Sinhala elite and the Colombo based English speaking artists of the ‘43 Group’.

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## **Modern Art in The Buddhist Image House. Gotami Viharaya**

A. Zoysa<sup>1\*</sup>

When George Keyt completed his murals at the Gothami Viharaya Borella, in the mid-20<sup>th</sup> century it created a sensation, almost a scandal.

Sri Lankans, who were accustomed to see the characters from the Buddha Charita as painted by the school of Maligawe Sarlis and Solias Mendis, were not accustomed to see such voluptuous figures and amorous poses. Furthermore, they were not familiar with the modern visual language of Keyt, which had taken inspiration from Modern Art seen among the French artists such as Braque and Picasso. This double cultural shock may have been one of the root causes to reject the newly painted murals.

This research on one hand locates Keyt's painting in the realm of 'Spiritual Art' of India with a heavy use of symbolism, taking examples from S. P. Sakalasooriya, Ananda Samarakoon, Motagedara Wanigaratne, Jayasiri Semage, Somabandu Vidyapati, Danny Wimalasiri on one hand, and on the other hand as seen in a selection of artists of the '43 Group'.

The general rejection of the '43 Group' because they did not follow rules of perspective, single point perspective, picturesque compositions of landscape, neo-classical poses, shadings implying a three dimensional and Keyt's heavy dependence of line may have been other reasons for the attack on Western Modernism entering the Buddhist Image House via George Keyt.

The research question would be focusing on the taste of the Sinhala Buddhist elite, who were intolerant to the erotic sentiment "Sringara" which is amply displayed in the stone reliefs of Bharut, Sanghol, Nagarjuna Konda, Karle and murals of Ajanta, where human form is shown in all its beauty. The presentation at the conference will focus on Buddhist Art as seen in contemporary Sri Lankan artists and Keyt's Gotami Vihara murals.

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## **A Comparative Study of Hindi and Sinhala Idioms: With Reference to Selected Idioms in Connection with Human Body Parts**

M. C. Gunarathne<sup>1\*</sup>

Idioms play an inseparable role in Hindi and Sinhala languages which belong to Indo-Aryan language family. In these two languages there are various idioms which indicate human body parts with related to their own culture. The purpose of this study is to examine how body parts have been used in Hindi and Sinhala idioms. Dictionaries of idioms have been used as primary resource. Books and magazines related to Sinhala and Hindi literature have been used as secondary resource. This paper indicates that there are some idioms which have been based on the same human body part as well as in some cases different body parts have been used to convey the same meaning. This paper highlights that there are more Hindi Idioms which are based on human body parts rather than in Sinhala. It also highlights that some idioms based on body parts such as 'māg bhārnā:' (married woman) are difficult to understand without knowing the cultural background of the language. Another finding of this research is that there are more Hindi idioms on body parts which convey more than one meaning but in Sinhala language it is hard to find such cases. The above mentioned findings of this paper help us to understand Hindi and Sinhala idioms based on body parts according to the cultural background of its' own.

***Keywords:*** *Idioms, Hindi, Sinhala, human body parts, culture*

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**දේශීය ධනෝශ්වර පංතියක් බිහිකරනු ලැබූ අරක්කු රේන්ද ව්‍යාපාරයේ 'හරත' (පරවර) සලකුණ.**

ගංගා දිසානායක<sup>1\*</sup>

ඉන්දීය සම්භවයක් සහිත ශ්‍රී ලාංකේය ජන සමාජය තුළ සිය ආර්ථික හා සමාජීය ස්ථාවරය ගොඩනගා ගත් පැරණි ජන කොටසක් ලෙස 'හරත' (පරවර) ජන කොටස හඳුනාගත හැකිය. ඔවුන් මීගමු හරත හා කොළඹ හරත ලෙස දෙකොටසකහිලා සැලකෙන අතර ඔවුන්ගේ ජනප්‍රවාදගත අතීතය කෝට්ටේ 6වන පරාක්‍රමබාහු රජසමය දක්වා දිවයයි. සංඛ්‍යාත්මකව ලක්ෂ 5ක් පමණ (2016) වන ජන සංගහණයක් සිටින හරත ජනතාව සිය ආර්ථිකය වෙළඳාම මුල්කර ගනිමින් ගොඩනගා ගත්හ. දේශීය ධනෝශ්වර පංතිය, බිහිවීමේ ආරම්භය හුවමාරු වෙළෙඳ ක්‍රමය අහෝසි වී යාමත් සමග ඇතිවූ අතර ආනයන අපනයන වෙළෙඳ ක්‍රමයක් වටා බිහිවූ දේශීය ව්‍යාපාරික පංතියක් ඉන් ජනිත විය. සමස්ත සේවා නියුක්තිකයන්ගෙන් 32% ක් වතු කම්කරුවන් වූ අතර ඔවුන් කේන්ද්‍ර කරගනිමින් බිහිවූ වෙළෙඳපල අවශ්‍යතා රටාවක් ලාංකේය සමාජය තුළ බිහිවිය. පෘතුගීසි, ලන්දේසි, ඉංග්‍රීසි යටත් විජිතයන්ගෙන් ලත් පුහුණුවෙන් හරත හා පහතරට වැසියෝ වෙළෙඳපල ආර්ථිකයට යුහුසුඵව යොමුවූ අතර ඉංග්‍රීසි පාලන රටාව හරහා විවර වූ වෙළෙඳ අවස්ථා වහා ග්‍රහණයට ගත්හ. අරක්කු රේන්ද ව්‍යාපාරය ඒ අතර ප්‍රමුඛස්ථානයෙහි ලා ගැනෙන අතර 1911දී ලාංකේය තැබෑරුම් කරුවන්ගේ සංඛ්‍යාව 1561ක් විය. 1730 සිට 1900 දක්වා ලක්දිව ප්‍රධාන පෙළේ අරක්කු රේන්ද හිමිකරුවන් 20 දෙනෙක් අතුරින් 4 දෙනෙකු හරත ප්‍රජාවට අයත් වූ අතර සෙසු රේන්ද කරුවන්ගෙන් 25% ක අධිකාරයක් ඔවුන් සතුව තිබුණි. සර් ඩොනැටස් වික්ටෝරියා (වික්ටෝරියා වයින් ස්ටෝර්ස්) සතුව හරත ප්‍රජාව නියෝජනය කරනු ලබන විශාලතම සුරාසැල් ජාලය තිබූ අතර කොළඹ නගරය කේන්ද්‍ර කරගනිමින් එය ස්ථානගත කර තිබුණි. දෙවැන්න ශ්‍රී.මුරුමුණි (මුරුමුණි වයින් ස්ටෝර්ස්) වන අතර වතු කම්කරුවන් ගේ අරක්කු වෙළෙඳපල ඉලක්ක කරගනිමින් යටියන්තොට/ බලන්ගොඩ/ ත්‍රිකුණාමලය/ අවිස්සාවේල්ල යන ස්ථාන ප්‍රධාන කරගනිමින් එම සුරාසැල් ජාලය පිහිටා තිබුණි. මෝතාස් හා කෝස්ටාස් අනෙකුත් හිමිකරුවන් වූ අතර දේශීය අරක්කු රේන්ද ව්‍යාපාරය තුළ ස්වදේශිකයන් හා කරට කර තරඟ කිරීමට මෙම ඉන්දීය කුඩා ජන කණ්ඩායමට හැකියාව තිබුණි. ශ්‍රේඛියල් ඩී කාස් ප්‍රධාන ජෝන් ලියෝ ඩී කාස්/ නිකලස් එම්මැනුවෙල් ඩී කාස් යන මීගමු හරත ප්‍රජාව කටුනායක සිට කොච්චිකඩේ දක්වා වූ සුරාසැල් වල හිමිකාරීත්වය අත්පත්කර ගෙන තිබුණි. මේ හරහා උපයාගත් ධනය ඉඩම් හිමි දේශීය ධනෝශ්වර පංතියක් බිහි වීමට හේතු සාධකයක් විය. එයින් ස්වදේශික ජනතාව හා සමානව ආර්ථික හා සමාජීය තත්ත්වයක් ලබාගැනීමට හරතී ප්‍රජාව සමත් වී තිබේ. අරක්කු රේන්ද හිමිකරුවන් පිළිබඳ මෙතෙක් කරන ලද පර්යේෂණ තුළින් හරත ප්‍රජාව ගිලිහී යාම හෝ ජනවර්ගයක් ලෙස ඒ සඳහා ඔවුන්ගෙන් වූ දායකත්වය නොසලකා හැරීම සිදුවූයේ මන්ද? යන්නත් අරක්කු රේන්ද කර්මාන්තය තුළ හරත ප්‍රජාවගේ සමාජීය භූමිකාව පිළිබඳවත් මෙහිදී විස්තර කිරීමට නියමිතය.

**ප්‍රමුඛ පද:** හරත/ අරක්කු රේන්ද ව්‍යාපාරය /හුවමාරු වෙළෙඳපල ක්‍රමය / ආනයන අපනයන ආර්ථිකය/ ඒකාධිකාරය

<sup>1</sup> සමකථන ජ්‍යෙෂ්ඨ ආයතනය, ශ්‍රී ලංකාව \*gangarajinee@gmail.com

**නැකැත්/බලි සිතුවම් කලාවේ උඩරට ආගමනය ටැම්පිට විහාර හා සොල්දර විහාර නැකැත් හා බලි සිතුවම.**

ගංගා දිසානායක<sup>\*</sup>

'බලි' ශාන්තිකර්මයක් ලෙස ක්‍රි.ව. 1457 දී ලංකාවට පැමිණි බමුණන් 19 දෙනෙකුගෙන් පැවත ආ අතර පසුකාලයක ඒවා 'බොදු බලි' ලෙස පරිවර්තනය වී ඇත. බලි ශාන්ති කර්මය වසරක් පාසා ම රජගෙදර පැවැත්වූ ප්‍රධාන උත්සව අංගයක් විය. ප්‍රමිලා බිසව වෙනුවෙන් කරන ලද බලි යාගය උඩරට දී කරන ලද වර්තමාන අවසන් බලි ශාන්ති කර්මයයි. නැකැත් - ජ්‍යොතිෂ්‍යය හා පදනම් වන අතර නවග්‍රහයින් ගෙන් සිදුවන රෝග- පීඩා- ව්‍යාධි සමනය කරගනු පිණිස 'බලි' ශාන්ති කර්මය සිදුකරනු ලැබේ. මෙම පර්යේෂණයේ දී සතරකෝරලය, තුන්කෝරලය, නුවර, බුලත්ගම හා කොත්මලේ, මාතලේ යන උඩරට දිසාවන්හි ටැම්පිට විහාර හා සොල්දර විහාර 70කට ආසන්න සංඛ්‍යාවක් නිරීක්ෂණය කරනු ලැබිණි. ගල් ටැම් මත එලන ලද ලැලි තට්ටුවක් මත මුල්කණු සිටුවා ඉදිකරනු ලබන කුඩා පිළිම ගෙය ටැම්පිට විහාරය වන අතර ආරුක්කු සහිත දැවැන්ත බිත්ති මත ලැලි අතුරා ඒ මත ඉදිකරනු ලබන විශාල ප්‍රතිමා ගෘහය සොල්දර විහාර වේ. තේමා හා ආකෘතිමය ලෙස ගත් විට මේ සෑම විහාරයක ම සත්සතිය, සුවිසිව්වරණය, ශ්‍රාවක රූප, අග්‍රශාවක රූප, හා ජාතක (තෝරාගත් කීපයක්) බුද්ධ චරිතය ඇතුළත් වන අතර 17 වන සියවසේ අග භාගයේ සිට 19 වන සියවස මැද භාගය දක්වා මෙම විහාර ඉදිකිරීම් හා සිතුවම් නිමකිරීම සිදුකර තිබේ.

'නැකැත් හා බලි' විහාර සිතුවම් අතර ප්‍රමුඛස්ථානයෙහි ලා හමුවන්නේ දකුණු සම්ප්‍රදායේ සිතුවම් සහිත විහාරස්ථානවල වන අතර දොඩන්දූව ගෛලබිම්බාරාමය ඒ අතර ප්‍රධාන වේ. කැළණි විහාරය, කරගම්පිටිය සුබෝධාරාමය, සපුගස්කන්ද රජමහා විහාරය යන විහාරයන්හිදී ද මෙම සිතුවම් දක්නට ලැබෙන අතර ඒවා 18 වන සියවසේ අග භාගයේ සිට 20වන සියවස මුල්භාගය දක්වා කාලය තුළ ඇද තිබේ. උඩරට සම්ප්‍රදාය ප්‍රමුඛ ව විහිදී ගිය මධ්‍යම හා සබරගමුව තුළ බලි හා නැකැත් සිතුවම් දක්නට නොලැබෙන අතර ඒවා හමුවන්නේ පර්යේෂණ ක්ෂේත්‍රය වූ විහාරාරාම ජාලය තුළ ද කීපයක පමණි. උඩතලවිත්ත ටැම්පිට විහාරය/ අත්තනගොඩ පොත්ගුල් විහාරය/ ගල්ලෙන්ගොල්ල පොත්ගුල් විහාරය/ බෝධිමල්කඩ ටැම්පිට විහාරය යන විහාරස්ථාන පහක මනා ලෙස ඇදී බලි හා නැකැත් සිතුවම් දක්නට ලැබෙන අතර ඒවා 18වන සියවස අග භාගයේ සිට 19 වන සියවස අගභාගය යන කාලපරිච්ඡේදය තුළ අදිනු ලැබූ ඒවා වේ. උක්ත දිසාවන්හි විහාර සිතුවම් කලාවේ තේමාවන්ට ආගන්තුක නැකැත් හා බලි සිතුවම් 18 වන සියවස අගභාගයේ දී ආගමන වීම දකුණු සම්ප්‍රදායේ චිත්‍ර තේමාවන්වලින් සිදු වූ බලපෑමෙන් උද්ගතවූවක් ද? යන්න පර්යේෂණ ගැටලුව වේ. මෙම පර්යේෂණ පත්‍රිකාව මගින් වියනට විශේෂිත ව වක්‍රාකාර රාමුවක අදිනු ලැබූ නැකැත් හා බලි සිතුවම් උඩරට විහාරවල දකුණු සම්ප්‍රදායේ චිත්‍ර ලෙස විග්‍රහ කර ඉදිරිපත් කිරීමට බලාපොරොත්තු වේ.

**ප්‍රමුඛ පද :** නැකැත්/බලි/ටැම්පිට විහාර/ සොල්දර විහාර/ දකුණු සම්ප්‍රදාය

<sup>1</sup> සමකථන පර්යේෂණ ආයතනය, ශ්‍රී ලංකාව \*gangarajinee@gmail.com

**බටහිර අභිප්‍රේරණ සංකල්පය සහ බෞද්ධ සමුත්තේජන සංකල්පය පිළිබඳ තුලනාත්මක විග්‍රහයක්**

ඩී. එම්. එල්. හර්ෂිකා<sup>1</sup>

බටහිර අභිප්‍රේරණ සංකල්පය මනෝවිද්‍යාව, සමාජ විද්‍යාව, අධ්‍යාපනය, දර්ශනය ආදී බොහෝ විෂය ක්ෂේත්‍රයන් තුළ ප්‍රධාන වශයෙන් භාවිත වන සංකල්පයක් වශයෙන් හඳුන්වාදිය හැකිය. අවශ්‍යතා ඉටුකර ගැනීම සඳහා යම් යම් වර්ගවන්ති පුද්ගලයා මෙහෙයවන අභ්‍යන්තරික ක්‍රියාවලිය අභිප්‍රේරණය වශයෙන් හඳුන්වා දී තිබේ. එමෙන් ම මානසික අවශ්‍යතා වැනි අභ්‍යන්තරික මූලයන් මෙන් ම බාහිර ප්‍රබෝධකයන් නිසා ද අභිප්‍රේරණය ශක්තියක් වශයෙන් ක්‍රියාත්මක වන බව මනෝවිද්‍යාඥයින්ගේ අදහස යි. මනෝවිද්‍යාත්මක ව මෙය විග්‍රහ කිරීමේ දී සත්වයා පුබුදු කොට මෙහෙයවමින් නිශ්චිත දිශාවකට යොමු කිරීමේ ගාමක බලවේගය අභිප්‍රේරණය යනුවෙන් නිර්වචනය කළ හැකිය. “අභිප්‍රේරණය” සඳහා විවිධ විෂය ක්ෂේත්‍ර තුළ පර්යාය පද රාශියක් භාවිත වේ. අභිප්‍රායනය, අභිචේතනය, පෙළඹවීම යනු ඉන් කිහිපයකි. එමෙන් ම පුද්ගලයා ක්‍රියාකාරී බවට පත් කරවීම, මෙහෙයවීම, යොමු කිරීම, උත්තේජනය කරවීම ආදී අරමුණු සාධනය කර ගැනීම සඳහා ද මෙම සංකල්පය භාවිත වී තිබේ.

බටහිර චින්තකයන් විසින් නූතනයෙහි අභිප්‍රේරණය නව සංකල්පයක් වශයෙන් හඳුන්වා දුන්න ද මෙයට වසර 2550කට පෙර භාරතයෙහි පහළ වූ ගෞතම බුදුන් වහන්සේ සත්වයාගේ ලෞකික හා ලෝකෝත්තර අරමුණු සාධනය කර ගැනීම සඳහා මෙම සංකල්පය ප්‍රායෝගික ව භාවිත කළ බව ත්‍රිපිටකය පරික්ෂා කිරීමෙන් සනාථ කර ගත හැකිය. බෞද්ධ දාර්ශනික සිද්ධාන්ත, ධර්ම දේශනා ක්‍රමශිල්ප, සම්මුති පරමාර්ථ ඉගැන්වීම්, බෞද්ධ සාහිත්‍යය ප්‍රකට වන විමාන වත්ථු, ප්‍රේත වත්ථු, ධම්ම පදය, ජාතක කථා සහ ආදී බෞද්ධ සූත්‍ර දේශනා අධ්‍යයනය කිරීමේදී බෞද්ධ අභිප්‍රේරණයෙහි ප්‍රායෝගික භාවිතාව සහ එහි දාර්ශනික අර්ථය ද මනා ව පිළිඹිබු කර යි. එහෙත් “අභිප්‍රේරණය” යන නාමය ත්‍රිපිටකය තුළ හෝ අටුවා, ටීකා වැනි තදනුබද්ද මූලාශ්‍රය තුළ දැකගත නොහැක. මේ සඳහා බුදුදහම භාවිත කොට ඇත්තේ “සමුත්තේජනය” යන නාමය යි.

බටහිර අභිප්‍රේරණ සංකල්පය බෞද්ධ සමුත්තේජන සංකල්පය සමග තුලනය කරමින් එහි ප්‍රභවය විකාශය පිළිබඳ ව මෙන්ම එහි සම විෂමතා, පරස්පරතා හා සුවිශේෂතා ද විමර්ශනාත්මක ව අධ්‍යයනය කිරීමට මෙහිදී අපේක්ෂා කෙරේ. ඒ තුළින් බැසගත හැකි නිගමන ද ඉදිරිපත් කිරීම අපගේ ව්‍යායාමය යි. මේ සඳහා බටහිර අභිප්‍රේරණ සංකල්පය පිළිබඳ විග්‍රහකොට ඇති ප්‍රාමාණික මූලාශ්‍රය මෙන්ම ත්‍රිපිටකයෙහි අදාළ සූත්‍ර දේශනා මූලාශ්‍රය වශයෙන් භාවිත කිරීමට අපේක්ෂිත ය.

**Keywords:** *Motivation, Samuttejana, Dhammapadaya, Vimanavaththu, Prethavatthu*

<sup>1</sup> රුහුණ විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව \*dmharshika@gmail.com

## **An Error Analysis of Japanese Business Letters Written by Undergraduates Learning Japanese as A Foreign Language in The University of Kelaniya**

B. A. D. N. Balasooriya<sup>1\*</sup>

The technique of writing Japanese business letters is very helpful for students who learn Japanese as a foreign language, especially if they wish to work for a Japanese company. With the aim of improving knowledge on business Japanese, a new Japanese course called “Business Japanese” was started in Kelaniya University in 2014. But the area of writing business letters is identified as a difficult area for students to master, although there are many books about techniques of business writing in Japanese. Most of the time students tend to memorize the examples that are given in text books and if they memorize it incorrectly that mistake will be made by them repeatedly. So this paper aims to specifically extract the errors found in the business letter writings of students, examine the frequency of errors and to point out often committed errors. In this paper, examples of errors made by undergraduates who are specializing in Japanese language, in writing Japanese business letters were collected, analyzed, and evaluated. The data were collected from a course taught in the first semester of 2016, and consisted of errors in internal and external letters written as practice on the use of honorific expressions. Many types of errors related to word choice were found. In particular, inappropriate combinations of recipient name and honorific title, inappropriate combinations of verbs and objects, mixing of respectful and humble language, and insufficient understanding of fundamental Japanese constructions were prevalent. Other types of mistakes included inappropriate layout, incorrect use of abbreviations, and incorrect use of Arabic and Japanese numerals. There was a tendency to make the same mistakes repeatedly, and it was concluded that the guidance offered by textbook examples is insufficient and that systematic training in formal written Japanese is desirable.

**Keywords:** *Japanese, business letters, writing, error analysis, honorific, university Students*

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**බෞද්ධ කර්ම සිද්ධාන්තය හා භගවත්භිතාවෙහි එන කර්ම යෝගය: සංසන්දනාත්මක අධ්‍යයනයක්.**

මුවපිටිගෙවල පඤ්ඤාලෝක හිමි<sup>1\*</sup>

මුල් බුදුසමයාගත කේන්ද්‍රීය ඉගැන්වීම් අතර කර්ම සිද්ධාන්තය ප්‍රමුඛ වූවකි. පුද්ගලයාගේ ක්‍රියාකාරී ගුණය වඩාත් ඇගයීමට ලක් වූයේ බුදුදහමෙහි ය. බෞද්ධ කර්ම සිද්ධාන්තයෙහි සුවිශේෂ බව නම් සචේතනික වීමයි. (වෙනනා'හං භික්ඛවෙ කම්මං වදාමි, වෙනයිත්වා කම්මං කරොති, කායෙන වාචාය මනසා) පුද්ගලයාගේ ක්‍රියාකාරී බව කෙරෙහි කිසිදු බාහිර බලවේගයක බලපෑමක් නොපිළිගන්නා බුදුදහම අනිශ්චර හා අනියතිවාදීව කර්මය විග්‍රහ කරයි. කර්මය සාංසාරිකව බද්ධ වූවක් බව ද කර්ම රැස්කිරීම මෙන් ම කර්මක්ෂය වීම ද අවධාරණය කරයි. කර්මයෙන් ඵලය ද ඵලයෙන් කර්මය ද ශුන්‍ය බව දක්වා හේතුඵලවාදය මත පදනම් ව කර්මය විග්‍රහ කරයි. ගුරු-ලඝු වශයෙන් ප්‍රචර්ග කෙරෙන කර්මය බුදුදහම තුළ අවස්ථාන්තර අනුව ද, කාල අනුව ද, විපාක අනුව ද විවිධ නයිත් ප්‍රතින්න ය. කර්ම නිදානය, විවිධත්වය, විපාකයාගේ නානත්වය, කර්ම නිරෝධය මෙන් ම ඒ සඳහා වන ප්‍රතිපදාව ද විවිධ තන්හි විස්තර වනු දක්නට ලැබේ. අනවරාග්‍ර වූ සංසාරයක සැරිසරන පුද්ගලයන්ගේ කර්මස්කන්ධය අප්‍රමාණ බැවින් බුදුදහම කර්මය අවින්නය ධර්මයක් ලෙස ද දැක්වී ය. මහාභාරතයෙහි භීෂ්ම පර්වයෙහි බණ්ඩයක් වන භගවත්භිතාව ආචාර විද්‍යාත්මක, යෝග ශාස්ත්‍රීය ජනප්‍රිය ග්‍රන්ථයකි. කර්ම හා ඥාන යෝග ගැන ඉගැන්වෙන මෙහි ප්‍රමුඛතම සංකල්පය කර්ම යෝගය බව ශ්‍රීමත් බාලගංගාධර කිලක් පවසයි. භිතාවෙහි කර්මය පිළිබඳ ඉගැන්වීම් ප්‍රමුඛ ලක්ෂණ කිහිපයකි. කර්මය වනාහි බ්‍රහ්මෝද්භූත ය, (කර්ම-බ්‍රහ්මෝභවං). ආත්මය පදනම් කොට ගත්තකි. කර්ම ප්‍රතිබද්ධ පුද්ගලයා නිතර කර්ම කළ යුතු ය, (නියතං කුරු කර්මස්වං). අකර්මක වූවනුට ශරීර යාත්‍රාව ද සිදු කළ නොහැක්කකි. කර්ම අතර ද අසක්ත වූ කර්මය ම විශිෂ්ට කරන භිතාව (අසක්ත: ස විශිෂ්‍යතෙ) ඵලාපේක්ෂාවෙන් කරණ කර්මය බැහැර කරයි. ආත්මය පදනම් කොටගත් භගවත්භිතාවෙහි කර්ම යෝගය බෞද්ධ කර්ම සිද්ධාන්තයට ප්‍රතිපක්ෂ වූවක් සේ පෙනුන ද ප්‍රතිජානනාත්මක ලක්ෂණ ද දක්නා ලැබේ. රාග, ද්වේශ, මෝහ ප්‍රභාණය උතුම් බව, නරක කර්ම කරන කිපුණු තැනැත්තා පාපියෙකු හා සතුරෙකු බව, ඉන්ද්‍රියයන්ට වඩා මනස උසස් බව (ඉන්ද්‍රියෙභ්‍ය: පරං මන:), කර්ම විමෝක්ෂය (මුච්‍යන්තෙ තෙපි කර්මභි: ) යනාදිය ඒ අතර ප්‍රමුඛ වේ. උක්ත කරුණු අනුසාරයෙන් බෞද්ධ කර්ම සිද්ධාන්තය හා භගවත්භිතාගත කර්මයෝගය සංසන්දනයෙන් එකිනෙකෙහි විශේෂතා මෙන් ම සාමාන්‍ය ලක්ෂණ අධ්‍යයන කරනු ලැබේ.

**ප්‍රමුඛ පද:-** බුදුදහම, භගවත්භිතාව, කර්මය, වේදය, ආත්මය

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## **Correlation Between the Teachers' and Students' Motivation in Second Language Achievement: A Review of Literature**

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In the domain of second language (L2) learning achievement, motivation is considered as a key determinant. During past decades in the educational milieu, numerous researches have been conducted and a considerable number of models have been presented focusing mainly on students' motivation. However, it raises a probing question whether students' motivation alone is sufficient for the successful acquisition of L2. As Deci and Ryan (1985) claim to develop intrinsic motivation in learners which leads to better language performance, the learners need to perceive the learning environment to be "informational" rather than "controlling" and the learning context has to be autonomy supporting in that it facilitates self-determination on the part of the learner. Therefore, it postulates that teachers play a vital role in creating a conducive learning environment. Accordingly, the present study is based on the hypothesis that teachers' motivation is a predominant variable in L2 achievement because teachers' autonomous motivation towards teaching foretold students' autonomous motivation towards learning. The key objectives of this study are to review the limited literature available on social-contextual conditions that have an impact on teachers' motivation and to analyse the correlation between the teacher's and students' motivation in L2 achievement.

The literature indicates the teachers are mostly motivated by factors such as; student achievement, teachers' perception of their status in society, a positive atmosphere in school, constructive evaluation, the sense of self-fulfillment, effective administration and management, etc... Further, the previous studies affirm that the teacher's motivational teaching practice leads to improved levels of L2 achievement. Thereby, consistent with these findings, it is concluded that autonomously motivated teachers stimulate their learners towards learning and when teachers are more supportive of autonomy and less controlling, students demonstrate higher levels of intrinsic motivation and self-determination.

**Keywords:** *autonomy, L2 achievement, self-determination, students' motivation, teachers' motivation*

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**දිළිඳු බව නැති කිරීම සඳහා බෞද්ධ මාර්ගෝපදේශයන්ගේ උපයෝගිතාව පිළිබඳ අධ්‍යයනයක්**

ආර්. එම්. සී. පී. රත්නායක<sup>1\*</sup>

දිළිඳු බව වත්මන් ලෝකය අභිමුඛ ඇති බලවත් සමාජ, ආර්ථික ප්‍රශ්නයකි. අසංවර්ධිත රටවල පමණක් නොව ඇතැම් සංවර්ධිත රාජ්‍යයන් තුළ ද දිළිඳුන්ගේ සිය ගණනක් වෙසෙති. ස්වභාවික සම්පත් ඉහළ, තාක්ෂණ ඥානයෙන් දියුණු රටවල පවා වස්තු හිඟ, දුෂ්පෝෂණයෙන් පෙළෙන, නිවාස අහිමි ජනතාව ලක්ෂ ගණනක් ජීවත් වෙති. දිළිඳු බව විෂම ආර්ථිකයේ ප්‍රතිඵලයකි. ඇතැමුන් දිළිඳුන් බවට පත් වන්නේ ඔවුන්ගේ විෂම වර්ග රටාව නිසා ය. නූතන අර්ථ ශාස්ත්‍රඥයන් දිළිඳු බව පිළිබඳ වරද පටවන්නේ දිළිඳුන් මත වුව ද දිළිඳු බව ඇතිවීම සඳහා පාදක වන ප්‍රස්තුත කිහිපයකි. දුර්වල රාජ්‍ය ප්‍රතිපත්ති, අත්තනෝමතික පාලනය, විරැකියාව, සමාජ ඵලය සාධාරණ ලෙස බෙදී නොයෑම, බදු ප්‍රතිපත්තිය, ජනගහන ගැටලු ආදිය මේ සඳහා බලපායි. දිළිඳු බව නිසා සමාජ ප්‍රශ්න රාශියක් උද්ගත වන අතර ඇතැමෙක් සොරකමට පෙළඹෙති. ඉන් නොනවතින මිනිසා මනුෂ්‍යය සාතන, ගණිකා වෘත්තිය, අවි ආයුධ නිෂ්පාදනය ආදි හයානක කායික මෙන් ම මානසික දුරාවාර කෙරෙහි ද යොමු වෙයි. සමාජයේ සෑම තැනැත්තෙක් ම දිළිඳු බව පැතිර පවතී නම් එය ප්‍රභීණ කිරීමට රාජ්‍යය මඟින් නිසි සැලසුම් සංවිධානය කළ යුතු ය.

ආර්ථික උද්ධමනයෙන් පීඩා විඳින රටක බදු අය නොකළ යුතු ය. නිර්ධනයින්ට ධනය ලැබෙන මාර්ග සැලසිය යුතු ය. එසේ ම ස්වකීය අභිමතාර්ථය පරිදි පාලකයා පාලනය සිදු නොකර ධාර්මික පාලනයක් ගෙන යා යුතු ය. වෘත්තීන්හි නියැලී සිටින්නවුන්ගේ ශක්ති ප්‍රමාණය අනුව සුදුස්සන් පත් කිරීම ද සිදුකළ යුතු ය. දිළිඳු බව පිළිබඳව මෑතකාලීනව අවධානය යොමු කළ දේශපාලන දාර්ශනිකයා වූයේ කාල් මාර්ක්ස් ය. නමුත් මෙම ප්‍රශ්නය කෙරෙහි මීට වසර දහස් ගණනකට පෙර අවධානය යොමු කළ එක ම ශාස්ත්‍රවරයා වූයේ බුදුරජාණන් වහන්සේ ය. සමාජ ආර්ථික ප්‍රශ්න විසඳීමට දියත් කළයුතු සැලසුම් රාශියක් බෞද්ධ සූත්‍ර දේශනාවන්හි අන්තර්ගත වේ. ආර්ථික දේහයේ මූලික කේෂ්ත්‍ර කිහිපයක් කෙරෙහි ම අවධානය යොමු කර ඇති එම බෞද්ධ උපදේශයන් මඟින් දිළිඳු බව තුරන් කළ හැක්කේ කෙසේ ද යන්න අධ්‍යයනය කිරීම මෙම පර්යේෂණ පත්‍රිකාවෙන් සිදුකෙරේ.

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## Renaissance of Pali Literature in Modern Era (After 19<sup>th</sup> Century)

U. Dhammadheera<sup>1\*</sup>

In 15<sup>th</sup> February 1798, our country became a colony. As a result of this colonization and the careers of Portuguese and Dutch, Christianity diffused in Sri Lanka. The foreign governors who were appointed by those nations were not frank enough towards Sinhalese people and they vehemently attempted to disseminate their own religion. Therefore our nation, religion, culture, education and literature etc. went to regress day-by-day. However, with the help of governors and foreign followers, Christians continued their missionary programmers such as sharing handouts, lectures, newspapers, hand books and so on. They destroyed Buddhist temples, schools and rebuilt churches and Christian schools. Not only those partial activities but also they threw money to the poor to admit them into their religion. At the beginning, Englishmen, who knew that the power of Buddhists is the closest association of monks and devotees, contrived to break down it. Under these types of circumstances the Buddhists were helpless, poor and immensely weak. It was a threat to become member of Buddhist religious society and especially, to get the ordination as a Buddhist monk. Therefore, Pāli literature and Buddhism had a dark period. Without a sustainable social, economic and political background, it is hard to believe an enrichment of a good literature. However, after years the outstanding role of venerable Weliviṭṭa Saraṇāṅkara Thero who was born from Upcountry was exceedingly instrumental for the reestablishment of Sri Lankan Buddhist monastic life, Buddhist scriptural studies and Pāli literature. Remarkably, many people from Southern province helped his praiseworthy commitment such as Katuwane Disanayake, Sāli Ele Maṇiratana, Karathoṭa Dammārāma, Mihiripana Dhammaratana, Thomas Mohandiram etc. Then in 1842, Walane Siddhārtha Thero started a school for Buddhists (Dhammacethiya Pirivena at Rathmalāna). Consequently, Buddhists were able to restart to learn Sinhala, Pāli, Sanskrit, Buddhism, Buddhist culture, Science and Literature. In 1862, he started the first Buddhist newspaper 'Lakmiṇi Pahana'. Then they proceeded to start a new press for Buddhist called 'Lankopakara Press.' Buddhists continued their actions against the missionaries. 'Pañca-mahāvāda' took a great place on it. And also, many societies like Royal Asiatic Society, Pāli Text Society, Oriental Studies Society, Mahābodhi Society were thoroughly contributory for the renaissance of Pāli literature. Not only scholars in Sri Lanka but also foreigners facilitated for the development of Pāli literature. Rhys Davis, Robert Childers, Sir William Jones, Henri Steal Alcott are some of them. Significantly, they all made a strong foundation for Pāli literature in Modern Era. However, the modern Buddhist scholarship seems to pay a less interest to this explored aspect. Accordingly, the aim of this research paper is to examine how the renaissance of Pāli literature in modern era (after 19<sup>th</sup> century).

**Keywords:** *Colony, missionaries, societies, local scholars, foreign scholars*

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## **A Critical Study for Attitudes Towards Memory Among Buddhist Schools**

Ven. Suriyawewa Wijayawimala,<sup>1\*</sup> Ven. Yakkaduwe Sugunaseela<sup>1</sup>

After the passing away of the lord Buddha, a great number of philosophical causes and reasons were affected the emergence of different schools of Buddhism. Among those philosophical disputes, memory appeared as the center of an important dispute with special reference to individuals. Hence, Buddhist schools have to give a substantial solution to this inescapable question by protecting Buddhist identity. As a result of to the attempt to find a solution for this problem, many new concepts were introduced by the different schools of Buddhism. It is very interesting to note that distinguished scholars argue that to resolve the problem of memory and the problems of the mind, schools of Buddhism had to introduce new concepts. In relation to the above idea, 'pudgalavāda' was accepted by the sect of school of Pudgalavāda and 'existence of three times (traikalika asthitva)' was accepted by the Sarvāstivāda tradition. Here, they created the concept that 'all subject and object matters are existing'. The other sect who asserted that these conflicts originated because of the Abhidhamma tradition accepted only the Sutras as substantial and they were called as 'Sautrāntika.' They followed early Buddhism, represented by the concept of 'Bija' and affirmed the identity and authenticity of the existing being. The sect of Yogācāra has resolved this problem through 'Ālaya consciousness.' In this matter, the Theravada response has been identified as the concept of Cittavīthi and the concept of 'Bhavanga citta.' As such, many contradictory solutions have persisted among different schools of Buddhism. Therefore, this search examines the various perspectives of memory among schools of Buddhism and its practicality and substantiality through examples.

**Keywords:** *pudgalavāda, Sarvāstivāda, Sautrāntika, Yogācāra Theravāda*

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## **An analytical study of characteristics, which should be included in an ideal Online Hindi Learner's Dictionary**

R. N. Lansakara<sup>1\*</sup>

This paper will explore problematic areas of Online Hindi Learner's Dictionaries, which have been launched to assist online Hindi learners through advanced means and ways. Since the teacher is not always an option or a well-chosen dictionary, the dictionary has been played a vital role in language learning and teaching for decades. As we are engaging in the process of language learning and teaching with plenty of complex necessities, it is difficult to carry traditional paper dictionaries with us all the time. Thus electronic dictionaries, unlike traditional papers, have been opened-up interesting and advanced methodologies with regard to vocabulary acquisition. Online Hindi Learner's Dictionaries present distinct ways as well as developed new ways of defining words and providing introduction of words and phrases. Most of students, who learn Hindi as a foreign language, often have difficulties in finding the correct meaning for unfamiliar words or phrases in their dictionaries. So an effective Hindi Online Learner's Dictionary should be included these characteristics - to make it easier for learners to identify and recognize the words' meanings; the language described is the usual, everyday variety preference is given to the quality of the treatment of words rather than to the quantity of words particular care is taken in the treatment of the more frequent words; the provision of information on the Grammar of words; the learner's dictionary should supply information about the contexts and environments in which words tend to appear most regularly. They give an account of what is typical, rather than describing what is simply possible; pronunciation is indicated by means of the IPA (International Phonetic Alphabet); Pictorial representation of words; Culture and domain-specific words, inflected forms and discourse markers; requires knowledge of the conventional contexts and collocations surrounding a word. This paper makes an attempt to point-out the importance of using an Online Hindi learner's Dictionaries for foreign students. Moreover, it will also give a possible idea about developing an ideal model of Online Hindi Learner's Dictionary.

**Keywords:** *Hindi, Learning, Teaching, Online Dictionary, Vocabulary*

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**බී. එස්. බ්ලූම්ගේ අධ්‍යාපන අරමුණු වර්ගීකරණය සහ ස්ටැනිස්ලාවුස්කිගේ රූපණ විධික්‍රමයෙහි දක්නට ලැබෙන සාමාන්‍යතා පිළිබඳ විශ්ලේෂණාත්මක අධ්‍යයනයක්**

අසංක කෝදාගොඩ<sup>1\*</sup>

ඉගෙනුම් ඉගැන්වීම් ක්‍රියාවලිය තුළ ඕනෑ ම විෂයක් ඔස්සේ අත්පත් කර ගත යුතු සුවිශේෂ ඉගෙනුම් අරමුණු (Taxonomy of Educational Objectives) පිළිබඳ ගෙනහැර දක්වමින් බී. එස්. බ්ලූම් (1956), අධ්‍යාපනය නිසා කිසියම් පුද්ගලයකු ලබන වර්ධනය; ප්‍රජානන, ආවේදන සහ මනෝවාලක යන ක්ෂේත්‍ර ඔස්සේ දැනුම, ආකල්ප සහ කුසලතා වශයෙන් සමබර පෞරුෂයකට මග පෑදෙන බව නූතන අධ්‍යාපන අරමුණු යටතේ විග්‍රහ කොට ඇත. පුද්ගලයකු ලබන අධ්‍යාපනය සමතලීන වීමට නම් ප්‍රජානන, ආවේදන සහ මනෝවාලක යන අවස්ථා තුන ම පරිපූර්ණ විය යුතු අතර පුද්ගල පෞරුෂය සමතුලිත වන්නේ එසේ සිදු වුවහොත් පමණක් බව ද අවධාරණය කරයි. නළුවාගේ රංගන කාර්යයෙහි පරිසමාප්තිය කරා ළඟා කිරීමේ මඟක් වශයෙන් ස්ටැනිස්ලාවුස්කි ස්වකීය පර්යේෂණයේ දී සොයාගත් රූපණ විධික්‍රමයේ (Method Acting) බලපෑම රංග කලාව ඔස්සේ ලෝකය පුරා ශීඝ්‍රයෙන් ව්‍යාප්ත වන්නට විය. රූපණ විධික්‍රමයේ මූලිකාංග ඔස්සේ සාර්ථක නළුවකු බිහිවන ආකාරය පිළිබඳ ලවුස්කි තමාගේ පර්යේෂණ ඇස මෙහෙයවීය. ඒ අනුව බ්ලූම් හඳුන්වාදුන් ඉගෙනුම් අරමුණු සහ ස්ටැනිස්ලාවුස්කිගේ රූපණ විධික්‍රමයේ මූලිකාංගවල පවතින සාමාන්‍යතා විශ්ලේෂණාත්මකව හඳුනා ගැනීම මෙම අධ්‍යයනයේ ප්‍රධාන අරමුණ වේ. මෙය මූලාශ්‍රය අධ්‍යයනයක් වන අතර ඒ සඳහා ප්‍රාථමික සහ ද්විතීයික මූලාශ්‍රය භාවිත කරනු ලැබ ඇත. සමස්තයක් ලෙසට මෙම අධ්‍යයනයෙන් පසක් වූ එක් වැදගත් කරුණක් නම් ඉගෙනුම් ඉගැන්වීම් ක්‍රියාවලිය සඳහා අධ්‍යාපන කාරකයක් ලෙස රූපණය නමැති නාට්‍ය භාවිතාව වින්දනාත්මක අධ්‍යාපනයකට මග සලසන බවයි.

**ප්‍රමුඛ පද:** ඉගෙනුම් ඉගැන්වීම් ක්‍රියාවලිය , ප්‍රජානන ක්ෂේත්‍රය , ආවේදන ක්ෂේත්‍රය , මනෝවාලක ක්ෂේත්‍රය , රූපණ විධික්‍රමය

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව \*asankakodagoda@gmail.com

**උත්තර භාරතීය සංස්කෘතියේ විකාශයට රාමි සහ ක්‍රිෂ්ණ දේව සංකල්පයේ බලපෑම**

ආනන්ද අබේසුන්දර<sup>1\*</sup>

සාමාජයක පවත්නා ඇදහිලි හා විශ්වාසය සංස්කෘතියක් නිර්මාණය කිරීමට ලබාදෙන දායකත්වය සුළුපටු නොවේ. සංස්කෘතිය, භාෂාව සහ ඇදහිලි අතර ඇත්තේ නොබිඳෙන සම්බන්ධතාවකි. භාරතීය ඇදහිලි හා විශ්වාසයන් හි ක්‍රිෂ්ණ සහ රාමි, විෂ්ණු දෙවියන්ගේ දස අවතාර අතර කැපී පෙනෙන වර්ත දෙකක් සේ ම හින්දු ජනයා අතර ඉතා ප්‍රචලිත දෙව්වරුන් දෙදෙනෙකි. අතීතයේ සේ ම වර්තමානයේ ද හින්දු ජනයාගේ පුද පූජාවන්ට පාත්‍රවන ක්‍රිෂ්ණ වර්තය සහ රාමි වර්තය උත්තර භාරතයේ පමණක් සම්පූර්ණ භාරතීය සංස්කෘතියේ උද්භවයට හා විකාශයට පදනම් වූ බව භාරතීය සංස්කෘතිය පිළිබඳ අධ්‍යයනයේ දී දක්නට ලැබෙන කරුණකි.

මෙම සංකල්පයන් බැහැරව උත්තර භාරතීය සංස්කෘතියේ උද්භවය හා විකාශය පිළිබඳව සිතීම ද ඉතා අසීරු කාර්යයකි. රාමි . ක්‍රිෂ්ණ කථා පුවත් භාරතීය සංස්කෘතිකාංග වශයෙන් හැඳින්විය හැකි විභූ, නැටුම්, සංගීත, මූර්ති ආදී කලාවන් කෙරෙහි ද උත්සව, පූජා විධි, ආහාර.පාන විලාසිතා වැනි සංස්කෘතික ප්‍රවර්ග කෙරෙහි ද ඉඳුරා ම බලපෑම් කර ඇති බව පෙනී යයි. උත්තර භාරතීය සංස්කෘතියේ විකාශන කාර්යයට රාමි සහ ක්‍රිෂ්ණ දේව සංකල්පය දායක වී ඇත්තේ කෙසේදැයි විවිධ සංස්කෘතික අංගයන් යටතේ විමසා බැලීම මෙම පර්යේෂණයේ මූලික අරමුණ වේ.

**ප්‍රමුඛ පද:** ක්‍රිෂ්ණ: රාමි: ඇදහිලි: සංස්කෘතිය, කලාව, දේව සංකල්පය

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව \*anandaabe@kln.ac.lk

**උත්තර භාරතීය හින්දු ජන සමාජයේ සහ ලාංකේය බෞද්ධ ජන සමාජයේ පවතින ගෘහස්ථ චාරිත්‍ර පිළිබඳ තුලනාත්මක අධ්‍යයනයක්**

කාංචනා ද අල්විස්<sup>1\*</sup>

ලොව පවතින සෑම ජන සමාජයක් තුළ ම එම සමාජයට අනන්‍ය වූ ගෘහස්ථ චාරිත්‍ර විධි සමූදායක් දක්නට ලැබේ. ජන ජීවිතයේ විවිධ අවස්ථා හා සම්බන්ධ වන මෙම ගෘහස්ථ චාරිත්‍ර විධි මඟින් එම සමාජ පිළිබඳ තොරතුරු හෙළි කෙරේ. මිනිස් ජීවිතයේ විවිධ අවස්ථා හා විවිධ ක්‍රියාකාරකම් ඔස්සේ මෙම ගෘහස්ථ චාරිත්‍ර විධි බිහි වී ඇත. උත්තර භාරතීය හින්දු ජන සමාජය තුළ ඇත අතීතයේ පටන් ගෘහස්ථ චාරිත්‍ර විධි පැවත ආ අතර නූතනය වන විට එම චාරිත්‍ර විධි දහසයක් ප්‍රධාන වශයෙන් භාවිත වේ. දරුවකු පිළිසිඳ ගැනීමේ පටන් මරණය දක්වා ජීවිතයේ විවිධ අවස්ථාවන්හි දී මෙම ගෘහස්ථ චාරිත්‍ර විධි ජන සමාජය තුළ භාවිත වේ. ලාංකේය ජන සමාජය තුළ ද දරුවකු පිළිසිඳ ගැනීම, රංකිරි කට ගැම, නම් තැබීම, ඉඳුල් කට ගැම, කන් විදීම ආදී කොට ගෙන ගෘහස්ථ චාරිත්‍ර විධි දක්නට ලැබේ. මෙම අධ්‍යයනය මඟින් උත්තර භාරතීය හින්දු ජන සමාජය සහ ලාංකේය බෞද්ධ ජන සමාජයෙහි ගෘහස්ථ චාරිත්‍ර විධි අතර පවතින සාමාන්‍යත්වය සහ විවිධත්වය පිළිබඳ ව අධ්‍යයනය කෙරේ. එක ම ජීවන අවධියක ජන සමාජයෙන් ජන සමාජයට වෙනස් වූ ද සමාන වූ ද ගෘහස්ථ චාරිත්‍ර විධි මෙහි දී දක්නට ලැබේ. මෙම අධ්‍යයනය සඳහා සාහිත්‍යයික විමර්ශනයක් ප්‍රමුඛ කොට ගත් තුලනාත්මක විග්‍රහයක් පර්යේෂණ ක්‍රමවේදය වශයෙන් උපයෝගී කර ගැනෙයි.

**ප්‍රමුඛ පද :** ගෘහස්ථ චාරිත්‍ර, සාමාන්‍යත්වය, විවිධත්වය, බෞද්ධ, හින්දු

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**හින්දී සහ සිංහල නාමපාදයෙහි අන්තර්ගත 'සම්බන්ධ විභක්තිය'**

නීතා සුභාෂිණි සෙනවිරත්න<sup>1\*</sup>

වාග්විද්‍යා විෂයෙහි අන්තර්ගත විස්තෘත අධ්‍යයන ක්ෂේත්‍රයක් ලෙස වාක්‍ය විචාරය හැඳින්විය හැකි ය. වාක්‍ය විචාරාත්මක සිද්ධාන්තයන්ට අනුව කිසියම් වාක්‍යයක් රූපීය විග්‍රහයට ලක් කිරීමේ දී එය ප්‍රධාන වශයෙන් නාමපාදය සහ ක්‍රියා පාදය ලෙස ප්‍රධාන කොටස් දෙකකට විභේදනය කළ හැකි ය. නාමපාදයක් නිර්මාණය වනුයේ මූලික වශයෙන් නාමපදයක් මුල්කොට ගෙන ය. නාමපදය, ලිංග භේදය, වචන භේදය, නියත අනියත භේදය සහ විභක්ති භේදය ආදී විවිධ ව්‍යාකරණාංගවලින් සමන්විත වේ. මෙම පර්යේෂණය සඳහා හින්දී සහ සිංහල නාමපාදයේ අන්තර්ගත 'සම්බන්ධ විභක්තිය' පමණක් පදනම් වේ. හින්දී සහ සිංහල නාමපාදයේ අන්තර්ගත 'සම්බන්ධ විභක්තියෙහි' දක්නට ලැබෙන සමානතා සහ අසමානතා කවරේ ද යන්න හඳුනා ගනිමින් තුලනාත්මක අධ්‍යයනයක් සිදු කිරීම මෙම පර්යේෂණයේ මූලික අරමුණ වේ. නාමපාදය සම්බන්ධයෙන් මෙවන් තුලනාත්මක අධ්‍යයනයක් මෙතෙක් සිදු වී නොමැති හෙයින් මෙවන් පර්යේෂණ කාර්යයක් සිදු කිරීම කාලෝචිත යැයි හැඟේ. මෙම පර්යේෂණ කාර්යය සඳහා ගුණාත්මක ක්‍රමවේදය උපයෝගී කර ගනු ලැබේ. සිංහල භාෂාව හා සැසඳීමේ දී හින්දී භාෂාවේ 'සම්බන්ධ විභක්තියෙහි' විශේෂ ලක්ෂණ රාශියක් දක්නට ලැබෙන අතර, මෙම විශේෂ ලක්ෂණ හින්දී භාෂාව හදාරන සිංහල භාෂික ආධුනික විද්‍යාර්ථීන්ට ව්‍යාකරණමය ගැටලු උපදවන කරුණක් බවට පත්ව ඇත. මෙම ගැටලු පිළිබඳ නිවැරදි අවබෝධය භාෂාවේ ප්‍රාගුණ්‍යයට බෙහෙවින් ඉවහල් වේ.

**ප්‍රමුඛ පද:** නාමපාදය, ක්‍රියා පාදය, සම්බන්ධ විභක්තිය, වාක්‍ය විචාරය, වාක්‍ය විචාරාත්මක සිද්ධාන්ත

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## **A Comparative Study on the Sound Systems of Hindi and Sinhala Languages**

H.D. Hirimuthugoda<sup>1\*</sup>, W.U.P. Perera<sup>1</sup>

All languages in the world are mainly based on verbal sounds that are symbolized through letters. Thus, an interconnection between the sound system and the alphabet can be found in any language. According to the International Phonetic Alphabet, there are about hundred and seven verbal sounds which have been identified in all the languages worldwide. Each language uses a minimum of twenty-three to a maximum of sixty sounds. Therefore, when comparing the phonetics of two different languages, there can be sounds that are shared and different sounds that are unique to each language. Hindi and Sinhala are two languages that belong to the same language family, the Indo-European language family, with common roots derived from Sanskrit. There are both similarities and a considerable number of differences between the phonetics of the Hindi and Sinhala languages. This paper attempts to identify the similarities and differences of the sound systems of Hindi and Sinhala languages. The objective of this research is the creation of a platform of discussion to minimize the errors and mistakes by students who learn either Hindi or Sinhala as a foreign language. This research was done through literature reviews based on Hindi and Sinhala linguistics. It was identified that there are verbal sounds that are common to both languages and differences such as the employment of nasal vowels, two open-mid vowels, two velar fricative sounds and two retroflex flap sounds in Hindi which are not found in the Sinhala sound system. This study is important because it enhances the learning and teaching methodologies of Hindi as a foreign language in Sri Lanka while supporting the Hindi speakers who learn Sinhala as a foreign language.

**Keywords:** *sound system, phonetics, Hindi, Sinhala, language*

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## **The Decline in Sri Lankan Film Background Score Composing**

M. Tennakone<sup>1\*</sup>

The objective of this research is to identify the reasons for the poor quality of Sri Lankan Film Background scores. It is apparent that the 1970 s marked the golden era of the Sri Lankan Film Music industry, during which a high standard in Film background scores in Indian and Western Film Background score existed as well. Though the other regions were able to maintain their quality in background score in film making, With the current technological revolution in the music industry in Sri Lanka., background scores have considerably declined when compared with those of Hollywood and Bollywood Film. This decline recession would reduce audience attraction to Sinhala films that contributing to the general decline of the Sri Lankan film industry. Though many researchers have examined Sri Lankan film songs generally, none has examined the reasons for the poor quality of the background score. Thus, the present study examines the causes and effects of the decline in background scores in Sri Lankan cinema. The present study mainly applies literary and field survey methods. A survey of literature on global trends in the present film music industry and its high-tech applications. Face to face interviews and discussions with famous Sri Lankan music directors and composers, film directors, audio engineers, and spectators of different age groups will be conducted. The study will also include an analysis of music from selected international and local films. The study exposes the several factors affecting the present situation of film scores: allocated funds, technical knowledge, the sense of the sound of music, the lack of knowledge of the visuals and their time management that that a music composer should be familiar with. Therefore, the present study focuses on identifying the factors affecting the decline of Sri Lankan Film background score composing and the areas that could be developed in the Sri Lankan film music industry.

**Keywords:** *Film Background score, Composing, Recession, Global trends, Spectators.*

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## The Influence of Folk Poems on the Works of Amarasekara and Sekara

C. Perera<sup>1\*</sup>

Gunadasa Amarasekara and Mahagama Sekara were powerful poets during the decades of 1956 and 1960. Both these Sinhala poets have been influenced by various poetic traditions. Among these influences, folk songs hold a very special place in their poetry. “Amalbisu” is a text where Amarasekara was strongly influenced from the tradition of folk songs, while Sekara’s “Sakvalihini” reflects how far the poet was influenced by folk poetry. In this paper, I analyse “Amalbisu” and “Kinduru Kumarige Kathawa,” two poems that deal with the subject matter of a prince’s emotions, and show the impact of folk poetry on the two poets. Both these creations depict various poetic forms, character portrayals, and visions of life. Although both Amarasekara and Sekara were influenced by folk poems, the poetic concepts that they worked out were completely different from those of the folk poems. These poets draw on premodern socio-cultural backgrounds when writing these poems. Therefore, it is important to ascertain how Amarasekara and Sekara were influenced by folk poetry.

**Keywords:** *Folk poems, Gunadasa Amarasekara, Mahagama Sekara, Amalbisu, Kinduru Kathawa*

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**කතෝලික හා ක්‍රිස්තියානි ආගමික ග්‍රන්ථකරුවන් ආගම ප්‍රචාරණයෙහිලා සිංහල කටවහර භාවිතයට ගත් ආකාරය**

නිල් පුෂ්පකුමාර<sup>1\*</sup>

අනුරාධපුර යුගයේ සිට කෝට්ටේ යුගයේ අවසානය දක්වා වැඩිගෙන ආ සිංහල සාහිත්‍යය මුළුමනින් ම පාහේ බෞද්ධාගමික පරමාර්ථ වටා කේන්ද්‍රගතව පැවතුණි. එහෙයින් ආරම්භයේ සිට කෝට්ටේ යුගය අවසානය වන තුරු සිංහල සාහිත්‍යය බොහෝ සෙයින් ඒක කේන්ද්‍රීය විය. එසේ වුවද, සොළොස් වන සියවසෙහි සිදු වූ සමාජ, සංස්කෘතිකාදී විචල්‍යයන්හි ප්‍රතිඵල වශයෙන් එතෙක් විෂයය නොවූත්, ආගන්තුක වූත් ආගමික දෘෂ්ටියකට අනුරූපී අදහස් ප්‍රකාශ කිරීමට සිංහල භාෂාව යොදා ගනු පෙනේ. එම සියවසයෙහි සිදු වූ පෘතුගීසීන්ගේ ආගමනය හා ඔවුන්ගේ අනුයායින් වශයෙන් පැමිණි ලංදේසීන් ද විසින් ආරම්භ කරන ලද සිංහල කතෝලික හා ක්‍රිස්තියානි සාහිත්‍යයට උපයුක්ත කර ගත් භාෂාව එතෙක් පැවති සිංහල සාහිත්‍යයට පසුබිම් වූ සාමාජික හා සංස්කෘතික පසුතලයෙන් වෙනස් වූ අත්දැකීම් සම්භාරයක් ප්‍රකාශ කරනු වස් සිංහලය යොදාගත් මූලාවස්ථාව නියෝජනය කරයි. මෙම සාහිත්‍යයෙහි භාෂාව බොහෝ සෙයින් සිංහල කටවහර පදනම් කර ගත් බව පෙනෙයි. මෙම පර්යේෂණයෙන් අධ්‍යයනය කෙරෙන්නේ එම භාෂා ස්වරූපය පිළිබඳව ය. ඒ අනුව උක්ත කර්තෘවරුන් කටවහර යොදාගත් ආකාර, ඒ සඳහා බලපෑ සාධක හා එමගින් සිංහල භාෂාවට වූ බලපෑම ද අවධානයට ලක්වෙයි. තව ද මෙම අධ්‍යයනය ජුසේ වාස් (Joseph Vaz) හා ජාකෝමේ ගොන්සාල්වේස් (Jacome Goncalvez) යන පියතුමන්ලාගේ තෝරාගත් කෘති සහ බයිබල් පරිවර්තන සමාගම් විසින් 1813, 1817, 1846 යන වර්ෂවල ප්‍රකාශයට පත් කරන ලද බයිබල් පරිවර්තනවලට සීමා වෙයි. ඊට අමතරව ද්විතීයික මූලාශ්‍රය ද සුදුසු පරිදි උපයෝගී කර ගැනෙයි. උක්ත කෘති මත පදනම්ව කතෝලික හා ක්‍රිස්තියානි ආගමික ග්‍රන්ථකරුවන් ආගම ප්‍රචාරණය සඳහා සිංහල කටවහර භාවිත කළ අයුරු විධිමත් අධ්‍යයනයකට ලක් කිරීමට අපේක්ෂා කෙරෙයි.

**ප්‍රමුඛ පද :-** කතෝලික හා ක්‍රිස්තියානි ආගමික ග්‍රන්ථකරුවන්, ආගම, සිංහල කටවහර, බයිබල් පරිවර්තන

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## **A Method to Familiarize Students with The Grammatical Gender of Hindi Inanimate Nouns by Drawing On Parallels with The Grammatical Structure of Gender in The German Language**

R. N. Lansakara<sup>1\*</sup>

Hindi poses a challenge to beginners when it comes to the grammatical gender of non-living things (inanimate nouns) as, unlike English, Hindi has grammatical gender for them as well. Moreover, there are no articles before nouns which can provide students a hint of the gender of the object, unlike in some languages i.e. der (for masculine groups), die (for feminine groups), das (for neuter groups) in German language. The identification of the grammatical gender of nouns for non-living things must be learned by heart as they are needed for noun declension in the Hindi language. Most learners of Hindi are confused by this complex grammatical situation. In Hindi, the genitive case is usually created by using the following inflectional affixes: का /ka:/ (for the singular form of masculine nouns), के /ke:/ (for the plural form of masculine nouns), की /ki:/ (for plural and singular forms of feminine nouns) before nouns. As noted earlier, in the German language, nouns usually make their gender known by means of articles and adjectives in front of nouns. Thus, when teachers give a new word to a student for the very first time, s/he could use a pattern similar to the German. The article would familiarize the grammatical gender of inanimate Hindi nouns for Hindi learners, if the inflectional affixes mentioned above (का /ka:/, के /ke:/, की /ki:/), which indicate genitive cases, are used before inanimate nouns. For example: का नमक /ka: nəmək/ (salt), की हवा /ki: həwa:/(wind). As a matter of fact, it has been identified that the interest of beginners towards the Hindi language has begun to decrease gradually because the grammatical gender of non-living things (inanimate nouns), is quiet difficult to understand. Therefore, this study draws attention to how both students and teachers can address the problems associated with learning and teaching the grammatical gender of non-living things (inanimate nouns) in the Hindi Language.

**Keywords:** *Hindi, German, Grammatical gender, Inanimate nouns, Genitive case*

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## **An Innovative Technique to Encourage Speech in A Second Language Class**

D. Suwandaratna<sup>1\*</sup>

Most of the tertiary level students joining English as a Second Language (ESL) classes expect to gain speaking ability. Yet, despite the encouragement provided to them to achieve this objective, they remain silent in class. Teachers, very often, misinterpret this silence as a manifestation of the students' indifference towards speech and focus attention on reading and writing at the expense of speech. Although this approach improves the student's proficiency in reading and writing it lets them down at interviews, limiting their chances of employment. Because career-related interviews are crucial matter to students, language teachers are responsible for equipping them by training them in speech. This presentation describes a technique used in class to overcome that problem.

A questionnaire administered to the students revealed that the inability to recall grammar quickly for speech is a major problem students face with regard to speech. Ignorance of the functions of grammar too was an item they prioritized as a drawback. To overcome these problems, basic grammar patterns were transformed into symbols first. Subsequently they were replaced with self explanatory, simple gestures and used as additional material in class. The simplicity of gestures helped students recall as well as repeat those easily. Their self-explanatory character helped them understand the salient features specific to different grammar patterns too. Discourse markers, relative pronouns and other deviant forms of T.L. too were taught using the same technique. These gestures were recalled at irregular intervals throughout the whole course of study in order to help them use those spontaneously. The Technique helped students to overcome the problems identified through the needs analysis.

**Keywords:** *gestures, language teaching, retentive power*

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## **“Autocratic Patriarchs and Subversive Angels”: An Analysis of the Father-Daughter Relationship in Selected Shakespearean Plays**

G. Jayawardane<sup>1\*</sup>

Shakespearean plays, though varied on the basis of genre, thematic concerns and theatrical elements, generally dramatize familial relationships. One of the richest familial relationships dramatized among Shakespeare's plays is the depiction of the father-daughter relationship. The seeming tensions that emerge from the subversive means used by Shakespearean daughters through which they appear to challenge the “conventional” patriarchal body invariably receive the attention of the reader and the audience. In most plays, Shakespeare destines the father-daughter bond to collapse where both parties ultimately fail in unification as “fathers and daughters”. Most of the father figures in the plays appear to be authoritarians who tend to regulate and confine the children, daughters in particular, to “conventional” ideological formations. On the contrary, most of the Shakespearean daughters, except for a few, are positioned as autonomous, rebellious figures who tend to challenge the norms that govern patriarchy. In fact, the fathers' insistence and doggedness in upholding the conformist values of the Renaissance and Medieval society and the daughters' challenging behaviours and their transgressive desires to challenge the strict structures of hegemonic patriarchy bring forth the central conflict in most father-daughter relationships in Shakespearean plays such as *A Midsummer Night's Dream*, *Merchant of Venice*, *King Lear*, and *Othello*. Hence, this paper focuses on several father-daughter relationships such as “Jessica- Shylock”, “Goneril-Lear and Regan- Lear”, “Hermia- Egeus” and “Desdemona- Brabantio” that tend to challenge the “conventional” parental model. Thus the aim of this paper is to reflect on how the revolutionary and the challenging behaviours of the young daughters of the selected Shakespearean plays ruin the “expectations” of the father figures; how their subversive means and non-conformity appear to challenge and question the “masculinity” of both the nurturing father as well as the domineering and hegemonic father who symbolizes the state.

**Keywords:** *Conformity, Hegemony, Patriarchy, Subversion, Transgression.*

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## **An Analysis of Postcolonial Gender Constructions in Three Selected Texts**

T. Amarasooriya<sup>1\*</sup>

The paper focuses on the ways in which gender is constructed in selected postcolonial literary texts: *The Quilt*, *Ten Rupees*, and *Mozelle*. Gender construction is distinctive in some postcolonial texts. Colonial rule caused many social changes. In the postcolonial context, women were exposed to new opportunities mainly due to globalization. This exposure led women to resist and question their subaltern status. The study tries to explain the deviations from stereotypical gender roles in the postcolonial context. *The Quilt* by Ismat Chughtai highlights the oppression and negligence of female sexuality and desire. The narrative depicts how Begum suffers due to her subaltern status in marriage. Her frustration and sense of loneliness ultimately lead to an alternative relationship which gives her sexual pleasure. The narrative shows how a female character is empowered and given agency in a postcolonial literary text. *Ten Rupees* by Manto is the story of a girl called Sarita. In describing Sarita's character, Manto emphasizes her innocence and delicacy. Manto's description of Sarita tends to break away from stereotypical imagery of sex-workers and the reader shares Sarita's joy. Hence, Sarita is portrayed in a positive way. Manto moves away from the traditional descriptions of a prostitute. He creates a new character who is full of dreams, fantasies, and wishes. It shows that gender construction in this text is different and it takes a new direction. *Mozelle* by Manto is woven around the relationship of a Jewish woman and a Sikh man. *Mozelle* is a Jewish woman living in Bombay. Trilochan, who is a Sikh, wants to marry her. *Mozelle* is portrayed as a very forward woman. Towards the end of the story *Mozelle* is portrayed as a "heroine", because she rescues a Sikh woman and dies naked. The narrative is also used as evidence to show the diversity in postcolonial gender constructions. In the above postcolonial texts, gender, racial and caste boundaries, which were prominent in traditional society are discussed in a subtle way through operative characters. Hence, the purpose of the study is to show how the postcolonial gender constructions in some texts move away from traditional and stereotypical gender constructions.

**Keywords:** *gender, subaltern, female sexuality, oppression, prostitution, agency*

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## **Subversive Others; Sexuality, Ethnicity, And Violence in Five Sri Lankan Novels in English**

N. Ambahelagedara<sup>1\*</sup>

(Hetero)Sexuality seems to play a highly important role in Sri Lankan society, but it is a topic that is deliberately avoided in discussions that take place within “polite circles”. It is for the most part invisible or made to be seen as non-existent by a “norm-governed” society, which considers heterosexuality to be the “ideal” form of sexuality. In terms of ethnicity, again the impact of the ideologies of the dominant ethnic groups on other ethnicities of the country is substantial. In the process of taking measures to make Sri Lanka an essentially “Sinhala-Buddhist” country, other ethnic groups have been pushed to the margins. Today, these “ethnic and sexual others” are engaged in a constant battle of searching for an accepted identity within Sri Lanka. Some of the Sri Lankan writers in English have endeavoured to form a space within their work in order to express the “undiscussed” theme of sexuality, including those sexualities that are considered “heretical”. *The Moon in the Water* by Ameena Hussein, *Giraya* by Punyakante Wijenaikē, *Funny Boy* by Shyam Selvadurai, *The Jam Fruit Tree* by Carl Muller, and *Servants: A Cycle* by Rajiva Wijesinha, which provide the basis for this study, are some of the Sri Lankan English novels that foreground “invisible spaces” such as sexuality. However, they are not confined to the theme of sexuality but illuminate the themes of ethnicity and violence as well. The boldness and honesty with which the authors address these issues on gender and sexuality have decidedly created a sense of awareness among the readership, as they attempt to create a space for those who are in the periphery, while providing an insight into the possible outcomes the “subversive other” would be subjected to. Hence, the objective of this study is to examine the ways in which such forms of violence are created, to show how these selected novels address the issues of sexuality, ethnicity, and violence and how transgressive sexualities and ethnic minorities threaten normative society and the status quo of the dominant groups.

**Keywords:** *Ethnicity, Other, Sexuality, Subversive, Violence*

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**කොහොඹා යක් කංකාරියෙහි හත්පද නර්තනය පිළිබඳ අධ්‍යයනයක්**

අසංක ජයරත්න<sup>1\*</sup>

කොහොඹා යක් කංකාරියට අයත් හත්පද නර්තනයෙහි පූජාර්ථය, වර්තමාන නර්තන අධ්‍යාපනය තුළින් ගිලිහී යාමට තුඩු දෙන කරුණු ගවේෂණය කිරීම මෙම පර්යේෂණ පත්‍රිකාවෙහි අරමුණු වේ. 'හත්පදය' කොහොඹා යක් කංකාරියෙහි ආකාර රෝග දෝෂ නිවාරණය හා සශ්‍රීකත්වය අරමුණු කරගත් ශාස්ත්‍රීය නර්තනාංගයකි. පූජා භාණ්ඩ හතක් දෙවියන්ට කැප කිරීම සඳහා කෙරෙන ගායනා රහිත ඒකල නර්තනාංගයක් වශයෙන් මෙය හැඳින්විය හැකි ය. එසේ වුවද වර්තමාන අධ්‍යාපන ප්‍රවණතාවන්හි ප්‍රතිඵලයක් ලෙස මෙකී හත්පදයෙහි ඇති ශාස්ත්‍රීය හර පද්ධතීන් අනිසි ලෙස බැහැර කොට හුදු නැටුමක් බවට පත් කොට ඇත. මෙයට ප්‍රධාන හේතුව වූයේ උඩරට සාම්ප්‍රදායික ගුරුකුල නර්තනය පිළිබඳ තුලනාත්මක ගවේෂණයක් නොමැති වීම හා එහි ආකෘතිය පිළිබඳ නිසියාකාර අධ්‍යයනයක් සිදු නොකිරීමයි. මෙහි ප්‍රතිඵලයක් ලෙස 'හත්පද' පිළිබඳ ලබා දී ඇති වැරදි අර්ථකථන මෙන් ම නර්තන අංගභාර, භාව, තාල හා බෙර පදවල ද අවභාවිතයක් දැකිය හැකි ය. එබැවින් මෙම පර්යේෂණ පත්‍රිකාව වැදගත් වන්නේ උඩරට සාම්ප්‍රදායික ලක්ෂණ සංරක්ෂණය කොටගත් නිවැරදි හත්පද ආකෘතියක් ස්ථාපිත කිරීමට හැකියාව ලැබෙන බැවිනි. මෙම අධ්‍යයනය සඳහා දත්ත රැස් කිරීමේ නියැදි වශයෙන් සාහිත්‍ය මූලාශ්‍ර මෙන්ම කංකාරි අත් පිටපත්, ක්ෂේත්‍ර අධ්‍යයන, සම්මුඛ සාකච්ඡා හා පර්යේෂකයාගේ අත්දැකීම් ද උපයෝගී කරගැනීමට අපේක්ෂිත ය. මෙකී පර්යේෂණ දත්ත අනුසාරයෙන් කොහොඹා යක් කංකාරියේදී උපයුක්ත හත්පදයෙහි ශාස්ත්‍රානුකූල ලක්ෂණ මෙන් ම නිවැරදි අංගභාර, භාව, තාල, බෙරපද මෙන් ම අභිප්‍රේතාර්ථ ද මැනැවින් සංරක්ෂණය කිරීමට හැකියාව ලැබෙනු ඇත.

**ප්‍රමුඛ පද:** කොහොඹා යක් කංකාරියල හත්පදය, පූජාර්ථය, අංගභාර, ගුරුකුල

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## **The Application and Practice of Group Activities in The Class of Oral Chinese Language Teaching**

BO YU<sup>1\*</sup>

In Second Language Teaching, skills training is generally divided into the five aspects of listening, speaking, reading, writing and translation. From the perspective of language communication, oral skills training is particularly important. However, the traditional oral teaching mode and teaching methods are not really different from other classes. The main problem of the traditional oral class is that the sentence practice is boring, the interaction between teachers and students is low, and the students' speaking rate is not good. Moreover, it is difficult for the students to get out of the frame of the textbook form in practical communication, and they cannot adapt to the flexibility and creativity of the language. In recent years, group activities are used as a teaching method by many languages. Compared with other forms of classroom teaching, group activities have many advantages. They will increase the degree of communicative training, improve the interaction between teachers and students and reduce the anxiety of students. At the same time, group activities can also improve the speech opening rate of students and stimulate students' learning motivation.

At present, the use of group activities in the oral Chinese class is common, and group activities are considered to be an effective class teaching method with high interactivity. Group activities, including the role of reading and reciting the role of sub-text, role-playing, group games, topic discussions, improve language proficiency. There are debates, interviews, surveys, and live simulations, which are closer to real life situations. Students in group activities have shown a great deal of enthusiasm, and tension has been eased. The new language knowledge and communication functions of the activity have been clearly established. This study focuses on the design, implementation, evaluation and feedback of group activities from the perspective of a large number of oral classroom observations. The author further analyzes several factors that affect the success or failure of group activities and provides some reference-point for the teaching method of using group activities for oral Chinese teachers.

**Keywords:** *Group activities; Chinese Oral Class; Communicative ability*

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## **Pluralistic Teachings on Polity in Buddhism and The Manusmṛuti with Special Reference to The Yassaṃdisaṃ-Sutta of The Aṅguttara-Nikāya**

V. Kumara<sup>1\*</sup>

Though the Pali canonical literature stands for tolerance towards the Brahmanism, pluralistic teachings are infrequent. However, the Yassaṃdisaṃ-sutta of the *Aṅguttara-Nikāya* (AN) describes five basic qualifications that a great King should possess. They are brief; well-born on both parental sides, wealthy, powerful by fourfold army, possesses a wise chaplain and glory. Particularly, the first qualification among them is atypical to Buddhism because it contradicts the teachings of the *Vaseṭṭha-sutta* (MN), which teaches that a being does not become a Brahmin or a pariah by birth. Nevertheless, the Yassaṃdisaṃ-sutta of the AN reveals that the King should gain his first qualification by birth. The point to be addressed here is why this Sutta admitted this first qualification while Buddhism heavily criticized the caste system introduced by Brahmanas. Though the *Manusmṛuti* does not prescribe the all the qualities spelled out in the the *Yassamdisam-sutta* in the same place, the five qualities found in the aforementioned Sutta throughout the 7th chapter of the text can be found in the *Manusmṛuti* as well. In this regard, my hypothesis is that Buddhist teachings on polity is pluralistic, like Brahmanism, since the polity is more of a worldly practice than a spiritual practice. The Buddha may have referred to the practicability of polity in Indian social-culture. This paper examines the reason for enclosing pluralistic Brahmanic teachings in the Pali Sutta and the significance of the political theories presented in the *Manusmṛuti*. The comparative method will be employed throughout the research.

**Keywords:** *Polity, Buddhism, Manusmṛuti*

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## **The Impact of Hinglish in Indian Commercial Advertisements on Standard Hindi in Indian Society**

A. N. Salwathura<sup>1\*</sup>

Hindi is the official language of India which is spoken by about 350 million people in Indian society. Hindi and English have had a reciprocal relationship ever since India become colonized. Since colonialism, Hindi started to mix with English and become famous as 'Hinglish' in Indian society. The 'British-Raj' is considered to be the first Hinglish word which was used during the colonial period, and now Hinglish is commonly practiced in Indian commercial advertisements. Hinglish is considered as the most appropriate language in the marketing and advertising fields in India. It is clear that Hinglish is gaining a wide success not only in the field of advertisements but also in media, entertainment and politics etc. This paper examines the impact of using Hinglish in TV commercials on Standard Hindi Indian society. Indian commercial advertisements have been utilized as primary sources and magazine and journal articles have been used as secondary resources. This paper argues that Hinglish has acquired a mass demand in Indian commercials and now it is hard to eliminate this trend which has deeply affected India's day-to-day communication. This paper also emphasizes that the wide use of Hinglish in commercial advertisements have become a huge challenge to Standard Hindi in Indian society.

*Keywords: Hindi, English, Hinglish, commercial advertiesments, Indian society*

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## **A Study of an Easy Method to Learn Tamil as A Second Language**

B. Indajoti <sup>1\*</sup>, U. Dhammawimala<sup>1</sup>

The Dravidian language family and the present languages belonging to this family have a long history. Tamil has a distinctive place among the widely spread languages in the world, and it this special place is evidenced by the way Tamil is among the most frequently used thirty languages around the world. The prevailing state of Tamil language and its use in our country is praiseworthy. The spirit and the necessity of language research have accelerated from the national level to the ground level as never before. Therefore, many try to learn Tamil as a second language despite age differences. This interest could also become the basis for national peace. The grammar should be simple in order to comprehend the language easily when studying Tamil as a second language. It is important to have a clear idea of infinitive verbs as it has a major role in all parts of of grammar. The verbs are categorized as Strong verbs and Weak verbs in some books. But according to our point of view, this categorization is difficult for students who learn Tamil as a second language. Therefore, this research is an effort to categorize verbs to make it easy to comprehend for students.

**Keywords:** *Tamil language, second language, students, infinitive, verbs*

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## **The Embodiment of Tārā in Prajñāpāramitā: A Way of Artistic Representation**

P. Narangoda<sup>1\*</sup>

The principal characteristic of Mahayana Buddhism is the invocation of female Buddhas. . Prajñāpāramitā is the predominant deity who is the essence and the physical embodiment of perfect wisdom. She is also considered the "Mother of all Buddhas and the sentient beings" due to her limitless powers to heal the living beings. On the other hand, Tārā, the consort or the Shakti of the Bodhisattva Avalokiteśvara also encompasses the same epithet in that she is believed to be the protector of all living beings, especially when they are in a difficult situation. In the South and East Asian Buddhist practice, both deities also have a well-established reputation as the perfect essence of compassion and are, hence, depicted through a variety of icons to which the devotees pay their respect. This particular understanding is sometimes confusing due to the fact that the ordinary people idealize Prajñāpāramitā and Tārā as synonyms for one female deity: either Prajñāpāramitā or Tārā. The notion has also been portrayed in the respective icons where both deities are represented through similar icons. The researcher of the present study therefore proposes to examine the relevant literature, canonical understanding and the descriptions given in silpa texts etc., that have made a significant impact in terms of their similarity in appearance through the medium of icons. The sutra literature pertaining to the two deities and other secondary sources along with the silpa texts have been discussed as the primary sources of this study. Research was also carried out using the icons selected from various locations: China, Japan, and Korea representing Prajñāpāramitā and Tārā, particularly in the context of Mahayana Buddhist practice. The icons selected from Sri Lanka will also be taken as samples to examine how this concept has evolved in the Southern Buddhist practice. The study revealed that the important characteristics of the two feminine aspects in East Asian Buddhism of her limitless powers have two derivations: whereas Prajñāpāramitā depicts her abilities as the embodiment of wisdom, which is the central aspect of the Buddhist doctrine, Tārā embodies similar powers due to her partner, Bodhisattva Avalokiteśvara who has the boundless skill to heal living beings. The particular incorporation has, therefore, provided an acceptable foundation for ordinary people to bestow them with similar epithets, and to represent them through similar icons.

**Keywords:** *Tārā, Prajñāpāramitā, Mahayana Buddhism, sutra literature, Avalokiteśvara*

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## **A Study of the Development of Feng-Shui Art in Sri Lankan Culture**

N. Basnayaka<sup>1\*</sup>

Feng-Shui art is a ritual that is practiced worldwide at present. This Feng-Shui art is included part of Chinese culture. Feng is wind and shui is water in Chinese culture. There are two concepts namely 'Yin and Yang' and 'Pancha Maha Dhathu' included in Feng-Shui which was established three thousand years ago. Meanwhile, Sri Lankans have focused their own kind of attention in Feng-Shui art. The main objective of this research is to review the areas of Feng-Shui art that can be identified in Sri Lanka. Here, the main research problem was to examine the feng-shui elements which have impacted to Sri Lankan culture. The main research method was drawing sources from books and periodicals.

In addition, information was collected through the Internet and interviews with specialists in this field. Symbols and other related objects were observed directly. Many Feng-Shui symbols were found in Sri Lankan culture: The Laughing Buddha, Golden Frog, Rings, Dragon tortoise, Paddy pot, Sandriyana plant and Salt container. Various animal symbols represent the different directions in Feng-Shui art. For example, North-rat, South-horse, West-fowl, East-rabbit. The purpose of using these symbols for Sri Lankans is having healthy lives, gaining wealth, gaining employment etc. As such, this study argues that many elements of Feng-Shui art are in operation in Sri Lankan culture.

***Keywords:*** *Feng, Shui, Laughing Buddha, culture, Rituals*

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## **Learners' Beliefs About English Language Learning in The Context of Vocational Education**

S. M. A. Priyadarshanie<sup>1\*</sup>

Human beings possess preconceived notions or beliefs on various issues and they can influence their comprehension or reactions towards new information. Simultaneously, learners of any language too develop their own assumptions about the nature of language learning and teaching. With the transition from teacher-centered learning to student-centered learning, the learner is considered to be an active participant in the teaching learning process. Thus, it has been revealed that learners' beliefs play a significant role in second / foreign language learning. Hence, the experiments on learners' beliefs are considered to be essential as successful learners develop insightful beliefs that facilitate their language learning processes and the use of effective learning strategies. On the other hand, learners' beliefs are essential in planning and implementing effective language instructions too. This study aims at investigating whether learner beliefs in learning English is an influential factor in teaching English as a second language (TESL). The group of respondents are those who follow Travel and Tour Management at the University college of Kuliyapitiya which offers national diplomas at National Vocational Qualification (NVQ) level 5 on vocational training courses. A mixed research approach of quantitative and qualitative methods was utilized to collect data in the study. Accordingly, the learners' beliefs were identified through questionnaires and interviews adapted from BALLI (Beliefs About Language Learning inventory) framework which was developed by Horwitz (1985). Qualitative and quantitative data have been analyzed according to four categories in this study. They are; Foreign language aptitude, nature of language learning, learning and communication strategies and motivation and expectations. The first category of 'foreign language aptitude' means the general existence of special ability for learning language. The second category of 'The nature of language learning' includes assumptions and perceptions about the important perspectives of learning English. The third category of 'learning and communication strategies' depicts learners' practices of learning English language. The fourth category of 'motivations and expectations' concerns the desires and aspirations that learners intend to get fulfilled through learning English. According to the findings of the study, the learners' beliefs not only reflect their perceptions on language learning but also inform about the strategies that can be adopted to improve the quality of TESL at tertiary level.

**Keywords:** *Learner beliefs, English language learning, BALLI, TESL, Learning strategies*

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## **An Examination of the Holistic Development of Adolescence and the Creative Process in Dance Education**

W. Vitharana<sup>1\*</sup>

The psychologist Jean Piaget called the cognitive development changes during adolescence the formal operations stage, during which adolescents become adept at mentally manipulating the world around them and systematically manipulating variables during scientific experimentation. Adolescence is also a time for rapid psychological development. There are certain characteristics of adolescence holistic development that are more deep-seated in culture than in human biology or psychological structures. Learning has been defined as the "symbolic and behavioral heritage received from the past that provides a community framework for what is valued". Precept is learned and socially shared, and it affects all aspects of an individual's life. Social responsibilities, sexual expression, and belief system development, for instance, are all things that are likely to vary by evolution. Combinations of behavioral studies have demonstrated that the development of executive functions, i.e. cognitive, affective and psychomotor skills, that enable the control and coordination of thoughts and behavior are generally associated with the preferential.

The purpose of this study is to examine the psychological foundation of adolescence within the creative process in dance and to examine how the creation of dance affects holistic development in Adolescence. The Method of study is qualitative and the data analysis is based on content analysis. Dance educators may find this information useful to design dance curriculum. The growing body of knowledge on dance and learning may help educators to find effective ways in which dance can facilitate learning during adolescence. This study contributes to our understanding of how learning takes place through movement-creation, and provides evidence that helps dance educators to be advocates for the integration of Sri Lankan art forms into the secondary school curriculum. While it is likely that dance has many links with learning in traditional academic settings, this focus has practical benefits because public education, in general, privileges adolescence development.

**Keywords:** *adolescence, psychological, holistic development, Dance, curriculum*

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## **Dance for Social Cohesion and Development**

W. Vitharana<sup>1\*</sup>

Dance education is the transferring of dance performance skills and knowledge of dance to students through teaching and training, or acquiring such knowledge and skills through research. The art of dance uses different ways to explore the meaning of human experience. It is far more than exercise or play. It is a powerful medium to express one's values, thoughts, and aspirations about the lives we live and the world in which we live. It is a perfect combination of physical activity, social interaction, and mental stimulation. Dancing enhances personal life in many ways: health, confidence, self-expression, social contact, relaxation, and fun.

As Sri Lanka experiments with new forms of education and a better future after an extended period of conflict, which had divisions within the country at its roots, a return of normalcy and a lasting state of peace can only be brought about through getting our communities to understand and embrace each other. Dance education can play a key role and entrust the youth of this country with the responsibility for achieving peace. The modern era requires people who are highly competent and youth who can be employed anywhere in the country and can communicate and exchange ideas wherever they may be. If the dream of making every student trilingual is realized, there will be no inequality or barriers within society and it will enhance the trust among communities as it demonstrates each other's willingness to bring about a change for long-lasting social cohesion. Dance processes require students to use critical thinking skills, excel in nonverbal reasoning and communication, exchange ideas, work cooperatively and collaboratively with others, and interact within a multicultural society. More comprehensively, education in the art of dance develops kinesthetic and spatial learning as well as intra and interpersonal knowledge of self and others.

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**ජයශංකර් ප්‍රසාද්ගේ 'කාමායනී' මහා කාව්‍යයෙන් පිළිඹිබුවන බෞද්ධ ආගමික සංකල්ප.**

අවලා කාරියකරවණ<sup>1\*</sup>

ජයශංකර් ප්‍රසාද් හින්දී සාහිත්‍යයේ ඡායාවාදී යුගයේ ප්‍රධාන සාහිත්‍යධරයන්ගෙන් එක් අයකු ලෙස හැඳින්විය හැක. ප්‍රසාද් හින්දී සාහිත්‍යයේ සෑම අංගයක්ම පෝෂණය කරමින් හින්දී සාහිත්‍යයට කළ සේවාව අද්විතීය වේ. ඔහුගේ රචනාවන් අතුරින් 'කාමායනී' මහාකාව්‍යයට හිමිවන්නේ ප්‍රමුඛ ස්ථානයකි. 'කාමායනී' මහාකාව්‍යයට බුදුදහමේ බලපෑම ලැබී ඇති බව පැහැදිලි කරුණකි. සමාජයෙන් මිනිස්කම පිරිහී යන විට සමාජ ව්‍යුහය තුළ ඇති වන ව්‍යසනයන් පිටුදැක යහපත් සමාජයක් ගොඩ නගා ගැනීමට අවශ්‍ය පසුබිම සකස් කිරීම බුදුදහමෙන් සිදුවන කර්තව්‍යයකි. එමෙන්ම ශීඝ්‍රයෙන් පිරිහී යන මානුෂික ධර්මතා ප්‍රතිස්ථාපනය කොට මිනිසා සැබෑ මිනිසකු බවට පත්කිරීමද බුදුදහමින් අපේක්ෂිත තවත් අරමුණකි. එවන්වූ අරමුණු 'කාමායනී' මහාකාව්‍යයෙන්ද විද්‍යමානවේ.

**ප්‍රමුඛ පද:** කාමායනී, මහාකාව්‍යය, හින්දී සාහිත්‍යය, ඡායාවාදය, මානුෂික ධර්මතා

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## **The Impact of Colonialism on Traditional Sri Lankan Temple Painting: A Case-Study Based on the Southern Coastal Region**

C. D. Peduruhewa<sup>1\*</sup>

The aim of the present study is to identify the characteristic features and elements which signify the Western/European influence on the local mural painting tradition of Southern temples. The so-called developments that occurred in Sri Lanka's social, political, economic, and cultural spheres during the 18<sup>th</sup> and 19<sup>th</sup> centuries were marked significantly by the inculturation of western elements into those in Sri Lankan maritime life. Such elements inevitably merged with the temple painting tradition in the low-country maritime regions, despite the fact that their roots are found in the central Kandyan style simultaneously. The encounter with colonialism is described as a watershed in Sri Lankan history as well as in the tradition of temple paintings. The rationale behind the particular derivatives is the use of Western elements in the temple paintings without a meaning or a proper context. Evidently, the building elements, garments, trees, and various other elements in the paintings are highly decorative and the backgrounds of the paintings often depict Western decorative motifs i.e. roses, grapes catena and design elements influenced by the Rococo style of western art tradition instead of their root characteristics absorbed from the Central Kandyan designs and motifs. European attires, architectural elements and furniture are not rare in the temple paintings of the southern coastal belt. The compositional techniques, treatment of the human postures, and the color palette of the Southern school of painters also have distinctive characteristics which differ from the Central Kandyan style. An in-depth study of these characteristics makes it clear that the so-called socio-political factors i.e. the destruction of temples in the maritime region, the amplification of catholic campaigns, cessation of the Sinhala Kandyan kingdom etc., have affected the Buddhist monastic life in the Southern coastal region as well. A detailed survey of the literature pertaining to the period was conducted to reveal the factors affecting the Western influence on the Southern maritime region. This study examines the paintings of selected temples of the region in order to identify the characteristic elements of the painting tradition that evolved in and around the region, which identified them as the "Southern painting style" by scholars. This study is based on qualitative research Methods.

**Keywords:** *temple paintings of Sri Lanka, southern style, western influence, Kandyan painting*

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# Medical Sciences

## **Comparison of Risk Factors for Stroke Subtypes versus Acute Coronary Syndrome: A Population-Based Study**

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Stroke and acute coronary syndromes (ACS) share risk factors, but population-based data on differential associations with stroke subtype and ACS are limited. We studied pre-morbid risk factors in stroke subtypes and acute coronary syndrome.

We studied all first-ever TIA/strokes and ACS from 2002-2012 in a population-based cohort (Oxford Vascular Study). Risk associations were compared by logistic regression, adjusted for age and sex, for hypertension, diabetes mellitus, hyperlipidaemia, atrial fibrillation, current smoking and over-weight (BMI > 25).

1913 TIA/ischaemic strokes (mean age 71.6 years, women 53.9%), 112 intracerebral haemorrhages (ICH) (mean age 71.0 years, 51.8% women) and 1191 ACS (mean age 71.35 years, 35.4% women) were studied. Compared to ACS, hypertension (adjusted OR=1.34, 95%CI=1.15-1.56,  $p < 0.001$ ), hyperlipidaemia (1.27, 1.07-1.50,  $p=0.006$ ) and atrial fibrillation (1.40, 1.12-1.76,  $p=0.004$ ) were more strongly associated with TIA/ischemic stroke than with ACS. However, diabetes mellitus (0.71, 0.57-0.88,  $p=0.002$ ), current smoking (0.62, 0.51-0.75,  $p < 0.001$ ) and over-weight (0.78, 0.65-0.93,  $p=0.007$ ) were negatively associated with TIA/ischemic stroke compared with ACS. For ICH, hypertension (1.85, 1.22-2.81,  $p=0.004$ ) was more strongly associated than with ACS, whereas hyperlipidaemia (0.56, 0.32-0.97,  $p=0.039$ ), current smoking (0.40, 0.21-0.74,  $p=0.004$ ) and over-weight (0.64, 0.42-0.99,  $p=0.045$ ) were negatively associated. When ICH was compared with TIA/ischemic stroke, the negative associations with hyperlipidaemia (0.43, 0.25-0.74,  $p=0.002$ ) remained. Results were unchanged after exclusion of TIA.

Diabetes mellitus, current smoking and obesity are more strongly associated with ACS than with stroke, whereas hypertension is a stronger risk factor for ischaemic and haemorrhagic stroke. Hyperlipidaemia is negatively associated with ICH.

**Keywords:** *Brain-Heart Interactions*

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## Envenoming Snakebite Risk Map for Sri Lanka

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Emanuele Giorgi<sup>4</sup>, Peter Diggle<sup>5</sup>, David Lalloo<sup>6</sup>, Janaka de Silva<sup>1</sup>

Snakebite is a neglected tropical disease. Hospital based statistics often underestimate snakebite incidence because a significant proportion of victims seek traditional treatments. Since geospatial risk assessments of snakebite envenoming are rare, health care resources are distributed based on administrative boundaries rather than on a need analysis.

The aim of the study was to develop a snakebite envenoming risk map for Sri Lanka. Epidemiological data was obtained from a community-based island-wide survey. The sample was distributed equally among the nine provinces. 165,665 participants living in 1118 Grama Niladhari divisions were surveyed. Model-based geostatistics was used to determine the geographical distribution of envenoming bite incidence. The Monte Carlo maximum likelihood method was used to obtain parameter estimates and plug-in spatial predictions of risk. A predictive model was developed with natural and social environmental variables to construct an estimated envenoming bite incidence map and a probability contour map (PCM) to demonstrate the spatial variation in the predictive probability that local incidence does or does not exceed national envenoming snakebite incidence (i.e. 151 per 100,000).

Envenoming bite incidence had a positive association with elevation up to 195 meters above sea level, with incidence dropping at higher elevations. The incidence of envenoming was higher in the dry zone compared to intermediate and wet climatic zones and decreased with increasing population density. Developed risk maps showed substantial within-country spatial variation in envenoming bites. Conclusion:

The risk maps provide useful information for healthcare decision makers to allocate resources to manage snakebite envenoming in Sri Lanka. We used replicable methods which can be adapted to other geographic regions after re-estimating spatial covariance parameters for each region of interest.

**Keywords:** *Envenoming bites, Sri Lanka, community based survey, spatial analysis, risk map*

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**Association between Body Mass Index and Blood Pressure among Hypertensive Patients Attending Medical Clinics Teaching Hospital, Batticaloa**

Karthikesu Karthijekan<sup>1\*</sup>, Karthikesu Kartheepan<sup>1</sup>

Overweight and obesity are known to be risk factors of hypertension. The aim of this study was to investigate the association between body mass index and blood pressure among HT patients who attending medical clinics, Teaching Hospital, Batticaloa. Descriptive cross sectional study carried out among 212 HT patients by using Simple random sampling. Data were collected with structured, interviewer administered questionnaire and anthropometric measurements of weight, height and waist circumference were measured by using appropriate measuring scales.

Patient's blood pressure readings were recorded manually using mercury sphygmomanometers. Patients who had the blood pressure more than 140/90 mmHg in last six consecutive readings were defined as Cases and the blood pressure less than 140/90 mmHg in last six consecutive reading defined as Controls. Among the 212 patients' controls and cases were 35.8% and 64.2% respectively. 37.7 % of them were male and 62.3 % were female. 63.7 % of them were Tamil, 26.8%, 9.0% and 0.5% were Muslims, Burgers and Sinhalese respectively. Among them uneducated, family history of HT, currently smoking and drinking habits were 18.9%, 44.3%, 9.0% and 16.5% respectively. Mean values of systolic blood pressure and diastolic blood pressure were  $136.95 \pm 10.84$  mmHg,  $85.82$  mmHg  $\pm 07.87$  mmHg respectively. Majority (70%) of the patients aged were more than 50 years. Among them underweight, normal weight, overweight and obesity were 9.4%, 39.2%, 34.9% and 16.5% respectively. Overweight and obesity among the cases were 37.5%, 19.1%, and among controls 30.3% and 11.8% respectively. Central obesity among cases and controls were 35.3% and 31.6% respectively. Chi-square test was used to find out the association for selected variables. There was a significant association between hypertension and body mass index ( $P = 0.019$ ,  $X^2 = 9.98$ ) but not with central obesity ( $P = 0.584$ ,  $X^2 = 0.3$ ). In conclusion, among patients attending the hypertensive clinic, increased body mass index was positively associated with blood pressure.

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**Nutritional status and factors associated with weight distribution among adults in Batticaloa district**

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Poor nutritional status is a chronic condition and the prevalence of adult obesity is increasing rapidly worldwide due to environmental and behavioral changes such as urbanization and modernization. Data on nutritional status among adults in developing countries including the different regions are needed for primary prevention. This study was undertaken to assess the nutritional status among adults (above 18 years) in Batticaloa district and to examine the associated socio-economic, nutritional and lifestyle factors with weight distribution.

A Cross-sectional survey was conducted among 400 adults aged above 18 years. Multi-stage sampling method was approached. Data on socio-economic, nutritional and lifestyle factors were collected with structured, interviewer administered questionnaire and anthropometric measurements of weight, height and waist circumference were measured by using appropriate measuring scales. Under weight, normal weight, over weight and obesity were defined as Body Mass Index (BMI) <18.5 kg/m<sup>2</sup>, 18.5-23 kg/m<sup>2</sup>, > 23 kg/m<sup>2</sup> and > 27.5 kg/m<sup>2</sup> respectively; waist circumference > 90 cm for men and >80 cm for women considered as presence of abdominal obesity. Nutritional status of adults and distribution of BMI by socio-demographic and lifestyle characteristics were assessed.

Among 400 adults 11.7 % were underweight, 40.5 % were normal weight 30.3 % overweight and 17.5% were obese in Batticaloa district. In urban areas among 80 adults 6.3% were underweight, 31.2% were normal weight, 35.0% were overweight and 27.5% were obese. In rural areas among 320 adults 13.1% were underweight, 42.8 % were normal weight, 29.1% overweight and 15.0% were obese. In the overall district, females were more overweight (17.3%) and obese (11.5%) than males. Adults belong to the age group of 35-44 years were more overweight and obese than others. Gender(p=0.03), age(p=0.000), marital status(p=0.01), ethnicity(p=0.02), occupation (p=0.026), smoking (p=0.005), alcohol intake (p=0.001), family history of overweight and obesity (p=0.009), sleeping habit after the meal in the evening (0.003), following weight reduction methods (p=0.000) were the significant factors (p<0.05) associated with nutritional status of adults. As overall, majority of adults were in normal weight. In urban areas nearly one third percentage of adults were overweight and in rural areas most of the adults were in normal weight.

**Keywords:** *Nutritional status, Urban, Rural, Adults, Batticaloa.*

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**A clinic-based pharmacy counselling service to improve medication adherence among diabetes out-patients**

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Cathy Lynch<sup>3</sup>, Dilmi Wickramasinghe<sup>1</sup>

The burden of diabetes is increasing with the rising prevalence of the disease and its complications. Medication adherence is a significant factor in the management of diabetes. Pharmacists' role in the improvement of medication adherence is well-studied in the world. Despite the high and rising prevalence of diabetes in Sri Lanka, this is the first study to evaluate a pharmacy counselling service in a Sri Lankan diabetes population.

To assess how a clinic-based pharmacy counselling service may affect patient medication adherence.

400 consecutive patients with diabetes mellitus attending outpatient medical clinics at Colombo North Teaching Hospital were randomized into either intervention group (IG) or control group (CG). Patients in the IG received pharmacist counselling (verbal and written) for four consecutive monthly visits in addition to standard care at the clinic, while patients in the CG received standard care only. Adherence for both groups was measured at baseline and post intervention using ©Morisky Medication Adherence Scale (8-Items).

Mean age of the participants was  $61.79 \pm 9.06$  and 67% were female. The IG had a median score of 4 out of 8 (IQR 5-3) at baseline which increased to 7 (IQR 8-6) after intervention. The median score of the CG was not significantly changed; 5 (IQR 7-4) at baseline and 5 (IQR 7-6.5) after intervention period. Patients in the IG had a statistically significant improvement in adherence compared to the CG, using the Mann-Whitney U test ( $P < 0.005$ ). The IG had a 74.15% improvement in adherence whereas the CG had an improvement of 1.78%.

Pharmacist counselling in outpatient clinics can improve medication adherence of the patients with diabetes.

**Key words:** *Pharmacy counselling, medication adherence, diabetes*

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**Knowledge and Practices Related To Fire Safety and Their Associated Factors among Factory Workers At CEAT - Kelani International Tyres (Pvt) Ltd**

Nilanka Ranasinghe<sup>1\*</sup>

According to the World Health Organization estimates, more than 250,000 deaths occur annually due to fire in the world. Fire at work place has been one of its main contributory factors. Apart from death, work related fire injuries lead to substantial social and economic cost to the victim and employers.

To describe the knowledge and practices related to fire safety, and their associated factors among factory workers in Sri Lanka

A cross-sectional study was carried out among 217 workers in the factory of CEAT-Kelani International Tyres (Pvt) Ltd having minimum work experience of one year, selected using simple random sampling. A pre-tested self-administered questionnaire used to collect data on knowledge on fire safety, use of fire safety practices and socio-economic characteristics. Marks were given for knowledge: Very good (100-80), Good (79-60), Average (59-40), Poor (Below 40) and practices: Satisfactory (100-75), Unsatisfactory (below 75). Associations of knowledge and practices were assessed using chi-square test.

Response rate was 81.2%. The majority was Sinhalese (98%), married (77%) and educated up to Ordinary level examination (66%). 51% have had fire related accidents while 59% had never participated in fire drills. 'Very good' knowledge was seen with fire safety practices (39%), fire-fighting and basics on fire (20%) and first aid during fire (19%). Workers' overall knowledge on fire safety was 'satisfactory' in 75%, with 17% having 'very good' knowledge and 58% having 'good' knowledge. None were in poor knowledge group. Majority of workers' (89%) overall practices related to fire safety was 'satisfactory'.

Being a machine operator, more than ten years work experience, advanced level/ vocational training as highest education level, experience on fire accidents and their participation in fire drills were significantly associated with workers' 'good' level of knowledge on fire safety. However, a significant association was not seen between the use of fire safety practices and knowledge on fire safety with any socio-economic characteristic of the workers.

Tyre factory workers showed satisfactory knowledge on fire safety and use of fire safety practices. Though knowledge was associated with many characteristics of workers, practices did not. Conducting fire training sessions and fire drills are necessary to improve their skills in practices related to fire safety.

**Keywords:** - *fire safety practices, disaster management*

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**Knowledge and attitudes among final year students of a Sri Lankan  
Medical Faculty on nutritional assessment and counseling**

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Nutritional assessment and counseling are core clinical skills expected from a medical graduate. Our objective was to describe the knowledge and attitudes on nutritional assessment and counseling among final year medical students. Since self-perceived scores are influenced by non-test-relevant response determinants, we also intended to examine the effect of social desirability bias on self-reported knowledge and attitudes to control for overestimation.

A random sample of final year medical students of a Sri Lankan Medical Faculty was assessed using a self-administered questionnaire. Knowledge and attitudes on nutrition were measured using a modified 17-item Nutrition in Patient Care Survey questionnaire. A 13-item Malrowe-Crowne instrument was used to assess the social desirability. Questions were in English language. Face validity of the above tests was established.

Of 88 respondents, 62.2%(n=56) were females. The mean age was 25.1±0.9 years. Seven (7.8%) had participated in some kind of special projects in nutrition. Forty-three (47.8%) had close friends/relatives with a medical condition which needed greater than normal attention to nutrition. Mean knowledge score was 65.5%±8.9%. Mean positive attitudes score was 61.1%±6.5%. Although 85.6%(n=77) agreed that nutritional assessment should be included in any routine consultation, 53.3%(n=48) agreed that most final year medical students are not adequately trained to discuss nutrition issues with patients. Pearson's test found no correlation between attitudes and self-reported knowledge ( $r=.041$ ,  $n=88$ ,  $p>.05$ ). Student's t-tests did not show significant differences of knowledge or attitudes depending on sex, participating in some kind of special projects in nutrition, or having a close friend/relative with a medical condition which needed greater than normal attention to nutrition( $p>.05$ ). The internal consistency of the SD scale (Cronbach's alpha) was 0.56. Results of a simple linear regression analysis predicting knowledge and attitudes score from SD score did not show a statistically significant association ( $F(1,74) = .050$ ,  $p>.05$ ,  $R^2=.001$ ,  $R^2_{Adjusted}=-.013$ ).

Perceived knowledge and positive attitudes on nutritional assessment and counseling is inadequate among final year medical students. The findings of this study do not support the presence of social desirability bias in students' reporting of knowledge and attitudes.

**Keywords:** *Nutrition, medical students, Malrowe-Crowne social desirability scale*

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## **Information Seeking Habits and Practices of Freshman Medical Students of University of Kelaniya**

Chithra Abeygunasekera<sup>1\*</sup>, Indrajith Solangaarachchi<sup>1</sup>, Thulani Beddage<sup>1</sup>, Suwin Hewage

Studying information-seeking habits of different groups of students is important as a decision making tool for collection development practices and introducing variety to library services. This study examined the past experiences of information access and usage by freshman medical students prior to their university admission. A survey was conducted on the new batch of MBBS students admitted in 2016 using a self-administered questionnaire distributed at the orientation programme.

Of the 155 respondents, majority (65.1%) were female students. They represented eight administrative districts of the country. Highest percentage of students was admitted from the Western Province (52.9%), while 20.6% and 10.3% were from North Western and Central provinces respectively. Students who reportedly visited the library at least on a weekly basis constituted 52.9% of the sample, while the remaining 47.1% did so less frequently. Even though the main information seeking mode was searching the web (99%), a considerable number of students used library books (80%) and personal textbooks (61.9%). Library books were a source of information for 83.7% of females and 75.5% of males, while use of personal text books for this purpose was noted by 62.2% of female and 60.4% of male students. Books lent by colleagues were a source of information for 37.8% of females and 47.2% males. The main purpose of information used by majority of students (84%) was self-study. Seventy-six percent (n=118) of students used information for gaining additional subject knowledge while 68.4% (n=106) used it for entertainment and 50.3% (n=78) for project work. School library is the place for information access for 98.7% of the students, followed by town council libraries (37.4%) and provincial council libraries (16.8%). There was no significant difference between males and females ( $p = 0.701$ ) or those from the Western Province and other provinces ( $p = 0.082$ ), when it comes to frequency of library usage. The research finds that even though the main information seeking method of sampled freshman medical students is the internet, a considerable number still rely on libraries and other print based resources.

**Keywords:** *Information Seeking Behavior, Libraries, Access to Information, Students, Medical, Surveys and Questionnaires*

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## **A Retrospective Study On Perinatal Post Mortems**

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A detailed post mortem examination is the key to the recognition of pathologies related to perinatal deaths. Post mortem findings assist the clinical team in confirming their clinical and radiological findings and the family for future pregnancy planning. However, this facility is still underutilized in Sri Lanka. Furthermore, examination of the placentas is an important aspect in recognizing the cause of perinatal death. The department of pathology, faculty of medicine, University of Kelaniya provides the perinatal pathology service to the Obstetrics and Gynaecology unit and the neonatal unit of the Teaching Hospital Ragama. This study was carried out in view of improving and expanding the perinatal pathology service provided by the department. Objectives were (1). To identify the number of perinatal post mortems (PPMs) reported over a period of six years. (2). To identify the number of PPMs that showed multiple congenital anomalies (3). To identify the number of PPMs accompanied by a placenta and the number of placentas with identifiable pathology.

This was a retrospective study on already reported PPMs in the Department of Pathology, Faculty of medicine, University of Kelaniya, From January 2011 to August 2016. The PPM databases maintained in the department were used to extract data.

A total of 118 PPMs were reported (2011-17, 2012-16, 2013- 17, 2014-21, 2015-31, 2016-16). 65 % (75/118) were premature deliveries. 56% (67/118) were performed following intrauterine deaths. 14 % (16/118) of PPMs showed multiple congenital anomalies. Placentas were submitted for examination in 31 PPMs (31/118) and clinically significant placental pathologies were noted in 7/31 placentas (23%). 76/118 (64%) showed no gross abnormality in the fetus/baby and placenta was not available for examination in 72% (55/76).

Major congenital anomalies were detected in 14% of PPMs. In majority of the PPMs, the placenta was not available for examination, therefore cannot exclude the possibility of placental pathology which might have led to the death.

***Keywords:*** *perinatal post mortem, congenital anomalies, placental examination*

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**A preliminary community survey of selected dengue patient households in the Ragama MOH, Gampaha District**

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Socio-economic aspects of the local population has been found to directly influence the emergence of dengue epidemics. Thus, a preliminary community survey was conducted among 30 randomly selected dengue positive patient households in the Ragama Medical Officer of Health (MOH) area, in Gampaha District to assess the socio-economic and demographic level of the patients. Study premises were selected randomly based on the MOH records during the year of 2015 and the selection of the premises was purposely limited to Narangodapaluwa Public Health Inspector area that has reported the highest number of dengue cases. An interviewer administrated questionnaire was used for the collection of socio-economic and demographic aspects of the patient households.

Among the selected households; 40% (n=12) had at least more than 2 dengue positive patients among the occupants, while 42 dengue positive patients were interviewed in total. Age distribution of positive patients ranged from 1 - 70 years, while mean and mode represented 35 and 19 years, respectively. Relative distribution of male to female ratio remained as 1:1. Around 50% of the patients had an educational level higher than intermediate school education (O/L). Based on the indirect questions regarding the possible factors affecting the DF transmissions, it was noted that only participants 26 out of 42 (61.90%), have been infected with DF more than once in their life time regardless of living in the same study area since birth. Twenty-two patients (52.38%) claimed that they believe, that the DF infection has acquired at home. Meanwhile others claimed (n=20, 47.68%) that possible DF infection acquired site could be outside environments, probably schools or the place of work. Cleanliness of the surroundings was maintained well at almost all households, while waste disposal was properly maintained at weekly intervals by urban council in 14 premises.

Others practiced open ground burning twice a week. Most of the respondents were willing to support Aedes control measures and follow mosquito bite prevention methods (n=28, 93.33%). Majority of the households (n=21) were not satisfied with the government vector controlling activates within the area. There is no significant association between socio demographic and economic data with DF transmission within the study population. Relative abundance of Aedes mosquito population in existing rubber plantation could be a reason for the occurrence of high rate of DF cases. Thus, practice of effective integrated vector control measures within the study area is highly recommended for the controlling of dengue.

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**Evaluation the Oviposition Behaviour of *Aedes Aegypti* and *Ae. Albopictus* Mosquitoes; Main and Secondary Vector for Dengue Transmission in Sri Lanka under Laboratory Conditions**

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Studies on the oviposition behavior of *Aedes albopictus* and *Ae. aegypti* are critical for effective controlling of dengue vector breeding. However, less attention has been drawn on such aspects of vector biology and bionomics in Sri Lanka. Therefore, the objective of the current study was to evaluate the oviposition behavior of dengue vectors under laboratory conditions.

Ovitrap with different sizes, colours, sources of water, sodium chloride (NaCl) concentration (0.2, 0.5, 1, 2 and 3%) and presence and absence of larvae were kept within separate cages of batches of 1000 *Ae. albopictus* and *Ae. aegypti* with (1:1, male: female ratio). Female mosquitoes were allowed to lay eggs and the number of eggs laid in different ovitraps were enumerated. ANOVA and cluster analysis were used to investigate the significance in the variations among oviposition behaviours.

The mean number of eggs laid by both *Ae. albopictus* and *Ae. aegypti* increased with the increasing size of the ovitraps. *Ae. albopictus* indicated the highest mean number of eggs in 0.2% of NaCl than that of distilled water, while the egg laying preference reduced with the increasing salinity for both species. Drain water with low dissolved oxygen level ( $0.43 \pm 0.12$  mg/l) was the preferred water source for both species and indicated a significantly high oviposition rate in ovitraps with larvae. Black colour ovitraps attracted the majority of the gravid females, while white was least preferred.

There were no significant variations among oviposition behaviors of *Ae. albopictus* and *Ae. aegypti* under laboratory conditions. Black coloured ovitraps were the preferred breeding place.

**Keywords:** *Aedes*, oviposition, ovitraps, behaviour.

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# Sciences

## A Cosmological Model for the Inflationary Universe (Using New Boundary Conditions).

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In 1997 it is showed that the Universe is expanding with an acceleration. Many models have been employed to explain this incident. Use of the variable cosmological parameter was proposed by Hemantha and de Silva (2003) & (2004). They wrote modified field equations in the form

$$R^{\mu\nu} - \frac{1}{2}\bar{R}g^{\mu\nu} = \kappa T^{\mu\nu} - \Lambda g^{\mu\nu}, \text{ where } \kappa = \frac{-8\pi G}{c^2}$$

We obtain a solution  $R = k + d\sqrt{(1 - \cos^3 \alpha t)}$  for above equations. This model represents the inflationary universe with deceleration, acceleration and again deceleration. This model also obey for the big bang model.

The unknowns  $k, d, \alpha$  can be found under the specific boundary conditions. According to the big bang, at the beginning of the universe the radius of the Universe is zero (this is our first boundary condition), so we can get  $k = 0$ .

In the literature it is found that the onset of acceleration took place at red shift is in between 1.2 – 1.6. At that time  $\ddot{R} = 0$ . We take 1.4 for redshift and take the age of the Universe as 13.7 billion years (this is our second boundary condition) and  $1.4 = \sqrt{(1 - \cos^3 \alpha t)}$  and calculate  $\alpha = 6.94 \times 10^{-18} \text{ rads}^{-1}$ .

To evaluate  $d$  we consider the ratio  $\frac{\Lambda'}{\rho} = \frac{7}{3}$  ( $\Lambda' = \frac{\Lambda c^2}{8\pi G}$   $\Lambda$  is the cosmological constant)

We get  $d = 6.14 \times 10^{27} \text{ cm}$

Finally, we obtain the Radius of the Universe and the density of the Universe at the present epoch and discuss the behavior of the radius of the Universe against the cosmic time.

Radius of the Universe at present epoch  $R = 8.5732 \times 10^{27} \text{ cm}$ .

Density of the Universe at present epoch  $\rho = 4.8153 \times 10^{-26} \text{ gcm}^{-3}$ .

**Keywords:**  $\lambda$  ( $\Lambda$ ), inflationary, big bang, red shift, onset

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## **Extinction of Quaternary Mammalian Habitats of Megafauna in Sabaragamu Basin, Sri Lanka**

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The Quaternary period of the geographic history of earth includes two geologic epochs *viz.*, the Pleistocene and the Holocene. Both epochs divided the faunal stages and human cultural phases based on climate and sea level changes that took place during these periods. The Quaternary ice age began roughly about 2.58 MYO with cool and dry climate conditions. The extinct Australopithecines and many other extinct genera of mammalian mega fauna appeared during this time. Thus, the Quaternary period shows the extinctions of numerous predominantly larger, especially mammalian mega faunal species, many of them lived during the transition from the Pleistocene to the Holocene epoch. The debate on the demise of the mammalian megafauna is often characterized by two highly polarized points of view: (1) climate-induced extinction; and (2) human-induced extinction. In Pleistocene period most parts of the Northern Hemisphere of earth were covered with glaciers creating a cold climate. Due to this glacial formation the main sea level was much lower than it is today. The low sea level facilitated the connection of Sri Lanka with the Indian mainland with a land bridge. Therefore, a number of mega fauna and micro fauna were able to cross to Sri Lanka from India along this land bridge. The last land bridge was emerged around 7500 years BP. During the Pleistocene era Sri Lanka experienced heavy rainfall causing the emergence of rain forest in the country. The heavy rainfall in the Sabaragamu Basin also provided habitats for a number of marsh loving animals including mammals. However, at the end of the Pleistocene epoch, drastic climatic changes were occurred resulting in the extinction of a number of animal taxa. Pleistocene fauna in Sri Lanka is known as Rathnapura Fauna. Their fossils are found in alluvial deposits in the Sabaragamu basins.

**Keywords:** *Quaternary mammalian fauna, Sabaragamu Basin, Rathnapura fauna, Extinction.*

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## **Efficacy of Alum Treatment and Vacuum Packaging in Controlling Crown Rot Disease of Cavendish Banana**

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Cavendish is the widely grown banana cultivar in the world today and the most prominent cultivar in the international trade. Crown rot, one of the most drastic postharvest diseases of Cavendish banana can cause severe postharvest loss both in the local and export markets. In the industry, cut crowns of banana are treated with fungicides to control this disease. Due to hazardous effects of fungicides, finding suitable alternatives in the management of crown rot of banana is essential. In this study, effect of alum (potassium aluminium sulphate) in combination with vacuum packaging was investigated in controlling crown rot disease and extending the shelf life of Cavendish banana at cold storage.

Twelve week mature Cavendish banana (*Musa acuminata*, AAA, Grande Naine cultivar) hands were treated with 1% (w/v) alum or distilled water (controlled). Treated and control fruits were packed in Low density polyethylene bags, air inside bags were removed using vacuum and placed in fiber board cartons and stored in a cold room at 12-14 °C. Each treatment comprised 10 replicate boxes each with 5 hands. In-package gases were analyzed after 14 days of cold storage. Physicochemical properties (pH, TSS, TA and firmness), sensory properties (peel colour, flesh colour, aroma, flavour, taste and overall acceptability) and crown rot disease severity were determined in ripening induced fruits. Test marketing trials were conducted at CIC fruit outlet in Dambulla, Sri Lanka where treated fruits were provided to consumers and staff to obtain feedback on the quality of treated banana.

At the end of 14 days, O<sub>2</sub> in packages remained between 5.0 to 5.8% while CO<sub>2</sub>% ranged from 4.9% to 5.8%. Alum in combination with vacuum packaging significantly controlled crown rot disease of Cavendish banana compared to the control. Physicochemical and sensory properties were unaffected by alum + vacuum packaging treatment when compared to control. Treated banana obtained higher score values from the customers and staff of fruit outlets for the sensory properties compared to the control. Therefore, this eco-friendly treatment strategy could be recommended in preparing Cavendish banana for local market as well as commercial scale export to various destinations which require a transit time of two weeks.

**Keywords:** *Crown rot, Cavendish banana, vacuum packaging, alum, postharvest*

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## The Simplest Proof of Fermat's Last Theorem

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It is well known that proof of Fermat's last theorem is very difficult and the main objective of this paper is to point out that if we make the Fermat equation a rational number equation then the proof becomes simple.

Fermat's last theorem for  $n(> 2)$  can be stated thus: There are non-trivial integers  $x, y, z$  satisfying the equation  $z^n = y^n + x^n$ ,  $(x, y) = 1, n > 2$ . Rearranging and relabeling the integers, we can assume without loss of generality that  $z, y, x > 0$ . From the above equation, we obtain  $g^n = h^n + 1$  where  $g = \frac{z}{x}, h = \frac{y}{x}, g, h > 0$ . From this rational number equation, we obtain the following nature of  $d$  and the equations satisfied by  $d$ .

$(g - h)[g^{n-1} + g^{n-2}h + \dots + gh^{n-2} + h^{n-1}] = g^n - h^n = 1$ , and if  $g - h = d$ , we have  $g^{n-1} + g^{n-2}h + \dots + gh^{n-2} + h^{n-1} = \frac{1}{d} > 0$ ,  $d > 0$ . Now, we obtain the equation in  $d$ .

$d([(d + h)^{n-1} + h(d + h)^{n-2} + \dots + (d + h)h^{n-2} + h^{n-1}]) = 1$ . From which we get the equation  $d^n + nhd^{n-1} + \dots + \left(\frac{n(n-1)}{2}\right)h^{n-2}d^2 + nh^{n-1}d - 1 = 0$  since  $h, d > 0$ , we get

$\left(\frac{n(n-1)}{2}\right)h^{n-2}d^2 + nh^{n-1}d - 1 < 0$ . Let us consider the property of this quadratic writing it as

$-\left(\frac{n(n-1)}{2}\right)h^{n-2}d^2 - nh^{n-1}d + 1 > 0$  which is a quadratic expression in  $d$  and the expression is positive and therefore the discriminant of it should be negative i.e.  $n^2h^{2n-2} + 2n(n-1)h^{n-2} < 0$ . Which never holds and since  $h > 0$  and that the original Fermat equation is not satisfied by non trivial integer triples  $x, y, z$ .

**Keywords:** Fermat's last theorem, trivial, quadratic, integers, negative

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## Simple and Short Proof of Fermat's Last Theorem for n=7

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Fermat's last theorem for  $n = 7$  was first proved [1],[2] by Lamé in 1839 and some others developed proofs later. None of the proofs is easy to understand and extended for all primes. Germain Sophie developed an important theorem that if  $p$  is a prime and  $2p+1$  is not a prime, then the equation

$$z^p = y^p + x^p, (x, y) = 1 \quad (1)$$

has two types of solutions  $xyz \equiv 0 \pmod{p}$  and  $xyz \not\equiv 0 \pmod{p}$ . Hence, the equation corresponding to  $p = 7$  also has the two solutions mentioned above if we assume it has solutions. Using this property, a simpler proof [3] has been developed. Our main interest is to give a proof for this case which can be used for any odd prime easily.

In proving Fermat's last theorem for  $n=7$ , we make use of a new approach. First, we transform the Fermat equation corresponding to FLT for  $n = 7$  to a rational number equation and then we use very elementary mathematics to prove the theorem.

Fermat's last theorem for  $n=7$  can be stated thus;

There are no non trivial integers  $x, y, z$  satisfying the equation

$$z^7 = y^7 + x^7, (x, y) = 1 \quad (2)$$

It is clear that we can assume, without loss of generality, that  $z > y > x > 0$ . The equation (2) can be transformed to

$$g^7 = h^7 + 1 \quad (3)$$

where  $g = \frac{z}{y}$  and  $h = \frac{x}{y}$

$$(g - h)[g^6 + hg^5 + h^2g^4 + \dots + h^5g + h^6] = 1,$$

$$(d)[(h + d)^6 + h(h + d)^5 + h^2(h + d)^4 + \dots + h^5(h + d) + h^6] = 1 \quad (4)$$

$$(d)[h^6 + d^6 + 6hd^5 + \dots + 6h^5d + h^6 + hd^5 + 5h^2d^4 + \dots + 5h^5d + h^2d^4 + h^6 + 4h^3d^3 + \dots + 4h^5d + \dots + h^6 + h^5d + h^6] = 1 \quad (5)$$

$$[d^7 + 7hd^5 + \dots + (6 + 5 + 4 + \dots + 1)d^2h^5 + 7h^6d - 1] = 0 \quad (6)$$

If  $g - h = d$ ,  $[g^6 + hg^5 + h^2g^4 + \dots + h^5g + h^6] = \frac{1}{d} > 0$  and therefore  $d > 0$ .

From (6), we get  $21h^5d^2 + 7h^6d - 1 < 0$ , Therefore  $-21h^5d^2 - 7h^6d + 1 > 0$  and this means that the quadratic in  $d$  is positive and hence the discriminant of it should be negative. In other words,  $49h^{12} + 84h^5 < 0$ , which is an apparent contradiction. Therefore, the equation does not hold and Fermat's last theorem for  $n=7$  follows.

We transformed the Fermat equation corresponding to FLT for  $n=7$  to a rational number equation first. Next, we used elementary mathematics to derive a strong contradiction and thereby we were able to conclude that the original equation has no integer solution. It should be emphasized that our proof is very simple and short and can be extended to any prime number  $p$ .

**Keywords:** Fermat's last theorem, integer triple, quadratic, discriminant, non-trivial

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## Assessing Potential Genotoxic Effects of Nano-Titanium Dioxide on Nile Tilapia (*Oreochromis Niloticus*)

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Due to widespread use of titanium dioxide nanoparticles (nano-TiO<sub>2</sub>) in many industrial applications, significant release of nano-TiO<sub>2</sub> to the environment can occur which may eventually reach aquatic ecosystems. Hence biological impacts of nano-TiO<sub>2</sub> to the aquatic fauna especially fish under chronic exposure need to be explored. Nile tilapia, *Oreochromis niloticus* is used as a bioindicator for evaluating toxic effects to environmental substances in tropical waters. The aim of the present study was to assess the potential genotoxic effects of water-borne nano-TiO<sub>2</sub> on Nile tilapia under chronic exposure conditions. Fish were exposed to a range of nano-TiO<sub>2</sub> (<25 nm, anatase) concentrations viz 0.1 mg/L, 0.5 mg/L and 1.0 mg/L along with the controls for 21 days and genotoxic effects were evaluated weekly by micronucleus assay and Comet assay using peripheral erythrocytes. Even though micronuclei induction in the erythrocytes was higher in the fish exposed to the lowest nano-TiO<sub>2</sub> concentration (0.1 mg/L) at 7 and 21 days of exposure, a statistically significant concentration-response pattern was not observed ( $P > 0.05$ ). Comet assay revealed that DNA damage in erythrocytes of Nile tilapia could be induced by nano-TiO<sub>2</sub> even at 0.1 mg/L level ( $P < 0.05$ ) by 21 days of exposure. Compared to micronucleus assay, Comet assay was more effective in detecting genotoxic effects on Nile tilapia. The results indicate that nano-TiO<sub>2</sub> exposure could lead to genotoxic hazards to the fish populations in the contaminated water bodies.

**Keywords:** nanoparticle; titanium dioxide; genotoxicity; Nile tilapia; Comet assay

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## **Production of Amylase by *A. Niger* Under Submerged Fermentation Using Pineapple Peel as The Substrate and Its Application in Baking Industry**

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Starch-degrading amylase was produced by *A. niger* under submerged condition utilizing pineapple peels as the substrate. Growth parameters were optimized by changing incubation period, pH of the culture media, level of carbon source (dried pineapple peel powder) and additional nitrogen source, in order to get maximum amylase production. Study revealed that the production of extracellular amylase increased with the culture growth and reached to maximum at day 7 in the cultures grown at pH 5.0. Studies with different levels of carbon source indicated that optimum level for carbon source for maximum amylase production was 18 gL<sup>-1</sup>. Effect of additional nitrogen source on amylase production was also monitored supplementing the growth media with different nitrogen sources such as peptone, gelatin and urea. The result indicates that using gelatin as additional nitrogen source increase the amylase production. Experiments were also carried out to monitor extracellular and intracellular amylase production and the results revealed that extracellular amylase production was found to be higher than that of intracellular. Yield of the enzyme was 8530 units/g of pine apple peel powder. To test suitability of the enzyme for improvement of the quality of bakery products bakery products were prepared by treating the wheat flour dough with different volumes of partially purified enzyme Results showed that Treating 7.7 mL (11.5 U<sub>mL</sub><sup>-1</sup>) partially purified amylase with one kg of wheat flour dough provide better quality product with improved shiny appearance, color, crumb structure, taste and better anti-staling effect than the control.

**Keywords:** *amylase, pineapple peel, submerged fermentation, bakery products, anti-staling effect*

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## **Background Levels of Heavy Metals in Moss *Hyophila involuta* as A Bioindicator Using Four Strict Nature Reserves in Sri Lanka: Sinharaja Rainforest, Knuckles Mountain Range, Horton Plains National Park and Hakgala Mountain Forest**

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Atmospheric deposition of six heavy metals (Zn, Cu, Pb, Ni, Cr and Cd) using the moss *Hyophila involuta* as a bioindicator was investigated to establish the background levels of heavy metals for different geographical and climatic zones of Sri Lanka.

Moss sampling was carried out in four strict nature reserves in different geographical and climatic zones of Sri Lanka, namely Sinharaja rainforest (6°24'–6°27' N, 80°24'–80°26' E, 450–500 m) from wet zone, Knuckles mountain range (7°31' N, 80°43' E, 1,000–1,300 m) from intermediate zone, Horton Plains National Park (6°46'–6°48' N, 80°47'–80°49' E, 2,000–2,200 m) and Hakgala mountain forest (6°55' N, 80°48' E, 1,700–1,800 m) from wet zone and Central highlands using about 10 sampling sites from each location within a month from October to November 2015. Concentrations of heavy metals in moss were analysed by using atomic absorption spectrometer.

The atmospheric deposition of heavy metal concentrations in all sampling stations is given for dry weight of moss and the ranges of six elements around four strict nature reserves were 9.58–65.68, 1.87–9.97, 1.20–10.56, 1.12–7.81, 1.20–10.60 and 0.05–0.36 µg/g for Zn, Cu, Pb, Ni Cr and Cd separately.

According to the statistical analysis (one-way ANOVA,  $p < 0.05$ ), accumulation of Cu, Cr and Cd in moss was not significantly change among four strict nature reserves and accumulation of Ni and Pb in moss was significantly higher around Hakgala mountain forest. Atmospheric deposition of Zn in moss was significantly higher around Knuckles mountain range area than other sampling locations.

Therefore background levels of heavy metals in moss can be expressed as 5.53 ( $\pm 1.75$ ), 7.23 ( $\pm 2.11$ ), 4.03 ( $\pm 1.41$ ), 6.61 ( $\pm 2.58$ ) and 0.17 ( $\pm 0.06$ ) µg/g for Cu, Pb, Ni, Cr and Cd respectively for the most of the geographical and climatic zones of Sri Lanka and background levels of Zn can be established as 30.62 ( $\pm 8.11$ ) and 47.42 ( $\pm 12.31$ ) µg/g for wet zone including Central highlands and intermediate zone of Sri Lanka respectively.

**Keywords:** atmospheric deposition, bioindicator, moss, heavy metals, Sri Lanka

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## Interspecific Relationships of *Piper* Species in Sri Lanka as Revealed by DNA Barcode ITS

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The genus *Piper* which is the largest genus in the family Piperaceae is economically important as it comprises with valuable crop species as well as several wild species. Although ten species of genus *Piper* are recorded in Sri Lanka, their interspecific relationships were not well studied. Therefore, the aim of this study was to determine interspecific relationships of *Piper* species in Sri Lanka using internal transcribed spacers from nuclear ribosomal DNA (ITS).

Ten varieties of *Piper nigrum* L., two varieties of each *P. betle* L. and *P. longum* L., *P. chuyva* (Miq.) C. DC., *P. siriboa* L., *P. sylvestre* Lam., *P. walkeri* Miq. and *P. zeylanicum* Miq. were used for the study. The genomic DNA was extracted from tender leaf samples using CTAB method, PCR amplified using ITS primer pair and subjected to DNA sequencing. The DNA sequence alignment analysis was carried out and a dendrogram was constructed using the multiple sequence alignment programme MUSCLE.

According to the dendrogram clear formation of two major clusters can be seen and ten *P. nigrum* varieties were clustered together however, variety Kuching has shown a separation from the main cluster. *P. longum*, *P. walkeri*, *P. sylvestre*, *P. siriboa*, *P. betle*, *P. chuyva* and *P. zeylanicum* formed the other cluster in which *P. siriboa* has shared close similarities with *P. betle*, while *P. sylvestre* and *P. walkeri* displayed close relationships and clustered together with *P. longum* varieties. Interspecific relationships between wild species and cultivated species (*P. nigrum*, *P. betle* and *P. longum*) indicated the potential of using the wild species in breeding programs for crop improvement. However, further studies to reveal genetic and phenetic relatedness of those species are needed to deepen the knowledge on interspecific relationships of *Piper* species.

**Keywords:** *Piper*, DNA barcode, ITS, interspecific relationships

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## Nanosilica from Sri Lankan Vein Quartz: Synthesis, Surface Modification and Characterization

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Vein quartz is one of the most abundant minerals in Sri Lanka and it is mainly mined for porcelain and materials industries. Vein quartz is an economically viable earth resource for the production of nanosilica through chemical methods as a value added product. Nanosilica is one of the widely used nanomaterials in adhesives, sealants, paints & coatings, cement-based building materials and rubber composites as a reinforcing, thickening and flattening agent.

In this research work, pure nanosilica was synthesized by a chemical precipitation method from Sri Lankan vein quartz. Finley ground quartz was refluxed with 3 M NaOH and then 0.5 M H<sub>2</sub>SO<sub>4</sub> was added drop wise to adjust the pH of the solution to be around 8.0 to precipitate nanosilica. X-ray diffraction (XRD) data indicated that the natural Sri Lankan vein quartz is highly crystalline and pure. Energy dispersive X-ray spectroscopy (EDX) data confirmed that vein quartz comprises pure silicon oxide with less impurities. Scanning electron micrographs (SEM) data showed that synthesized nanosilica particles from vein quartz were in the agglomerate form with average particle size of 50 nm. XRD data showed a strong broad peak around 22.14° (2θ) indicating synthesized nanosilica was in amorphous form. Fourier transform infrared spectroscopy (FTIR) data indicated the structural change from crystalline silica (in vein quartz) to amorphous silica by the absence of a sharp peak at 695 cm<sup>-1</sup> in the FTIR spectrum of nanosilica synthesized. Silica nanoparticles were subjected to surface modification by oleic acid (C<sub>18</sub>H<sub>34</sub>O<sub>2</sub>). Thermo gravimetric analysis (TGA) graph indicated the thermal decomposition of oleic acid in functionalized nanosilica with a significant weight loss between 350 °C to 400 °C. FTIR data showed that modified nanosilica with oleic acid indicated a carbonyl stretching peak of an ester bond at 1711 cm<sup>-1</sup>, which confirmed the ester bonding between silinol group and the carboxylic group of the oleic acid.

**Keywords:** vein quartz, Sri Lanka, nanosilica, nanomaterial, oleic acid

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## **Montmorillonite/TiO<sub>2</sub> Advanced Hybrid Material Using Sri Lankan Clay: Preparation and Characterization**

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Montmorillonite (MMT) is a naturally occurring crystalline silicate clay mineral. Nano titanium dioxide (nano-TiO<sub>2</sub>), particularly in the anatase form, is a photocatalyst under ultraviolet (UV) light. Nano-TiO<sub>2</sub> is thus added to paints, ceramics, tiles, or other products for its sterilizing, deodorizing and anti-fouling properties and is used as a hydrolysis catalyst.

The objective of this research is to enhance the photocatalytic activity of TiO<sub>2</sub> by forming a hybrid material with MMT. Therefore, montmorillonite/TiO<sub>2</sub> advanced hybrid materials was prepared using montmorillonite clay from Murunkan deposit in Sri Lanka. The cation exchange capacity (CEC) of Murunkan clay was found as 65 meq/100 g. Raw materials, intermediate products, and the MMT/TiO<sub>2</sub> hybrid material were analyzed using X-ray diffraction (XRD), energy dispersive X-ray spectroscopy (EDX), scanning electron microscopy (SEM), and Fourier transform infrared spectroscopy (FTIR). XRD and EDX data analysis revealed the presence of TiO<sub>2</sub> in the hybrid material as anatase form. According to XRD and SEM data analysis average particle size of the nano TiO<sub>2</sub> was found to be 60 nm. SEM images showed that the microstructure of the clay has not been destroyed during the formation of the MMT/TiO<sub>2</sub> hybrid material. UV-Visible spectroscopy was used to measure the effectiveness of the photocatalytic activity of the hybrid material versus nano TiO<sub>2</sub> for the degradation of methyl orange. In this experiment methyl orange was used as a model organic pollutant. Experimental results showed that after 4 hours MMT/TiO<sub>2</sub> hybrid material degraded 92% of methyl orange while nano TiO<sub>2</sub> has only degraded 67% under diffused light. The synthesized MMT/TiO<sub>2</sub> advanced hybrid material exhibited much higher efficiency in degrading methyl orange compared to the same weight of nano TiO<sub>2</sub> alone.

**Keywords:** *montmorillonite, Sri Lanka, nano titanium dioxide, hybrid material, photocatalysis*

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## Studies of Mass Modulated Enzymes with Purified Methylenetetrahydrofolate

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The potential of the folic acid biosynthesis pathway as a target for the development of antibiotics and chemotherapeutic drugs has been recognized for many years and validated by the clinical use. One function of folic acid metabolism is the support of DNA synthesis and repair through the generation of nucleic acid building blocks such as thymidine triphosphate (dTTP). This process involves the last step of *de novo* synthesis of a precursor of DNA, 2'-deoxythymidine-5'-monophosphate (dTMP) with thymidylate synthase (TSase EC 2.1.1.45) using the cofactor (6*R*)-N<sup>5</sup>,N<sup>10</sup>-methylene-5,6,7,8-tetrahydrofolate (CH<sub>2</sub>H<sub>4</sub>folate). Therefore, the isotopically labeled R-[6-<sup>x</sup>H]-CH<sub>2</sub>H<sub>4</sub>F (where <sup>x</sup>H: hydrogen, deuterium or tritium) allows studying the contribution of fast protein dynamics to a variety of kinetic steps along the catalytic cascade of natural vs. mass modulated *Escherichia coli* TSase. Ultimately, a better understanding of the catalytic mechanism of TSase can assist in developing more effective drugs that selectively act on cancerous cells therefore having reduced toxicity.

Generally, HPLC remains as the main purification method of the synthesized R-[6-<sup>x</sup>H]-CH<sub>2</sub>H<sub>4</sub>F due to high sensitivity. However, it is quite laborious and the high salt content in the purified sample interferes with the NMR analysis. In this regard, we developed and optimized a simple procedure for the purification of the R-[6-<sup>D</sup>H]-CH<sub>2</sub>H<sub>4</sub>F (D= deuterium) after its synthesis using solid-phase extraction with a strong anion exchange (SAX) cartridge followed by a C-18 cartridge. The purified 6R-<sup>D</sup>H-CH<sub>2</sub>H<sub>4</sub>folate was used to investigate whether the mass modulation of the enzymes changes the rate-limiting step for the reaction. The kinetic studies indicated that the turn over number,  $k_{cat}$  is no longer rate limited by the hydride transfer in mass modulated TSase chemical cascade.

**Keywords:** *chemotherapeutic drugs, thymidylate synthase, purification, protein dynamics, kinetic studies*

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## The Study of Occurrence of Polycyclic Aromatic Hydrocarbons in Sediments of Sebasthian Canal and Hamilton Canal of Sri Lanka.

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Polycyclic Aromatic Hydrocarbons (PAHs) are known as a major group of organic pollutants which are considered as toxic, mutagenesis and carcinogenic. These PAHs composed of two or more aromatic benzene rings are produced due to incomplete combustion of fossil fuels; such as coal, oil and due to pyrolytic processes. Since PAHs are harmful towards living beings, studies on monitoring PAHs have been conducted in different parts of the world. The canals, Sebasthian Canal and Hamilton Canal are in close proximity to Kelanitissa Power Station (KL) and Kerawalapitiya Power Station (KW) respectively were subjected to this study. A preliminary study has been conducted to determine the occurrence of PAHs in water bodies of these two canals. For the purposes of water quality monitoring, qualitative and quantitative studies of sediment has a significant importance. This study aims to determine the type and concentration of PAHs in sediment of the above water bodies near the two power plants. Occurrence of PAHs in sediment is expected since these are diesel fuel fired combined cycle power stations and the preliminary study has shown accumulation of PAHs in surface water of the water body.

Studies have shown PAHs in water bodies vary with the seasonal variation. The sediment samples were collected during the dry season in which the reported PAHs of water bodies are high. The sediment samples at a thickness of 2.5 – 5.0 cm along with soil were collected during dry season. The reference study was conducted from sediment collected from a fresh water spring in Bandarawela, which is approximately 180 km away from the study area where anthropogenic influence is very low. The samples were sonicated using ultra-sonicator for 1 hour at 50 °C to extract PAHs. Methanol extract was cleaned using silica gel (60-120 Mesh) column. Identification and quantification of PAHs in sediment samples were carried out using HPLC at 254 nm and HPLC-FLD (excitation at 250 nm, emission at 410 nm).

Identified PAHs contained both low and medium molecular weight PAHs. Naphthalene, acenaphthene, fluoranthene, pyrene, Benz[a]anthracene and chrysene were the major PAHs present in the sediments. The total measured PAHs in sediment ranged from 1.53 to 3.89  $\mu\text{g kg}^{-1}$  in KL site and from 0.68 to 21.60  $\mu\text{g kg}^{-1}$  in KW site, which is a significant increment than that of its reported measured total PAHs values in surface water. (PAHs in surface water of Sebastian canal varied from 0.11  $\mu\text{g L}^{-1}$  to 1.71  $\mu\text{g L}^{-1}$  where as it varied from 0.16  $\mu\text{g L}^{-1}$  to 2.74  $\mu\text{g L}^{-1}$  in surface water of Hamilton canal.) Therefore, it verifies that, for purposes of water quality monitoring, qualitative and quantitative studies of sediment has a significant importance. Further studies should be carried out to identify the source of PAHs into these water bodies.

**Keywords:** PAHs, Priority pollutants, Sediment, Polycyclic Aromatic Hydrocarbons

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## Effect of Repeated Heating on The Oxidative Degradation of White Coconut Oil and Soy Bean Oil.

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Repeated heating of cooking oils is a common practice used mainly to save the cost in food preparations. The aim of the present study was to investigate the effect of repeated heating on the oxidative degradation of frying oils (white coconut oil and soy bean oil). Initially, fresh potatoes were peeled off and sliced into uniform thickness ( $4 \times 0.3 \times 0.3$  cm<sup>3</sup>). Sliced potatoes (batches of 25 g) were fried in 100 mL portions of white coconut oil (WCO) and soy bean oil (SO) separately at  $180 \pm 5$  °C for 10 minutes. The oils were reused for 2 more frying cycles over a span of 3 days (1 frying cycle per day). In each day, an amount of fresh oil was added to make the volume of frying oil in to 100 mL. After each frying cycle, oil samples were collected from the frying pan and by extraction of fat with n-hexane from potato chips. Level of oxidation of frying oils and lipid extracted from potato chips were assessed by measuring the peroxide value (PV) and thiobarbituric acid reactive substances (TBARS).

Table 01 states the results of PV and TBARS. Both PV and TBARS of frying oils and lipid extracted from potato chips increased as the number of frying cycles were increased (Table 01). Fried SO (FSO) and lipid extracted from potato chips fried in SO (PSO) showed higher PV and TBARS values than that of fried WCO (FWCO) and lipid extracted from potato chips fried in WCO (PWCO) in every frying cycle (Table 01).

**Table 01.** PV and TBARS of frying oils and lipid extracted from potato chips

| Sample | 1 <sup>st</sup> Frying cycle             |                                     | 2 <sup>nd</sup> Frying cycle             |                                     | 3 <sup>rd</sup> Frying cycle             |                                     |
|--------|--|-------------------------------------|--|-------------------------------------|--|-------------------------------------|
|        | PV<br>(meqO <sub>2</sub> / kg<br>of oil) | TBARS<br>(MDA<br>mmol/kg<br>of oil) | PV<br>(meqO <sub>2</sub> / kg<br>of oil) | TBARS<br>(MDA<br>mmol/kg<br>of oil) | PV<br>(meqO <sub>2</sub> / kg<br>of oil) | TBARS<br>(MDA<br>mmol/kg<br>of oil) |
| FWCO   | 2.54±0.46                                | 0.77±0.08                           | 4.69±0.11                                | 1.41±0.21                           | 16.91±0.29                               | 2.71±0.19                           |
| FSO    | 18.48±0.35                               | 4.23±0.16                           | 20.24±0.76                               | 6.60±0.08                           | 21.67±0.49                               | 7.59±0.08                           |
| PWCO   | 2.36±0.14                                | 2.57±0.12                           | 2.87±0.17                                | 2.54±0.85                           | 11.33±0.27                               | 2.69±0.24                           |
| PSO    | 14.06±0.63                               | 5.12±0.33                           | 13.05±0.32                               | 5.78±0.50                           | 15.49±0.65                               | 7.92±0.30                           |

According to Codex standards for fats and oils, PV up to 15 meq O<sub>2</sub>/ kg of oil is considered as safe level for consumption. AOCS and Food Sanitation Law of Japan guidelines state that PV up to 10 meq O<sub>2</sub>/ kg of oil and PV ≤30 meq O<sub>2</sub>/ kg of oil as safe levels of consumption respectively. Considering these values, we can conclude that, the levels of PV of WCO can be safely maintained for three frying cycles with a frying time of 10 minutes. Financial assistance provided by NRC 12-012 is highly appreciated.

**Keywords:** *Frying oil, Oxidative degradation, Peroxide value, Repeated heating, Thiobarbituric acid reactive substances*

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## Effect of Thermal Annealing on Electrodeposited CdS and CdS/CdTe Heterojunction

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At present CdS/CdTe based solar cells have a significant commercial impression due to its low-cost, scalability, manufacturability and simplicity. Nevertheless, it is essential to elevate the optoelectronic qualities of CdS and CdTe materials and the interface properties of CdS/CdTe heterojunction and ultimately the efficiency of the solar cells. In this regard thermal annealing is one of the key steps to be considered in order to enhance the material and heterojunction properties. Hence, in this study, the effect of thermal annealing on electrodeposited CdS and CdS/CdTe heterojunction was investigated.

CdS and CdTe semiconductor layers were potentiostatically electrodeposited on bare fluorine doped tin oxide (FTO) glass substrates and FTO/CdS respectively using the typical three electrode electrolytic cell. For both layers, saturated calomel electrode and high purity (99%) graphite rod were used as reference and counter electrodes respectively. 0.10 mol/L CdCl<sub>2</sub> and 0.01 mol/L Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> were used as Cd and S precursors respectively to produce CdS thin films while 1.35 mol/L CdSO<sub>4</sub> and 1.0 mmol/L TeO<sub>2</sub> were used as Cd and Te precursors respectively for CdTe. CdS layers were grown at cathodic deposition potential of 660 mV at pH 1.6 and temperature of 55 °C. Afterwards, one set of electrodeposited CdS samples was conveyed for fabrication of CdS/CdTe heterojunction. CdTe layers were grown on CdS layers at cathodic deposition potential of 650 mV at pH 2.3 and temperature of 65 °C. Subsequently, thermal annealing was carried out for both CdS and CdS/CdTe at three different temperatures; 390, 400 and 410 °C, for each annealing three different time periods; 10, 15, 20 min were considered. After the process of annealing all the samples were inspected for their optical, electrical and morphological properties using the techniques of optical absorption spectroscopy, photo-electrochemical cell and scanning electron microscopy respectively. According to the results, the optimum annealing conditions which yielded good optoelectronic qualities for CdS and CdS/CdTe were found to be 400 °C, 15 min and 390 °C, 15 min respectively.

**Keywords:** *Electrodeposition, CdS, CdS/CdTe heterojunction, Thermal annealing, Solar cells*

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## **Combination of Physico-Chemical Analysis and A Plant Bioassay for Screening Potential Toxicity of Drinking Waters in Selected Dug Wells in Medawachchiya Area, Sri Lanka: A Preliminary Study**

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Chronic Kidney Disease of unknown aetiology (CKDu) is becoming a major health problem especially in the North Central Province of Sri Lanka showing the highest prevalence in Medawachchiya area. Aetiology of this disease seems to be multifactorial which includes chronic exposure to environmental toxicants. This study reports the preliminary results of an ongoing study which has mainly focused on evaluating potential toxicity of drinking water in the dug wells in the Medawachchiya area using combination of physico-chemical analysis and bioassays. Eight dug wells were selected for the study using judgmental sampling method which included four drinking water sources of CKDu affected families and four wells which have been used by the families with no clinical signs of CKDu (Reference wells). Water samples obtained from these wells during prolong dry season in August 2016 were analyzed for physico-chemical parameters and the herbicide glyphosate using standard analytical methods. Potential toxicity of water samples was examined by the bioassay with the plant model (*Allium cepa*) following standard protocols with aged tap water and mineral water as negative controls. Results revealed that total hardness of the water of dug wells used by CKDu affected families were above the standard limits (250 mg/L, SLSI:2013). Alkalinity levels of water of all the wells used by the CKDu affected families and one reference dug well also exceed the stipulated limits for drinking water (200 mg/L, SLSI:2013). Arsenic was detected (2.0 µg/L) in water of one dug well used by CKDu affected families. Glyphosate was not detected in all drinking water samples (< 5 µg/L, detection limit). The bioassay indicated potential toxicity associated with water in the dug wells used by CKDu affected families based on *A. cepa* root growth retardations effect compared to negative controls and reference dug wells ( $P < 0.05$ ). Further studies will be continued using bioassays with plant and animal models covering different climatic seasons in order to evaluate potential toxic/cytotoxic/genotoxic effects associated with the drinking waters of the dug wells used by CKDu affected families.

**Keywords:** *Chronic Kidney Disease, bioassay, Physico-chemical characterization, toxicity, dug wells*

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## **Effect of The Domestic Characteristic on Colonization of Phlebotomine Sand Flies: A Case Study in Anuradhapura District, Sri Lanka.**

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Cutaneous Leishmaniasis (CL) is an endemic vector-borne disease in Sri Lanka. It is caused by protozoan parasite *Leishmania* species and transmitted via infective bite of female Phlebotomine sand flies (Diptera: Psychodidae). The public health importance of this disease is positively increasing due to inadequate knowledge of vector biology. The current study is an attempt to uncover the vector biological aspects, focusing on the successful vector control interventions.

This study was carried out in Anuradhapura district, Sri Lanka; a district with high disease prevalence of CL. Three sampling localities were selected; Thalawa, Padawiya and Wijayapura. A questioner and field studies were carried out in the sampling areas among CL patients to assess the effect of domestic environment characteristics on colonization of phlebotomine sand flies. Presence of decaying garbage, termite hills, manna grass (*Glyceria* sp.), water streams, unclear areas, wet soil areas, scrub jungles and gardening areas are the concerned characteristics for the present study. Field studies were conducted every month for seven months continuously. In every visit, Phlebotomine sand fly samples were collected from the study sites mentioned above using yellow sticky trap method.

Increment of the mean number of sand fly population along with the increment of the number of domestic characteristics was tested with the regression analysis. With the increment of supportive environmental characteristics, sand fly populations were increased linearly ( $P = 0.000$ ) in each site. This relationship revealed that the maximum sand fly populations were recorded in the places with all the tested characteristics stated above. Accordingly, the surrounding characteristics of the domestic environment have a significant effect on the colonization of sand fly populations. Domestic characteristics such as decaying organic matter, wet soil, unclear areas and water streams around the living environment show higher contribution to the colonization of sand flies.

In conclusion, characteristics of the domestic environments have effect on the colonization of sand flies. Increment of the supportive domestic characters intensifies the colonization of sand flies.

**Keywords:** *Cutaneous Leishmaniasis, Phlebotomine sand fly, Anuradhapura, Environment characteristics, sticky traps*

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## Effect of Concentration of Cd<sup>2+</sup> on the Material Properties of CdTe Thin Films Electrodeposited via a Two Electrode Electrolytic Cell

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Cadmium telluride (CdTe) is a vital semiconductor material which can absorb most of the electromagnetic radiation of solar energy spectrum to yield more efficient solar cells. Among the thin film fabrication methods, electrodeposition is an emerging technique to produce good quality CdTe materials using either two or three electrode system. This study was performed using the two electrode electrolytic system to investigate the effect of Cd<sup>2+</sup> concentration on the material properties of CdTe thin films to enhance its photovoltaic activities.

Electrodepositions of CdTe were carried out in an aqueous electrolyte which was prepared utilizing analytical grade CdSO<sub>4</sub> as the cadmium and TeO<sub>2</sub> as the tellurium precursors. Fluorine doped tin oxide coated conducting glass (1×3 cm<sup>2</sup>) and high purity carbon electrode were used as the working (cathode) and counter electrodes (anode) respectively in the electrolytic cell used for the depositions. The concentration of TeO<sub>2</sub> was maintained around 1 mmol/L throughout while varying the CdSO<sub>4</sub> concentration from 1.00 mol/L to 1.50 mol/L. pH of the electrolyte was initially adjusted to 2.2 and depositions were carried out in the cathodic potential range of (1.33 - 1.37) V at 65 °C while stirring at continuous stirring rate of 60 rpm. The resulting electrodeposited CdTe layers were heat treated for 10 minutes at 400 °C in air and subsequently, their optical, electrical morphological and structural properties were studied using UV-visible spectrophotometry, photo-electrochemical cell, scanning electron microscopy and X-ray diffraction spectroscopy. As elucidated by the results, at the deposition potentials of 1.34 V and 1.35 V, the short circuit current and open circuit voltage values were increased with the increasing of concentration of Cd<sup>2+</sup> from 1.00 mol/L to 1.25 mol/L while the band gap energy reached to its theoretical value of 1.50 eV.

**Keywords:** Cadmium telluride, Electrodeposition, Thin films, Two electrode system, Solar cells

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## Multilevel Analysis of G.C.E. Ordinary Level Performance of Schools in North-East Provinces

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Multilevel data structure generally consists of multiple units of analysis, one nested within the other. This type of data structure can be discovered in a natural way or as designed experiments. Many types of data that are available in the fields of Education and Medicine have a multilevel data structure. The modelling of multilevel data on various aspects has been developed for several years. However, the area of multilevel modelling for ordinal categorical response is a novel application. The study mainly aimed at finding out whether the time period together with the other factors (i.e. Grade, Gender, Race and School Size) have a significant effect on the General Certificate of Education Ordinary Level (G.C.E. O/L) pass rate of schools in Northern and Eastern Provinces of Sri Lanka While observing the hierarchical structure of the data into Schools and Districts levels, and determining how these levels impact with the G.C.E. O/L pass rates. In this study, the time period has been taken from 2005 to 2014 while it is categorized as war period (from 2005 to 2009) and post-war period (from 2010 to 2014). The application of advanced analysis in this study focused on modelling a two level Generalized Multilevel Ordinal Model using the Bayesian Markov Chain Monte Carlo (MCMC) estimation method from MLwiN 2.10 software. The response variable was the G.C.E. O/L pass rates of Schools. Here, the number of students at first attempt have been considered for the G.C.E. O/L pass rate while explanatory variables were Grade, Gender, Time Period, Race and School Size. 8,455 schools were selected for the sample. In Advanced Analysis of this study, Generalized Multilevel Ordinal Model was developed under two approaches. One approach was to develop a proportional odds model and the second approach was to develop a partial non-proportional odds model. Ultimately, the partial non-proportional odds model based on the DIC diagnostic was selected as the most appropriate model for the data. In the final model, the variable time period provided a significant main effect. It has been proved that the odds ratio of a school having a less than or equal pass rate opposed to a greater pass rate during the post-war period is lower than during the war period in Northern and Eastern provinces of Sri Lanka.

**Keywords:** *Bayesian Method, Education, Multilevel data, Ordinal categorical response, Partial non-proportional odds model*

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## Growth of Electrodeposited n-Cu<sub>2</sub>O Thin Films with Tunable Band Edge Position

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Cuprous oxide (Cu<sub>2</sub>O) is one of the best candidate for low cost photovoltaic applications due to its optoelectronic properties. Cu<sub>2</sub>O based solar cell devices have already been reported but the efficiency of the devices are very low compare to the theoretical efficiency limit of 20 %. One of the major drawbacks of the PV devices made with Cu<sub>2</sub>O is the unfavorable band edge positions of the semiconductors in contact. Indeed, the possibility of relative band edge shifts of Cu<sub>2</sub>O with suitable interfacing materials will pave the way for interface engineering to improve the efficiency of Cu<sub>2</sub>O based devices. In this study we have investigated this possibility of using electrodeposited n-type cuprous oxide thin films deposited using an acetate bath containing 0.1M sodium acetate and 0.01M cupric acetate at various pH values. In order to fabricate Au/n-Cu<sub>2</sub>O Schottky junction, thin Au layers having the area of 2X2 mm<sup>2</sup> were sputtered on these Cu<sub>2</sub>O films and then these samples were employed with capacitance-voltage measurements to study the flat band potential variations with the pH of the Cu<sub>2</sub>O film deposition baths. It was observed that pH value of the Cu<sub>2</sub>O film deposition bath is very sensitive to the flat band potential and observed the flat band potential shift of about 450 mV in the negative direction, as the pH of the deposition bath was changed from 6.2 to 5.5. This result gives a direct evidence that the surface of n-Cu<sub>2</sub>O film can be modified with the deposition bath pH. The observed shift in the flat band potential is very useful to match the band edge positions of the p-type semiconductors in contact to fabricate high efficient Cu<sub>2</sub>O base PV device. National Research council is gratefully acknowledged for the financial assistance through the research grant NRC 15-41.

**Keywords:** Cu<sub>2</sub>O, electrodeposition, flat band potential, relative band edge position

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## **Spatial and Temporal Variation of Selected Physicochemical Parameters in Chilaw Lagoon in Sri Lanka**

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Chilaw Lagoon is an intermittently closed, shallow coastal lagoon located in the North Western province of Sri Lanka. Excessive shrimp farm development has resulted in pollution of the lagoon since the farms extract water from the lagoon and discharge the effluent to the same lagoon.

This study investigated the seasonal and spatial variations of selected water quality parameters at fifteen different locations situated between 7° 29' 17" to 7° 36' 25" N latitude and 79° 47' 19" to 79° 49' 02" E longitude in the Chilaw lagoon for a period of six months (from March to August in 2016). Each water sample was analyzed at the sampling sites for pH, Electrical Conductivity (EC), Salinity, Dissolved Oxygen (DO), Turbidity, Air Temperature and Water Temperature as physical and chemical parameters. Nitrite Nitrogen, Nitrate Nitrogen, Ammoniacal Nitrogen and Dissolved Phosphate were also analyzed.

According to the experimental results, pH values of water in the lagoon fluctuated from 6.7 to 9.3 and exceeded the proposed ambient water quality standards for fish and aquatic life. The lagoon DO levels varied from 1.25 to 6.79 mg/L and the lower limit does not comply with the tolerance limit for fish and aquatic life. EC values ranged from 2.8 to 55.1 mS/cm and the corresponding Salinity variation was 2 to 35 ppt (parts per thousand). The surface water temperature and the turbidity of the water in the lagoon varied in the range of 27.4 to 33.9 °C and 0.96 to 50.3 NTU respectively. Ammoniacal Nitrogen was detected from 0.01 to 0.25 mg/L. The maximum Nitrite Nitrogen value was 0.04 mg/L and it was 0.32 mg/L for Nitrate Nitrogen. The maximum level of Orthophosphate was observed as 0.29 mg/L. Therefore, pH, EC, DO, Salinity, Turbidity and nutrients showed a significant spatio-temporal variation that affects the aquatic life in the lagoon critically.

**Keywords:** *Chilaw lagoon, aquatic life, water quality, seasonal variation, physicochemical parameters*

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## Assessment of Water Quality Status and Pollution Levels in MaduruOya Reservoir in Sri Lanka

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MaduruOya reservoir was constructed in 1983 under the Accelerated Mahaweli Program. The dam is located in North Central province and the reservoir extends to Eastern province and Uva provinces (between 7° 32' 42" to 7° 39' 57" North latitude and 81° 11' 35" to 81° 12' 21" East longitude). It is reported that high amount of nutrients and other chemical residues accumulate in water of the reservoir due to heavy use of agrochemicals in the catchment area. Fifteen locations were selected for sub-surface water sampling and analysis from February to July in 2016. Temperature, pH, Dissolved Oxygen (DO), Electrical Conductivity (EC) and Turbidity were measured *in-situ*. Ammonical nitrogen, nitrate nitrogen, nitrite nitrogen, dissolved phosphate, and other chemical parameters such as alkalinity and hardness were also assessed.

Water temperature of the reservoir varied from 29.7 °C to 36 °C while pH value was from 6.8 to 9.5. DO value was from 3.3 ppm to 9.4 ppm. EC varied from 94  $\mu\text{S cm}^{-1}$  to 200  $\mu\text{S cm}^{-1}$  and turbidity of water fluctuated from 0.96 NTU to 49.4 NTU. Ammonical nitrogen varied from 0.001 ppm to 0.652 ppm. Nitrite Nitrogen was from 0.001 ppm to 0.905 ppm and Nitrate Nitrogen was detected from 0.001 ppm to 1.131 ppm. The highest phosphate concentration was detected as 0.468 ppm near the dam site of the reservoir in July. Total hardness was from 21 ppm to 68 ppm and alkalinity varied from 15 ppm to 190 ppm. The highest pH was recorded in June near the dam site of the reservoir and exceed the WHO standards for drinking water. The maximum nitrate and nitrite concentrations were recorded in June at the middle of reservoir and maximum ammoniacal nitrogen was also recorded in June and it was at the dam site. High accumulation of nutrients can lead to eutrophication in the reservoir and it causes the spreading of toxin producing algal species such as *Microcystis* affecting the ecosystem health and human livelihood.

**Keywords:** *MaduruOya reservoir, water quality assessment, water pollution, pH value, eutrophication*

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## **Dengue Prevalence Trends in The Past Decade Across All Districts of Sri Lanka**

T. G. S. L. Prakash<sup>1\*</sup>, D. M. S. H. K. Ranasinghe<sup>1</sup>

Dengue is a viral infection transmitted by the bite of an infected mosquito. The global prevalence of dengue has increased dramatically in recent decades. Dengue fever, dengue hemorrhagic fever, and dengue shock syndrome (DSS) occur in over 100 countries and threaten the health of more than 2.5 billion people in urban and peri-urban areas especially in south and south East Asia including Sri Lanka. This study was conducted to find out the trends of reporting dengue cases in all the administrative districts over the last decade. All 25 districts were selected as study area.

Annual dengue incidence data for each district over a 10-year period from 2006 to 2015 and Midyear population data of each year were collected. Then the number of cases per 1000 people per month was calculated in each year and plotted in scatter plots and calculated the gradient of linear trend line of each district. All statistical and graphical analyses were performed using Microsoft Excel 2010. Reporting of dengue cases of all the 23 districts except Mathale and Vavuniya shows the increasing trend over the past 10 years and it can be recognized as a continues public health hazard in Sri Lanka. The gradients are ranging from 0.555 to -0.038. All the 23 districts show the positive gradients of trendline. People who live in Colombo, Jaffna and Gampaha districts are highly vulnerable for dengue fever. These finding indirectly emphasize that the different efforts employed by the authorities to control dengue cases in the country have less impact on dengue prevention. The researches have to be conducted to find out the actual courses of spreading dengue over the island and controlling measures have to be restructured to manage this public health hazard.

**Keywords:** *Dengue fever, Gradient, Public Health, Sri Lanka, Trend line*

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## Secondary Metabolites with Radical Scavenging Activity from *Daldinia Eschscholzii*, Isolated from The Lichen *Parmotrema* Sp. In Sri Lanka- Isolation and Structure Determination

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Natural products are promising leads for novel therapeutic agents. Isolation and characterization of bioactive compounds in search for potential pharmacophores has acquired a developing interest in on-going research. Although Endolichenic fungi (EF) are a rich source of bioactive secondary metabolites, they still remain almost unexploited. The present study is focused on isolation and structure elucidation of compounds with radical scavenging activity from the EF, *Daldinia eschscholzii* that occur in the lichen *Parmotrema* sp. in Hakgala Botanical Garden, Sri Lanka. *Daldinia eschscholzii* cultivated on 48 large petri dishes with PDA were incubated at room temperature for one week. Mycelia were cut in to small pieces along with the medium and extracted with ethyl acetate twice. The radical scavenging activity of the crude extract was evaluated using DPPH assay. Standard antioxidant, Butylated Hydroxy Toluene (BHT) and MeOH were used as the positive control ( $IC_{50} = 38.2 \pm 4.0 \mu\text{g/ mL}$ ) and negative control respectively. The crude extract with high radical scavenging activity ( $IC_{50} = 77.9 \pm 5.1 \mu\text{g/ mL}$ ), was partitioned with hexane, chloroform and aqueous methanol. All three organic extracts were then subjected to DPPH assay. Chloroform fraction with the highest activity ( $IC_{50} = 63.8 \pm 4.8 \mu\text{g/ mL}$ ) was further fractionated using silica gel, sephadex column chromatography and preparative TLC to isolate two pure compounds. The structures of the compounds were elucidated using  $^1\text{H}$ ,  $^{13}\text{C}$ , 2D NMR and MS data. The compounds were identified as 7-hydroxy-2-methylchroman-4-one (1) and 5-methoxynaphthalen-1-ol (2). Compound 1 showed no activity in the assay. Compound 2 showed higher activity than the standard BHT, with  $IC_{50}$  value of  $10.2 \pm 5.8 \mu\text{g/ mL}$ .

**Keywords:** *Daldinia eschscholzii*, endolichenic fungi, radical scavenging activity, secondary metabolites, DPPH assay

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## Intelligent Window Controlling System

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During the 21st century the global surface temperature has increased dramatically as a result of that, Air conditioners are often used to improve thermal comfort and indoor air quality. In both developed and developing countries, air conditioners increase the occupancy ratio of building areas. But air conditioners are expensive option for this issue. Because of that we need to optimize usage of air conditioners only in comfort zone.

This research is conducted due to the growing energy management interest in the air-conditioning industry. Most of the places outside air temperature and humidity drop down to human comfort levels during the night time. It may take considerable time to transfer these environmental conditions into the room. Insulated thermal envelope may be slowing this process furthermore. The objective of this research was to transfer the fresh outside air into the air conditioned room when the outside environment is in the comfort zone. Comfort zone is an area marked in the psychrometric chart which is comfortable for human being. The American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE's) publication on thermal environmental conditions for human occupancy has defined the comfort zone with suitable temperature and relative humidity (RH) ranges. The specified temperature and humidity ranges for the designed system are 22 Celsius & 40 RH to 27 Celsius & 60 RH respectively. The designed controller detects the outside temperature and relative humidity every 15 minutes and opens the windows of the room if the outside fall into comfort zone. When the windows are opened the air conditioner is switched off by the controller at the same time.

The designed system consists of three separate items such as outdoor unit, indoor unit and actuator driver. Relative humidity and temperature of the outside air are measured and transmitted to the room via radio frequency (RF) communication system by the outdoor unit. The indoor unit receives the transmitted signal from the outdoor unit, process it and produce appropriate signals to both actuator driver and air conditioner. Therefore, actuator driver is controlled the window according to the outside environmental conditions.

The designed system is commissioned in Thailand and it is proven that the device is significantly saving the energy in the residential sector.

**Keywords:** *Comfort zone, Psychrometric chart, energy saving*

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## **Community-Based Management Strategies in The Brush Parks Fishery of Negombo Estuary, Sri Lanka**

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The objective of this study was to investigate how fishers optimize resource use in the brush park fishery of Negombo estuary, Sri Lanka through community based management. In this regard, a questionnaire survey was carried out during 2014-2016 including semi-structured interviews and participatory observations. A five-point Likert scale was used to measure the attitudinal levels of 20 brush park fishers on the resource use for sustainability of the fishery. Ownership of a brush park and fishing rights are controlled solely by a given family for generations, and are handed down from father to son. Encroachment by externalities is prevented as long as a brush pile exists in a given site. Although there was no specific authority for governing the brush park fishery, owners themselves hold rights to implement and monitor traditional community-based fishery management (CBFM) strategies. Traditional brush park fishing activities were found to be carried out with unwritten territorial boundaries by single or joint owners following certain customary rules, where fishing rights are socially accepted. Based on the local ecological knowledge including fish feeding and migratory behavior, habitats of fish aggregation, and co-occurrence of certain fish species, brush park fishers were found to be able to predict their fishing time using weather conditions and certain other environmental characteristics such as tidal flow. Traditional demarcation of territories and appreciation of fishing rights for equity sharing of the resource have therefore ensured the governance of the dilemma of common pool resources. Results also indicated that the major threat to the CBFM was the disturbance of fish movement caused by other fishers due to the nature of their fishing practices. Hence, it is necessary to establish co-management strategies, where centralized fisheries management authorities also play a significant role in the decision making process.

**Keywords:** *Brush parks, community-based fisheries management, coastal fisheries, local ecological knowledge*

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## **An Investigation On Awareness of Smart Textile in Sri Lankan Apparel Industry**

U. Sureka<sup>1\*</sup>

Smart textiles are revolutionizing the scopes of Sri Lankan apparel manufacturers, professional designers, and textile and electronic engineers. Even though Sri Lanka is a country which exports textiles and apparel in large scale, the contribution to the Smart textile sector and its development is insignificant. This research aims to investigate the awareness of smart textiles in the Sri Lankan apparel industry, explore ongoing smart textiles projects of the industry, and also to study the consumer behavior and attitude towards those products. To explore the industry, according to the EDB data, seven uppermost apparel industries who directly involve with apparel innovations were interviewed. An apparel industry related survey were carried out using 100 randomly selected people who are directly involved with the Smart Textile subject. A consumer survey was carried using 100 randomly selected people in the general public in Colombo, Sri Lanka. Data were analyzed using Google forms and Excel charts. Further SWOT and PEST analysis were used to get to a conclusion about macro and micro environment of Smart Textile market in Sri Lanka. Analysis indicate that there is a considerable diversification and development on smart textiles in Sri Lankan apparel industry. While, Sri Lankan consumer awareness of smart textiles is limited to wearable technologies which comes under ultra-smart textile, Sri Lankan apparel industry has already started working towards capturing the manufacturing technologies of Smart Textile and its developments globally. If the Sri Lankan apparel industry focuses on producing or developing smart textiles for local consumers, the potential market segment is between age 18 and 38. Although there are number of leading smart textile brands all over the world, NIKE and Adidas are the suitable brands to introduce smart textile to the local market considering the familiarity of these brands in Sri Lanka. This study informs the Sri Lankan apparel sector in two ways; shows an emerging profitable niche market in the country and informs the apparel manufacturing boundaries to capture the global smart textile trends before it's too late.

**Keywords:** *Smart textiles, wearable technology, consumer attitudes, consumer behaviors, awareness*

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**Development of Essential Oil Based Tablets from *Cinnamomum Zeylanicum* Leaves and *Cymbopogon Nardus* Against The Stored Grain Pest Insect, *Sitophilus Oryzae* in Traditional Rice Varieties in Sri Lanka.**

P. A. Paranagama<sup>1\*</sup>, H. M. I. Maduwanthi<sup>1</sup>

Essential oils have been used as an alternative method to reduce postharvest losses from rice weevil, *Sitophilus oryzae* in traditional rice varieties cultivated in Sri Lanka. In the present study essential oils extracted from Cinnamon leaves (*Cinnomomum zeylanicum*) and Citronella leaves (*Cymbopogon nardus*) were used to control rice weevil, in three traditional rice varieties, Rathkanda al, Pachchaperumal, Suwandal along with a hybrid variety, White raw rice cultivated in Sri Lanka. Kaolin pellets treated with test essential oil mixture, *C. zeylanicum* and *C. nardus* (2: 1 v / v) were used to test the effect on rice. The major components of the essential oils of *C. zeylanicum* leaf oil and citronella oil were eugenol, citronellal and geraniol. Number of *S. oryzae* in treated rice samples throughout the test period were significantly decreased compared with the controls. A significant decrease of % seed damage was also observed during the 6 months of storage of rice in polyethylene bags. Flavor, aroma, and stickiness of cooked rice have enhanced significantly in all treated rice varieties compared to controls. The physical and organoleptic properties of cooked rice were not significantly different with controls after 6 months of treatment. Only 5 % weigh loss of kaolin tablets was revealed after completing the test. The insecticidal activity of the above essential oil mixture showed the highest effect on the rice type Suwandal.

**Keywords:** *Cinnamomum zeylanicum*, *Cymbopogon nardus*, *Sitophilus oryzae*, *Post-harvest damage*, *Organoleptic properties*, *Essential oils*, *Traditional rice varieties*.

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## **Impact of Attitude on Implementation of E-Healthcare in Western Region of Sri Lanka.**

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Healthcare, either in paper-based or digital format, is an information-intensive industry as for the industry to operate; it depends on the existence of patient health information (PHI) that is collected whenever a patient visits a healthcare center. Contrary to paper-based healthcare setup where PHI is collected every time a patient visits a healthcare center, in e-healthcare physicians collect Personal Identifiable Information only once and frequently update its related medical records. In general term, e-healthcare is related to computerization of healthcare services.

Major factors identified as significant in the introduction of information & communication technology (ICT) into health care practice are ICT literacy of staffs, confidentiality, security of e-healthcare information systems and the attitude of staffs' that will use the system. Healthcare staffs are change agents in healthcare sector. They are key drivers who play crucial role in ICT integration in healthcare. Objective of this study is to research the impact of Attitudes of healthcare staffs when implementation of e-healthcare in western region of Sri Lanka. The Computer Attitude Scale (CAS), developed by Selwyn (1997) was used to measure the health care professionals' attitudes towards the computer. It consists of four components of computer attitudes (Affect, Perceived Usefulness, Perceived Control, Behavioural intentions).

A sample of 100 healthcare staff representing doctors, paramedical staff, nurses, Development officers, clerks were assessed for their attitude with respect to ICT using a Likert type questionnaire. Samples were collected from state teaching hospitals in Colombo, Gampaha and Kaluthara districts.( Lady Ridgway Hospital for Children (LRH), Colombo North Teaching Hospital – Ragama, General Hospital Kalutara). There were 60 females (60%) participants and 40 were male (40%). The average number of years of computer use was 8.73 years (SD=5.722).

According to the analyzed data, healthcare staff in western region of Sri Lanka have positive comfort level towards ICT. Behavioral intentions of healthcare staff with respect to ICT have positive responses. Further, healthcare staff have positive feelings towards ICT and have positive beliefs about the usefulness of ICT in their job. This study clearly depict that staff of healthcare in western region of Sri Lanka have positive attitude to work in computerized environment.

**Keywords:** *eHealth, IT for hospitals, healthcare staff attitude for ICT, attitude for ICT*

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# Social Sciences

## **Analysis of Cause and Effect of Boko Haram Insurgency in North-East Nigeria**

I. Baba<sup>1\*</sup>

This work analyzed the causes of Boko Haram insurgency in North-East Nigeria. It examined the effects of the insurgency in the same region of the country. The research was carried out with the use of library based documentation analysis, and with the use of secondary sources of data collection. Academic write-ups in journals, magazines, newspapers, periodicals, reading manuals as well as internet based information provided the data utilized in this research. The research found out that Boko Haram insurgency in North-East Nigeria was incubated and hatched by both remote and immediate causes. Remote causes of the insurgency as this research discovered include illiteracy, poverty and unemployment among the youth in the region. The research also found out that alleged extra judicial killings of some of the sect members and summary execution of its leader during its first combatant confrontation with the Nigerian government forces in Markas and other areas in Maiduguri the Borno state capital in July 2009, triggered a full blown insurgency in the North-East region of Nigeria. The rise in number the Internally Displaced Persons (IDPs), as well as grave waste of lives and properties were some of the effects of the insurgency in this region of Nigeria. This research made a number of recommendations among which the rehabilitation of Internally Displaced Persons (IDPs) and the establishment of an independent commission to rebuild the North-East region especially Borno and Yobe States which were the seriously affected states in the region.

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## **Heritage Management Issues of *Pidurangala* Beritage Site.**

S. Rathnayake<sup>1\*</sup>

*Pidurangala* is a heritage site, which is situated very close to *Sigiriya* world heritage site. *Pidurangala* has a direct link with king *Kashyapa* and the *Sigiriya* kingdom. Though *Sigiriya* is a world heritage site and a famous tourist attraction, *Pidurangala* is not much popular as a heritage site among visitors. The main objective of this study was to identify the heritage management issues of *Pidurangala* and secondary objective was to introduce a proper heritage management plan to attract visitors. The research problem was “what are the issues related to heritage management in *Piduranagala*?” Both primary and secondary sources were used to collect data. Printed media (books) and electronic media (internet) were used as primary sources and field observation was used as the secondary source. There were many issues related to heritage management in *Pidurangala* site. No proper site interpretation, cleaning and maintenance issues, inadequate infrastructure and sanitary facilities, vandalism are some major problems. It is important to avoid these issues and rearrange the site. A proper management plan can be introduced using the following steps:

1. Welcoming the visitors and fulfilling their requirements
2. Defining the value of the site
3. Proper maintenance
4. Prevention of vandalism
5. Visitor management

Greeting of the guests, establishing infrastructure facilities, introducing proper a security system, gardening and landscaping, introducing a signage system, developing secondary attractions are some recommendations for a proper heritage management plan for the *Pidurangala* heritage site.

**Keywords:** *Pidurangala, heritage, visitors, management issues, vandalism.*

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## **Impact of Resettlement Villages on Crimes in Sri Lanka**

K.G.N.U. Ranaweera<sup>1\*</sup>

“Village” is the smallest element of a society. In the Sri Lankan context, village is being considered as a cluster of cultural formations. Researchers and cultural critics have been arguing about the main features of traditional villages which had been existed from time immemorial. Villages of Sri Lanka bear many significant characteristics when compared to villages of other countries. The main objective of this study was to identified whether there was an impact on crimes occurring as a result of new settlement villages on the traditional villages in Sri Lanka.

Data collection was carried out by using both qualitative and quantitative data collection methods. Qualitative data was collected from a random sample of 100 villagers from four settlement villages and 100 villagers from four traditional villages in Galle District of the southern province in Sri Lanka. Quantitative data were collected from police records belonging to a 5 year period (2005-2010) from both villages while exploring available literature as secondary data.

The study disclosed that the crimes rates of the settlement villages have been increased while traditional villages indicate minimal and unlined crime rates during the selected period. Moreover, the comparing of the traditional villages and settlement villages revealed that the lack of cohesion, anonymity, rivalry of depending, stress and built environmental factors which triggered crimes. However, Education level and financial status were not acted as growth factors of crimes.

**Keywords:** *Anonymity, Cohesion, Crimes, Resettlement villages, Traditional Villages.*

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## **Prevalence of Personality Disorders in Late Adolescents with Drug Abuse.**

N. Perera<sup>1\*</sup>

The World Health Organization defines health as “a state of complete physical, mental and social well-being, and not merely the absence of disease”. According to American Academy of Child and Adolescent’s Facts for Families, Late Adolescence is approximately between 19–21 years of age. Adolescence is a transitional stage of physical and psychological human development that generally occurs during the period from puberty to legal adulthood. In the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders, personality disorders are placed on Axis-II in the multi-axial scheme and defined through a set of general diagnostic criteria. Drug abuse is a chronic, often relapsing brain disease that causes compulsive drug seeking and use, despite harmful consequences to the addicted individual and to those around him or her. Research problem of the study was to search whether there is a prevalence of personality disorder in late adolescence with drug abuse. General objective is to prevalence of personality disorder in late adolescence with drug abuse. Specific objectives are to identify types of personality disorders in DSM IV and to identify most common personality disorder in late adolescence with drug abuse. This was a descriptive study. All participants were male. Interview based questioner was used for data collection and Used 120 participants in rehabilitation centers were interviewed. Approximately 79.2% clients were 19 years old, 16.7% were 20 years old and 4.2% were 21 years old in the sample. 88.3% were unemployed and seeking work. 5% were full time students, 2.5% were part time employed, while full time employed and full time home makers were 1.7%. Approximately 83.3% were educated up to GCE(O/L), 7.5% were educated up to GCE(A/L), 5% were educated up grade 6- 10, 2.5% were in diploma level, while grade 1- 5 and graduate level were 0.8%. Among late adolescents who had personality disorder due to drug abuse, the majority were borderline affected personalities. Its valid percentage is 34.2%. Then valid percentage of dependent personality is 15%, Paranoid personality 14%, Avoidant personality 10%, Narcissistic personality 8%, and Schizotypal personality 6%. Further Obsessive compulsive personality 5%, antisocial personality 4%, Schizoid personality 3% and histrionic personality 1%. These data show that there is a high prevalence of personality disorders in late adolescence with drug abuse.

**Keywords:** *Adolescence, Personality Disorders, Drug abuse, Diagnostic and statistical manual of mental disorders, Diagnostic criteria.*

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## **A Study on Financial Literacy of Rural Community in Sri Lanka: With Special Reference to Kurunegala District**

K.T.S. Karunathilaka<sup>1\*</sup>

Financial literacy can develop an individual's ability of using financial resources effectively and efficiently. As a result, an individual's economic wellbeing and of the social welfare is optimized. As is the case with like many developing countries, in Sri Lanka also financial literacy is in a considerably lower level. This study analyzed and assessed the financial literacy of the rural sector in the country by collecting data from 250 individuals in the Kurunegala district. On the basis of the observations made by the analysis it was found that the socio-economic status, components of income and expenditures, level of awareness, factors influencing investment behavior and perception towards the financial services are significantly related to the financial literacy level. Financial literacy is positively correlated with income, education, usage of banking products and knowledge of simple economic concepts. It was recognized that there is a higher financial literacy among the males when compared to the level of education and profession were the most significant factors that determine the level of financial literacy of a rural individual. These results suggested that knowledge and practice of the basic financial literacy should be included in the formal education syllabus and popularizing financial knowledge through various programs is a must to improve the prevailing conditions. Further formal financial institutions can introduce financial products that suit the reclaims of each sectors of the country.

**Keywords:** *financial literacy, financial literacy index, gender, level of education, rural community.*

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## **Use of Smart Boards as a Pedagogical Tool in a Public Universities in Sri Lanka**

B. Amarathunga<sup>1\*</sup>, S. Pathiratne<sup>2</sup>

In engendering this world-class fitness for purport, Sri Lankan universities play a pivotal role by being responsive, demand-led organizations that use e-technology to amend participation, achievements and the progress of their students. Objective of this study is to decide (1) the required skills, (2) the extent of utilization, and (3) the possible challenges facing the utilization of Smart board in the public university in the North- Western province of Sri Lanka. The study adopted descriptive survey research design and was carried in the North- Western province of Sri Lanka, which equipped with Smart board as pedagogical implement. The population for the study was 105. Sampling was not required because of the manageable size of the population. A structured questionnaire was utilized for data accumulation and there were divided into 3 sections predicated on the categorical purposes of the study. Reliability of the instrument was resolute utilizing Cronbach alpha method which yielded 0.78. 105 replicas of the research instrument were administered but 101 were returned and utilized for analysis. Findings of the study revealed that the Smart board is poorly utilized by the lecturers in the University in Sri Lanka and that the lecturers possess average operational skills for the utilization of computers and web browsers but remotely possess the required skills for the efficacious utilization of the Smart board. Withal Findings revealed that unstable power supply interrupting continual use, arduousness in learning the manipulation and operational adeptness and arduousness in preparing electronic note for the course content, etc. are the challenges to efficacious utilization of the Smart board. In Conclusion the study has identified the required skills, extent of utilization and the challenges facing the utilization of Smart boards.

**Keywords:** *Academia, Pedagogy, Smart board, Utilization, University.*

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## **Effect of Administration, Environment and Academic Qualifications on Motivation of the Sri Lankan Primary School Teacher's Motivation**

P. A. B. H Amarathunga<sup>1\*</sup>, S. Pathiratne<sup>2</sup>

Education is the process through which an individual is developed into an individuality and a person into a personality. Each person is different from the other and every individual has same unique potential in some field or other. Education refers to the change in behavior, attitude and culture brought about in the individual as a result of having undergone education during a particular period. In Child's inculcation primary stage implements of edifying acquisition of the schools of learning cultivation of habits of body and postures of mind compulsory for efficient acquisition of erudition formation of sound judgment and adroit performance of tasks. Edifier plays the most paramount role in primary inculcation. Objectives of the study is to find the effect of administration, location and academic qualifications on Sri Lankan Primary School teacher's motivation. The sample for the investigation consisted of 160 teachers. The stratified random sampling was applied. The male and female teachers are 77 and 83, the sample consists of 77 males and 83 female teaches from Government (87) and Private (73) schools.

Three hypothesizes was formulated for the study and the teacher's motivation was tested for significance by employing 't' – test. The results denoted that the administration has paramount effect on the motivation of teachers. Additionally, location of school has significant influence on the teacher's motivation and there is paramount influence of academic qualifications on the teacher's motivation. In Conclusion researchers can say that Administration highly influenced the teacher's motivation. Government teachers have positive teacher's motivation scores than Private sector teachers. The administrators should provide better employment facilities for the Private school teachers. Location of school also highly influenced the teacher's motivation. Urban school teachers have positive teacher's motivation scores than the rural school teachers. Therefore the administrators should provide physical facilities for the rural school teachers. Academic qualifications also highly influenced the teacher's motivation. Undergraduate teachers have positive teacher's motivation scores than the Post - graduate edifiers. This indicates that the administrators should provide more facilities for the undergraduate teachers.

**Keywords:** *Administration, Location Motivation, Primary Teachers.*

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## **Exploring factors associated with smokeless tobacco use among urban Communities in Sri Lanka**

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Smokeless tobacco is tobacco or a tobacco product that is used by means other than smoking which implies use of unburned tobacco in the finished products. These products are intended to be used orally, sucked, chewed, gargled or applied to the gums or tooth, while fire tobacco mixtures are usually inhaled into the nostrils. Chewing tobacco is a risk in getting oral cancers and pre-cancers. Other health risks of chewing tobacco include gum disease, tooth decay and tooth loss, and possible links to other cancers and cardiovascular disease. Informal observations reveal an increase in use of smokeless tobacco among youth and adolescence. Studies or health programs related to smokeless tobacco in Sri Lanka is scarce. This study attempted to explore factors associated with smokeless tobacco use among urban communities in Sri Lanka. Study design was qualitative in nature. Subjects / sample were selected based on snow ball sampling method. The study was conducted in Colombo district. Fourteen in-depth Interviews ( $n=14$ , including 8 males and 6 females) were conducted to collect data. Inquiries were made with regard to factors effecting initiation and continuing smokeless tobacco (Here, unseen determinant factors were especially taken into consideration). Saturation method was the guiding method of data collection and data were analyzed through framework analyzing method. The study found out the following factors associated with smokeless tobacco use among urban communities in Sri Lanka; Perceptions ('Being with the gang', as a youth style, Group action – Ganja Set, Pampara Set, Hanz Set), Expectancies (forget problems, keep the energy, and escape from the loneliness, to gain attraction, to gain pleasure, to keep wake up at night), distributors do it secretly acting as if they are engaged in other things, compare to other substitutions this is cheap, chemical effect cannot be seen by outsiders compared to other drugs, carelessness of parents, lack of knowledge about harmfulness of the product, peers – (not to be stigma, financial support), and certain qualities of the product (no bad smell). The study recommended an effective Health Promotion intervention to address these determinant factors.

**Keywords:** *Determinants, Smokeless tobacco.*

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## **The Apparel Industry in Sri Lanka and its Externalities (with reference to Narammala Divisional Secretariat)**

G. A. T. Nimeshika<sup>1\*</sup>, H.A.T. Hettiarachchi

When Sri Lanka liberalized its economy in 1977, the country's garment industry took off immediately. Initially quota-hopping East Asian garment exporters, attracted by the country's liberal trade regime, relocated their already well-established garment businesses to Sri Lanka. This relocation encouraged local entrepreneurs to start their own garment enterprises to exploit markets guaranteed by quotas, assisted by the liberal trade regime and incentives granted by the Sri Lankan Government. Sri Lanka has since become a world class apparel manufacturer supplying to global super brands for over three decades. However, externalities have been created by the apparel industries. The objective of this study is to identify the significance of the apparel industry and its externalities to the economy of Sri Lanka. For the research primary and secondary data has been used. Primary data has been collected from interviews and questionnaires. 100 people who are living and working in Narammala divisional secretariat were selected by using multiple cluster sampling method. Secondary data collected from Internet & websites, journal articles and books. After the survey was completed, the data was processed in SPSS for statistical results. Line graphs, percentages, tables have been used to present the collected data. This research is based on the Descriptive Analysis. Two hypotheses were created for the research:

H0: Apparel industry generated positive externalities than the negative externalities.

H1: Apparel industry did not generate more positive externalities than negative externalities.

According to the study, the positive and negative externalities could be identified. The negative externalities are water pollution with fabric dyes and massive water consumption in different steps of the process. The positive externalities are increasing the job opportunities, infrastructures facilities such as road development, transport. It can be concluded that positive and negative externalities have been created from the apparel industry, Positive externalities were greater than the negative externalities.

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## Education and Employment of Women in Sri Lanka

P. Lankeshwara<sup>1\*</sup>, N. Wijesekara<sup>2</sup>

Sri Lankan woman population is in a growing trend, where women are highlighted in every aspect in the society and the employment opportunities for the women also have been grown, where women's participation is encouraged in every operational aspect. The research is mainly focused on analyzing the need and impact of education on the successful employment of women. It has been investigated that the extent to which the education can influence the employment capabilities of women. On The other hand the education of the country is also in a path of development, where the people are given more opportunities in gaining education. The study was conducted based mainly on data gathered through the house hold and social surveys conducted by the Central bank of Sri Lanka and the Census & Statistics Department in Sri Lanka. Further independent survey has been conducted with a random sample of 150 working women, in order to gather more influential factors on their livelihood and this primary data is collected through a survey questionnaire. Basically data analysis was carried out through the statistical analysis, especially the technique of correlation has been used to distinguish the relationship between the women employment and their education. Based on the data gathered from the employed women, a strong positive correlation has been identified between the successfulness of the career and the educational support. The final conclusion was that the women's literacy as well as their engagement in the labour force is also growing, and their voice has also gained prominence. It can be said that they should successfully empowered and geared through a proper and structured education.

**Keywords:** *Women, Employment, Labour Force, Literacy, Education, Social cultural barriers.*

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## **Making and Unmaking the Meaning of Widowhood: A Case Study on Elderly Widows in Post War Jaffna**

N. Baskaran<sup>1\*</sup>

Loss and bereavement are an important part of anybody's life. Experience of loss is even more distressing when the death of a person brings additional social stigma. Such is the experience of widowhood in post war Sri Lanka. A common idea about this experience in a country like Sri Lanka is the 'colorless' life a widow is expected to live till the time she breathes on this earth. A widow is stigmatized, feared and segregated from the family and wider society. An elderly widow is at a particular disadvantage, as she has to face discrimination on three grounds – gender, age and widowhood. Given this context, this study, intended to understand the social background of elderly widows.

The main objective of this study is to consider the Common conceptions about widowhood and looking into how different meaning of this experience emerges in post-war Jaffna. Time and again many researchers have tried to get to the basics of understanding widowhood. This paper's primary concern is to fill this gap of doctrinal approach of meaning attribution to widowhood through a qualitative sociological approach on the meaning of widowhood based on real life experiences in post war Jaffna, Sri Lanka. This study makes further attempts to answer the following specific research questions– How do elderly widows construct meaning of their status as widows in post war Jaffna? And do their role, status and experience within the household and family effect creation of such meaning?

This study conducted a qualitative research based on random sampling method. This paper has reported on the experiences of 62 elderly widows. The participants were selected from a list of those who got registered as elderly widows at the divisional secretariat in Jaffna. The selected respondents were using in-depth interviews, non- direct and participant observation and key informant interviews (09) as the ways of collecting primary data through the purposive sampling. The method for the analysis of data is theme analysis based on grounded theory for the analysis of field interviews. The focus of this paper is on elderly widows as they are the ones whom more likely to have grave experience of widowhood on the basis of their gender, age, day to day life events, situations, etc. This preliminary fieldwork pertaining to the topic gave us a sense that not all the widows have attached the same kind of meaning to their widowhood experience. Creation of a; meaning depends on various factors from grief of losing a caring husband to the relief of getting rid of a drunkard husband. Since issue of elderly people have become a central part of the development and social work discourse in the post-war Tamil society, findings through this study can be helpful in developing better understanding of elderly widowhood and what kind of approach and policies need to be formulated to address their issues and grievances.

**Keywords:** *Post War, Elderly widows, Widowhood.*

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## **The Influence of Neighbours on Helping Behaviors of People**

Ven. Sobitha Karapikkada<sup>1\*</sup>, Ven. Piyadhamma Attaragoda<sup>1</sup>

Pro-social behavior is one of the very interesting topics in Social Psychology today. Helping others is a type of pro\_social behavior. Social Psychologists who investigate on pro\_social behaviors are highly concerned with factors that influence helping behaviors. In this research, the influence of neighbours on helping behaviors was investigated using natural observational method. This research was conducted with 20 volunteer participants and they were divided into two equal groups as first group and second group. The first group was asked to sit on front seats on the buses and advised to help beggars who beg on the buses while the second group was asked to sit on front seats and advised not to help beggars. The research was conducted at general bus stand of new town, Anuradhapura. It was clear that beggars earned more money from buses where the first group sat in the front seats when compared to the earnings from buses which the second group sat in the front seats. Therefore, it can be concluded that the neighbours influenced the helping behaviors of people. Therefore, finally, this research concluded that neighbors influence on helping behaviors of people.

**Keywords:** *pro\_social behaviors, neighbors, helping behavior, influence.*

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## **A Bibliometric study of Postgraduate Theses in Library and Information Science**

S. Angammana<sup>1\*</sup>

Bibliometrics is the statistical analysis of bibliographic information of research outputs and publications. It is observed that in the field of Library and Information Science this type of research is used more effectively to overcome problems faced by librarians such as selection and weeding out of information resources. Further, bibliometric analytical research demonstrates the impact of researches on researchers. These studies identify the emerging areas of research as well as strengths and weaknesses, top performing journals and researchers in a subject area and finally inform future research priorities too. Also, the rareness of this kind of researches, improve the significance of this study. The purpose of this study is to investigate the pattern of references in masters' theses in the field of Library and Information Science. For this research study 50 Master's of Library and Information Science (MLS) postgraduate theses submitted to University of Colombo during the period from 1999 to 2009 were analyzed. Citations were extracted from list of references, bibliographies and title pages. Data collected was cross-classified and tabulated according to research needs.

Total of 3349 citations were found from 50 postgraduate theses. Out of those citations 3329(99.40%) were in English, 17(.51%) in Sinhala language 2 citations in French (0.06%) and only 1 (0.03%) in Tamil. Study revealed that journals were the most heavily used source of material with 41% of the citations. The second most heavily used source of material was books accounting for 34% of the citations. Most heavily used journal was "College and Research Libraries" while most heavily used book was the "Encyclopedia of Information and Library Science". Among those citations, single author contribution accounts for 2162 citations (64%) and two authors contributions were 583 citations (17%) while three authors contribution of citations were 111(3%). More than three authors contribution accounts for only 28(1%) while corporate author contribution was 188(6%). Language-wise distribution of citations showed that the usage of Sinhala citations is negligible compared to English citations. It was concluded from the study, still the English journals are the most important reference of the Library and Information Science discipline in the Masters' level. Recommendations were made to strengthen the quality of postgraduate research encouraging to use more current journal articles in the printed and electronic versions as well.

**Keywords:** *Bibliometrics, Library and Information Science, Citations, Authorship pattern, statistical analysis.*

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## The Importance of Stress Management in Buddhist Perspective

A. Dissanayake<sup>1\*</sup>, S. Dissanayake<sup>2</sup>, N. Jayasinghe<sup>1</sup>

Stress has become a constant issue in the modern world. Most jobs involve heavy workloads and people are being pressurized to meet higher standards of living due to unlimited demands. All of this can lead to out of control stress levels and individuals are unsatisfied with the modern life style. Dr. Andrew Galizek has stated that stress is the illness of 20<sup>th</sup> century caused by the industrial revolution. The industrial countries such as Japan derive stress as Karosi because many people die due to heavy workload and uncontrolled stress levels. Positive stress can help an individual to perform under pressure and motivate but constant negative stress which is in the emergency mode will exhaust an individual physically, mentally and socially. Buddhist soft skills are one of the best ways to manage stress and towards reaching a positive lifestyle.

This paper will elaborate many Buddhist techniques which still has up to date validity even though the teachings were introduced by Lord Buddha before 2600 years in India. The significance of Buddhist techniques with compared to western psychological aspects is highlighted throughout the paper.

The word stress derived from the Latin word “Strictus” and the Buddhist term āsava which denotes the meaning of defilements or klesa is the best suitable word for mental stress. Many suttas related to āsava such as Sabbāsava, Satipattāna, Vitakkasantāna, Anumāna, Ratavinitha, Bayabherava are reviewed in this paper. The 7 methods of managing stress such as by seeing, by restraining, by using, by enduring, by avoiding, by removing and by developing according to Sabbāsava sutta is highlighted in the second part of the paper. Furthermore, eradicating stress through achieving soft skills by practicing eight fold path, ānapanasathi in Satipattāna sutta, practicing four sublime status, Saptha Bojjanga, practicing loving kindness meditation, Mahādukkakhandā sutta will be elaborated in the paper.

Buddhist stress management is discussed in this paper comparing it with western psychological inventions such as psychoneuroimmunology study in which researchers are interested in the study of psychological factors and physical changes. It is revealed that when a person is under stress the hypothalamus sends messages to endocrine glands. The studies have revealed that severe stress has caused the higher risk of heart diseases which occurs due to antagonistic hostility, chronic depression and continuous negative emotions.

Soft skills which is associated with emotional intelligence quotient which includes self-awareness, self-management, self-motivation, empathy and social skills can be well developed through mindfulness meditation. Recent neurological research which reveals neuro plasticity; the brain changes after relaxation meditation fulfills the great qualities such as loving-kindness, wisdom and sympathetic joy. These Buddhist techniques can be used to manage stress without any discrimination.

**Keywords:** *Stress, āsava, neuro plasticity, mindfulness meditation, EQ, Soft skills.*

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## **The Protection of Geographical Indications in Sri Lanka: Need of a Registration System**

P. M. A. S. Pathiraja<sup>1</sup>

In the era of knowledge based economy, the protection of industrial property rights plays an important role under the intellectual property law agenda. Among them, geographical indications (GIs) have been subjected to vigorous scholarly debate across the world in last two decades. GI as a distinctive sign, permits the identification of products on the market and protects the quality, reputation or other character of goods essentially attributable to their geographical origin. As a developing country Sri Lanka has varieties of natural resources with great economic value. Geographical Indications like Ceylon Tea, Ceylon Cinnamon, Ceylon sapphires are some of the major earners of foreign exchange in the country. Despite this GIs receive less attention when compared with other intellectual property rights. This has become a major issue in the development of law relating to GIs.

Therefore, this paper discusses the problem of protecting products of geographical origin by exploring the laws available in Sri Lanka in terms of both domestic and international obligations. The present study expects to explore a domestic registration system of Geographical Indications as an option. It also expects to propose ways for strengthening the legal framework of the country in order to accord better protection for GI in Sri Lanka. This is a qualitative research based on literature review and mainly carried out by the reference of primary and secondary data such as statutes, International treaties, academic writings, journal articles and e-sources. The comparative analysis of successful legal position in selected jurisdictions such as, India have been followed in reaching the conclusion.

**Keywords:** *intellectual property law, geographical indications, Sri Lanka, protection registration*

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## **Saving Behavior of Estate Sector in Sri Lanka: with Special Reference to Nuwaraeliya District**

A. Jayasinghe<sup>1\*</sup>, N.A.N.J. Maduwansa<sup>1</sup>, G. Rathnayake<sup>1</sup>, B. Senevirathne<sup>1</sup>

Saving is an important macroeconomic variable to be studied under the purview of the economic arena on a household basis. In Sri Lanka, the income standard is most uncertain and leads to more consumption rather than saving which has been a cardinal problem. Estate sector is one of the most energetic sectors of the economy of Sri Lanka. It is centered to limited economic activities. This study mainly focuses on underlining the determinants and significant factors of saving behavior of estate sector in Sri Lanka. The special features of this sector: poverty, minimum educational qualification and unemployment. Lack of educational qualification and lower level of income are the results of these interested teachers. The required data were acquired through a structured questionnaire and sampling method was simple random sampling with a sample size of 300 in the Ambagamuwa region in Nuwaraeliya district. The determinants of saving are analyzed empirically by a linear regression method and hidden factors are underlined by factor analysis. The income level, the expenditure level of education, confidence and savings are taken as the criteria for drawing the sample. The study finds that most of the estate sector households (72%) have a low educational qualification status, which is resulting in less awareness of the majority towards the benefits of savings. However, factor analysis found four common factors, namely lack of education, unconfidence, financial difficulties and purpose which determine the household saving behavior. Furthermore, it revealed three variables, namely level of education, confidence and purpose were significantly influenced savings. An efficient wage acts policy should be implemented by the government as many of the estate people are the daily wage workers, empowering them in proper ways which can satisfy their consumption needs and then some portion of the income can be saved.

**Keywords:** *educational qualification, estate sector, financial difficulties, purpose, saving.*

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**ළමා ආකල්ප සංවර්ධනය ප්‍රශස්ත මට්ටමකට රැගෙන ඒම සඳහා පාසල් පද්ධතිය තුළ ක්‍රියාත්මක කෙරෙන විෂය සමගාමී ක්‍රියාකාරකම් ශක්තිමත් කිරීමේ වැදගත්කම පිළිබඳ සමාජ විද්‍යාත්මක අධ්‍යයනයක්**

චිත්‍ර ම කංකානම්ගේ දොන් කීර්තිරත්න<sup>1,2\*</sup>

පාසල විෂය සමගාමී ක්‍රියාකාරකම් මගින් ළමයා ජීවත්වන සමාජය හා බද්ධ වූ සංස්කෘතිය, ප්‍රතිමාන අගයයන් හා හරපද්ධතීන් ඔහු තුළ වර්තමානය කිරීමෙහි පුරෝගාමී මෙහෙවරක් ඉටු කරයි. එමගින් දිනෙන් දින වර්ධනය වන සදාචාර විරෝධී මිනිස් හැසිරීම් හේතුවෙන් වන්මන් සමාජය තුළ නිර්මාණය කෙරෙන සමාජ ගැටලු රාශියකට පිළියම් සපයයි. එහෙයින්, ළමා ආකල්ප සංවර්ධනය ප්‍රශස්ත මට්ටමකට රැගෙන ඒම සඳහා පාසල් පද්ධතිය තුළ ක්‍රියාත්මක කෙරෙන විෂය සමගාමී ක්‍රියාකාරකම් ශක්තිමත් කිරීමේ වැදගත්කම පිළිබඳව සමාජ විද්‍යාත්මක දෘෂ්ටිකෝණයෙන් විමර්ශනාත්මකව අධ්‍යයනය කිරීම මෙම පර්යේෂණයේ ප්‍රධාන අරමුණ විය. ආගමික කටයුතු, විවිධ ක්‍රීඩා, බාල දක්ෂ, ශිෂ්‍ය හට, කේෂ්‍ර වාර්තා, සමිති සමාගම්, විවිධ සංවිධාන, සඟරා සංස්කරණ, විවෘත තරග යනු පාසල හා ඉන් පිටත දී සංවිධානය කෙරෙන විෂය සමගාමී ක්‍රියාකාරකම් වේ. මෙහි දී මාස තුනක් ඇතුළත (ජූනි 28 සිට සැප්තැම්බර් 28 දක්වා) ලංකාවේ ප්‍රධාන පුවත්පත් හා අන්තර්ජාල ලිපි මගින් පළ වූ සිද්ධීන් ඇසුරින් ලබාගත් තොරතුරු දත්ත රැස්කිරීමේ ප්‍රාථමික මූලාශ්‍රය ලෙස යොදාගෙන ඇත. ද්විතීයික මූලාශ්‍ර ලෙස විෂය සමගාමී ක්‍රියාකාරකම් පිළිබඳ විවිධ පර්යේෂකයන් විසින් ලියන ලද පර්යේෂණ ලිපි, ජාතික හා ජාත්‍යන්තර සම්මන්ත්‍රණවල දී ඉදිරිපත් කොට ඇති පර්යේෂණ පත්‍රිකා, යොදා ගන්නා ලදී. එසේ එක්රැස් කළ කරුණු විශ්ලේෂණාත්මකව සමාජ විද්‍යාත්මක දෘෂ්ටිකෝණයෙන් ඉදිරිපත් කොට ඇත.

පාසල තුළ දී හා පාසලෙන් පිට දී ක්‍රියාත්මක කෙරෙන විෂය සමගාමී ක්‍රියාකාරකම්වලට එළඳායීව දරුවන් යොමු කිරීමෙන් මත්ද්‍රව්‍ය හා මත් වතුර භාවිතය, දුම්පානය, බාල අපරාධ, නව යොවුන් වියේ ගැබ් ගැනීම්, නව යොවුන් වියේ සමලිංගික හැසිරීම්, අක්‍රමණශීලී හා ප්‍රචණ්ඩ හැසිරීම්, සියදිවි නසා ගැනීම්, වෙබ් අඩවි සඳහා අනවසර ඇතුළු වීම්, නිවෙස් හැරයාම්, මානසික පීඩනය, සොරකම් කිරීම් වැනි සමාජ ගැටළු රාශියකට විසඳුම් සෙවිය හැකි බව පර්යේෂණ තොරතුරු විශ්ලේෂණයේ දී තහවුරු වූවකි. ඒ අනුව සහකම්පනශීලී බව, චිත්තවේග පාලනය, සාමූහික බව, සහයෝගයෙන් සතුටුවීම, නීති ගරුක බව, අවංකකම, පරාජය හමුවේ වියරු නොවැටීම මෙන්ම ජයග්‍රහණය හමුවේ නිහතමානී වීම, තවකෙකුගේ ජීවත් වීමේ අයිතිය පිළිගැනීම වැනි ගුණ ධර්ම යහපත් ආකල්ප සංවර්ධනය මගින් වන්මන් සමාජය තුළ ජීවත්වන දරුවන් තුළ රෝපණය කිරීම අතීතයට වඩා වර්තමානයේ සමාජ අවශ්‍යතාවක් බවට පත්ව ඇති බව පර්යේෂණ තොරතුරු මගින් තවදුරටත් අනාවරණය විය. විෂය සමගාමී ක්‍රියාකාරකම් ළමයාට හුදෙක් කුමන හෝ කාර්යයක නිමග්න කරවන්නක් නොව ඔහුගේ ලැදියා, හැකියා, රුචිකත්වය හා අපේක්ෂා හඳුනාගෙන ඒ අනුව ඔහුව නිවැරදි දිශාවකට යොමුකිරීමට සමත් වන්නක් වියයුතු ය. එපමණක් නොව, පාසල් මට්ටමේ විෂය සමගාමී ක්‍රියාකාරකම් සංවිධානය කිරීමේ දී ඉන් අපේක්ෂිත ඉගෙනුම් එල මතුවන සේ ඒවා සංවිධානය කළහොත් විශ්වීය සමාජය හා ගැටෙන දරුවා සහකම්පනශීලීව 21වන සියවසේ අභියෝග ජය ගනිමින් වැඩෙන අයෙක් මෙන්ම සමාජයට දැරියහැකි පුද්ගලයෙක් ද වනු ඇත. තව ද, මෙවැනි පර්යේෂණ මගින් ලැබෙන නිගමන හා යෝජනා විෂය සමගාමී ක්‍රියාකාරකම් එලදායි ලෙස පාසල් පද්ධතිය තුළ ක්‍රියාත්මක කිරීමට කිසියම් මග පෙන්වීමක් කරනු ඇත.

**ප්‍රමුඛපද:** විෂය සමගාමී ක්‍රියාකාරකම්, පාසල් පද්ධතිය, ආකල්ප, සමාජ ගැටළු, දැරිය හැකි සමාජ රටාවක්.

<sup>1</sup> ෂැන්ඩොන්ග් විශ්වවිද්‍යාලය, මහජන චීනය \*wkdk1974@yahoo .com  
<sup>2</sup> පස්දුන්රට ජාතික අධ්‍යාපන විද්‍යාපීඨය, කළුතර, ශ්‍රී ලංකාව



## **Securitizing European Migration; A Conceptual Framework**

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In the current global context, migration to the European Union has become an issue of controversy. The increasing migratory flows of economic or labour migrants, asylum seekers or war refugees are said to have called for action in the European Union's security landscape. Further, a number of research studies that concern the migration and security nexus have defined migration as a central dimension of a rounded security agenda. Even international law does not recognise the right to enter another country. Further, the activities of the governing bodies that execute security measures at borders have been questioned and accused for their actions. The above, highlights the need for better policies that would operate beyond the mere military concerns, which incorporates freedom and well-being of the migrants, that would provide true meaning to the European Union's migration policy rubric; 'Freedom, Security and Justice'

The European Union's migration policies are diverse in nature and numerous in number as there are various aspects to be considered. Among the policy categories there are two separate agendas for migration and security. Hence, it is believed that migration should be an essential part of a national security strategy while national security should be embedded in the migration policy in return. Thus migration should be part of migration policy with security as a frame of reference. In light of the current security threats faced by the European Union in relation to migration, the study will examine the possibilities of the security agenda being incorporated into the migration policy agenda, to function as a single framework for a more secure and a sustainable approach on migration. Further the study will assess, whether the migration policies armed with a security agenda would point the region in a clear direction in relation to the security issues the region faces which are linked with migration.

**Key words:** *Migration, Security, European Union, Migration policies, Frame work.*

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**A Study on the Usage of Library Versus Internet as Sources of Information by Undergraduate Students of University Kelaniya: with Special Reference to Faculty of Humanities, Social Sciences, Science and Commerce & Management**

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The library of the University of Kelaniya plays a significant role to support learning, teaching and research activities of the academic community by providing print and e-resources. As at July, 2016 the library of the University of Kelaniya comprised of 250301 printed books, 2157 CD-ROMs, 1203 theses and 800 non-book materials. In addition, the library has subscribed to 60 local journals and access to provide over 12,500 full text academic journals and 100,000 e-books.

At present library usage patterns and information seeking behaviors of undergraduates have been change due to the introduction of Wifi facilities for students and changes of the courses modules, curriculums and teaching methods of the university education system. Both academic staff and students have adopted and continue to use the online information retrieval for their academic and research work. This study aims to compare the usage of library and the Internet to find information sources in the faculties of Humanities, Social Sciences, Science and Commerce & Management in the University of Kelaniya. This research attempts to determine the factors of enthusiasm and the disinterest of students on using library and Internet. All the undergraduate students in the University which is 8440 (as at August 2016) were taken as the study population and 368 students were selected as the sample by using Krejcie and Morgan method. The quantitative data were analyzed by using Descriptive Statistical Method.

Findings, of the study indicated that undergraduate students of all the selected faculties use both the library and the Internet to fulfill their information needs. The students of faculty of Science and faculty of Commerce & Management selected Internet as the most preferred source of information.

**Keywords:** *Usage of library versus Internet, Electronic resource, Undergraduates in Sri Lanka.*

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**වියපත්වුවන් මුහුණදෙනු ලබන මනෝ-සමාජීය ගැටලු හඳුනාගැනීම කඹුරුපිටිය ප්‍රාදේශීය ලේකම් කොට්ඨාශය ඇසුරින්**

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වියපත්වීම යනු (Ageing) කාලානුරූපීව සිදුවන ක්‍රියාවලියකි. එය වූ කලී ජීවිතයේ යථාර්ථයකි. සිසුයෙන් වැඩිවන වියපත් ජනගහනය සමස්ත ලෝකයටම අභියෝගයක් මෙන්ම, කඩිනමින් විසඳුම් සෙවිය යුතු ප්‍රශ්නයක් බවට පත් වී තිබේ. වියපත්වියෙහි වයස් සීමාව පිළිබඳ පොදු එකඟතාවයක් නොමැති වුවත් සාමාන්‍යයෙන් වයස අවුරුදු:60 හෝ 65 ට වැඩි වුවත් වියපත් ජනගහනය ලෙස සලකනු ලබයි. ශ්‍රී ලංකාව වියපත් ජනගහනය සිසුයෙන් ව්‍යාප්ත වන ආසියාතික රටක් ලෙස ප්‍රමුඛ ස්ථානයක් හිමිකර ගෙන ඇත. ජනගහනය වියපත්වීම විශ්වීය ප්‍රපංචයක් (Universal phenomena) බවට පත්වන තත්ත්වයක් තුළ අප සමාජයේ වියපත්වුවන් ගෘහ ජීවිතය තුළ හුදකලා වී කායිකව, මානසිකව පීඩා විඳිමින් සිටීම ඉතා බේදනීය තත්ත්වයකි. වියපත්වීම යනු බොහෝ දේ අහිමි වී යෑමක් ලෙස ද සැලකේ. මෙම අධ්‍යයනය සිදු කිරීමේ අරමුණ වූයේ ගෘහ ජීවිතය තුළ වියපත්වුවන් මුහුණ දෙනු ලබන සුවිශේෂී වූ මනෝ-සමාජීය ගැටළු (Psycho-Social issues) හඳුනා ගැනීමයි.

වියපත්වුවන්ට මුහුණ දීමට සිදුවී ඇති ගැටළු රාශියක් ඇතුළත් මනෝ-සමාජීය ගැටලු ප්‍රධාන වී තිබේ. පවුලේ සාමාජිකයින්ගෙන් ඔවුන්ට මුහුණ දීමට සිදුවී ඇති හිංසනයනන්, පීඩනයන්ද වර්ධනය වී ඇත. මේ හේතු කොටගෙන ඔවුන් දැඩි අසහනකාරී මානසිකත්වයෙන් ජීවිත ගත කරනු හඳුනාගත හැකිවිය. එහි ප්‍රතිඵලයක් වශයෙන් ඇතමුන් මත්ද්‍රව්‍යවලට ඇබ්බැහි වීම, පවුල තුළ ගැටුම් ඇති කර ගැනීමට යොමු වී තිබුණි. මෙහිදී හඳුනාගත හැකි වූ සුවිශේෂීත්වය වූයේ සිය කාලත්‍රයා (Spouse)මියයාම හේතුකොට ගෙන ඇතිවන හුදකලා මානසිකත්වය පවුල තුළ ඔවුන් තවත් අසරණ වීමට හේතු වී තිබීම ය. ඔවුන්ගෙන් බහුතරයක් වයස අවු:65-70 අතර වියපත්වුවන් වී තිබීම ද සුවිශේෂ වේ.

මෙම සමාජවිද්‍යාත්මක පර්යේෂණය සිදුකිරීම සඳහා අධ්‍යයන ක්‍ෂේත්‍රය වශයෙන් කඹුරුපිටිය ප්‍රාදේශීය ලේකම් කොට්ඨාශය තෝරා ගන්නා ලදී. එමෙන්ම දත්ත රැස් කිරීම සඳහා උපයෝගී කොටගන්නා මෙවලම් ද කිහිපයකි. ප්‍රාථමික දත්ත රැස්කිරීම සඳහා ප්‍රශ්ණමාලා ක්‍රමය, සම්මුඛ සාකච්ඡා ක්‍රමය, සිද්ධි අධ්‍යයන හා සහභාගී නොවන නිරීක්ෂණ මේ උපයෝගී කර ගැනුණි. ද්විතීයික දත්ත රැස්කිරීමේ දී වියපත්වුවන් හා සම්බන්ධ ලියවී ඇති පොත්පත්, සඟරා, අන්තර්ජාලික තොරතුරු උපයෝගී කරගන්නා ලදී.

**ප්‍රමුඛ පද:** වියපත්වීම, මනෝ-සමාජීය ගැටලු, කාලත්‍රයා, හිංසනය, විශ්වීය ප්‍රපංචය.

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## **Opportunities for Sri Lanka through China-Sri Lanka Relations (2004-2015)**

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Foreign policy of Sri Lanka has always maintained cordial relations with the world with the concept of non-alignment. China was one of the countries which had maintained strong relations with Sri Lanka since the 1952 Rubber Rice Pact. During the period of President Mahinda Rajapaksa (2004-2014), China has gained a prominent place in the country's foreign policy. The present study intends to 'identify positive opportunities which open up to Sri Lanka through maintaining of cordial relations with China during the period from 2004 to 2015'. The methodology that has followed for the study is qualitative in nature along with descriptive analysis. For the study, only secondary data has used. In examine the above research problem; the study only focuses on the strengths from content analysis.

According to the findings of the study, the positive opportunities that possessed from China-Sri Lanka relations to Sri Lanka are, military assistance and aid during the peak of the war, financial aid for infrastructure development, investment in Sri Lanka, trade relations and political support from China to Sri Lanka during the post war period. In the conclusion, it can be elaborate that even though there are mutual benefits to both Sri Lanka and China through their strong relations, Sri Lanka itself could address its requirements depending on the Chinese source of assistance. In the meantime, China's strategic interest has been achieved by establishing their presence in Sri Lanka which have sustained their 'String of Pearls' policy chain in Indian Ocean.

**Keywords:** *Opportunities, Sri Lanka, China, Positive Opportunities.*

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**පශ්චාත් සුධකාලීන ශ්‍රී ලංකාව තුළ ජාතිය ගොඩනැංවීමේහිලා ආගමික සංවිධානයන්හි බලපෑම පිළිබඳ විශ්ලේෂණාත්මක අධ්‍යයනයක්**

කේ. එම්. ඩී. සී. ප්‍රසාද්<sup>1</sup>\*

ජාතිය, ආගම, භාෂාව, කුලය, වර්ගය හෝ සංස්කෘතිය අනුව බෙදී සිටින ජනවර්ග අතර පවතින්නා වූ ගැටලු නිරාකරණය කර, ඔවුන් සියලුදෙනා සමාන අයිතිවාසිකම් ඇති සහ සමාන මනුෂ්‍ය ගෞරවයක් ඇති මිනිසුන් බවට පත්කරන වැඩපිළිවෙලක් තුළ, තමන් ජීවත්වන දේශය මුල්කර ගත් දේශාභිමානයකින් ද, සාමයෙන් ද, එකිනෙකා කෙරෙහි ගොඩනගා ගත් ආදරය සහ ගෞරවයෙන් ද ක්‍රියාකරන ශ්‍රී ලාංකීය ජාතියක් ප්‍රතිනිර්මාණය කිරීම, ශ්‍රී ලංකාවේ දේශපාලන සන්දර්භය තුළ ජාතිය ගොඩනැංවීම ලෙස සැලකිය හැකිය. වර්තමානය වන විට ප්‍රජාතන්ත්‍රවාදී ආණ්ඩුක්‍රමයක හා ජාතික රාජ්‍යයේ පැවැත්ම සඳහා එක්සත් ජාතියක් බිහිකර ගැනීම මෙන්ම ප්‍රජාතන්ත්‍රවාදී සාක්ෂරතාවයක් සහිත සමාජ ක්‍රමයක් නිර්මාණය කරගැනීම සඳහා ශ්‍රී ලංකාවට අවශ්‍යව තිබුණ ද, එම අවශ්‍යතාවය සපුරා ගැනීමට වර්තමානය වන විට නොහැකි වී ඇත.

මෙම අවශ්‍යතාවය සපුරාගැනීමේ දී ආගමික සංවිධානවල ක්‍රියාකාරිත්වය ජාතිවාදී මුහුණුවරක් ගෙන ක්‍රියාකරන බවට චෝදනා එල්ල වන්නේ ඇයි? යන්න අධ්‍යයන ගැටලුව ලෙස සකසා ගනිමින් මෙම අධ්‍යයනය සිදු කරන ලදී. මෙම අධ්‍යයනයේ දී මහර ප්‍රාදේශීය ලේකම් කොට්ඨාශයට අයත් නීලමහර ග්‍රාමීය ප්‍රදේශයෙන් පුද්ගලයින් 210 ක් සරල සසම්භාවී නියැදි ක්‍රමයට තෝරාගෙන එනම් 20% ක් තුළින් මෙම අධ්‍යයනය සිදු කරන ලදී. එහි දී ජාතිය ගොඩනැංවීම සඳහා ආගමික සංවිධානයන්හි කාර්යභාරය, බලපෑමේ ස්වරූපය පිළිබඳ විමසන ලදී. ඊට අමතරව ආගමික සංවිධානයන්හි ස්වරූපය, ජාතිවාදී මුහුණුවරක් ගැනීම සම්බන්ධව තවදුරටත් මෙම අධ්‍යයනයේ දී විමසන ලදී. මේ සඳහා ප්‍රාථමික දත්ත හා ද්විතියික දත්ත රැස් කිරීම සිදු කළ අතර වගු, ප්‍රස්ථාර යනාදී විස්තරාත්මක ක්‍රමවේදය ඔස්සේ දත්ත ඉදිරිපත් කිරීම සිදු කරන ලදී. ඒ අනුව අන්‍යාගමිකකරණය, මූලධර්මවාදී ක්‍රියාකාරකම් සහ ආගමික පදනම් කරගත් අන්තවාදී සංවිධාන බිහිවීම නිසා ඒවායේ ක්‍රියාකාරිත්වයේ අනිටු ප්‍රතිඵල ජාතිය ගොඩනැංවීමට බධාවන හෙයින්, ආගමික නායකයින් සහ සංවිධාන සෘජුව ඊට මැදිහත්වීම සහ ඒවාට ප්‍රතිචාර දක්වන්නට යාමේ දී, ජාතිය ගොඩනැංවීමේ ක්‍රියාකාරිත්වය පසුගාමී වී ඇතිබව මෙහි මූලික නිගමනය විය. මෙහිදී ආගමික නායකයන් සහ සංවිධාන තම පෞද්ගලික මතවාදයන්ගෙන් බැහැරව සහ මූලික අරමුණ වූ ජාතිය ගොඩනැංවීම සඳහා පමණක් ක්‍රියාත්මක වීම හරහා මීට විසඳුම් ලබාගත හැක.

**ප්‍රමුඛ පද:** බෞද්ධ ආගම, ජාතිය ගොඩනැංවීම, ප්‍රජාතන්ත්‍රවාදය, ආගමික සහජීවනය, ජාතික රාජ්‍ය

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව \*prasahas@gmail.com

**පාසල් නිල විෂයමාලාව ප්‍රායෝගිකත්වයට නැගීමෙහි දී ඇතිවන ගැටලු පිළිබඳ විමර්ශනාත්මක අධ්‍යයනයක්**

විමලධම්ම එම්පේ<sup>1\*</sup>, සෞභිත කාරාපික්කාඩ්<sup>1</sup>

පාසල් විෂයමාලාවෙහි අන්තර්ගත කරුණු ප්‍රායෝගිකත්වයට නැගීමෙහිලා යම් යම් දුර්වලතා පවතින බව හැඟියයී. සිසුන්ගේ හැසිරීම් අධ්‍යයනය කිරීමෙන් වර්තමාන අධ්‍යාපනය තවදුරටත් සංවර්ධනය විය යුතු මට්ටමක පවතින බව පැහැදිලිය. පාසල හා ඉන් පරිබාහිරව සිසුන් තුළ පවතින සමාජානුයෝජනය නොවූ හැසිරීම් පාසල හා සමාජයට පද්ධතියක් ලෙස ගැටලු ඇති කර වන මට්ටම දක්වා වර්ධනය වී ඇත. පාසල් නිල විෂයමාලාව තුළින් යහපත පුරවැසියන් බිහිකර ගැනීම දිගුකාලීන පරමාර්ථය වේ. එකී පරමාර්ථ උදෙසා සියලු විෂයයන්ගෙන් උත්සාහ දරනු ලැබේ. එහි දී බුද්ධ ධර්මය විෂය සද්චාරාත්මක බව ඇති කිරීමට ප්‍රමුඛ දයකත්වයක් සපයන බව එහි අරමුණු හා නිපුණතාවලින් ගම්‍ය වේ. උක්ත කරුණු අධ්‍යයනය සඳහා ශ්‍රී ලංකාවේ තෝරාගත් දිස්ත්‍රික්ක දෙකක 1 සී වර්ගයේ පාසල් දෙකක උද්‍යෝගි ආගමික වතාවත් ඇසුරින් කෙරෙන විමර්ශනාත්මක අධ්‍යයනයකි. ඒ සඳහා ප්‍රශ්නාවලී, සම්මුඛ සාකච්ඡා, නිරීක්ෂණ හා ලේඛනගත දත්ත යොදා ගන්නා ලදී. තොරතුරුවල නිරවද්‍යතාව හා විශ්වසනීයතාව ආරක්ෂා කිරීම සඳහා දත්ත ත්‍රිකෝණීකරණය කරන ලදී. එහි දී පහත සඳහන් අනාවරණයන් වඩාත් සුවිශේෂී විය. සිසුන්ගේ වර්ත සංවර්ධනය සඳහා සියලු ගුරුවරුන්ගේ අවධානය නොමදව ලැබිය යුතු අතර එය විනය භාර ආචාර්යවරුන්ට පමණක් භාරකිරීම සුදුසු නොවන බවත් යහපත් සමාජානුයෝජනය සඳහා දැනුම පමණක් ලබාදීම ප්‍රමාණවත් නොවන අතර ප්‍රායෝගිකව ක්‍රියාකාරකම්වල යෙදවීම අත්‍යවශ්‍ය වී ඇත. සිසු ආකල්ප වර්ධනය වීමට එය බෙහෙවින් බලපානු ඇත. සද්චාරාත්මක වර්ධනය කෙරෙහි නිවසෙහි පවතින පරිසරය හා සංස්කෘතිය බෙහෙවින් බලපාන අතර එය සිදු වන්නේ සීමිත සිසු පිරිසක් සඳහා පමණි. ඒ නිසා නිල විෂයමාලාවේ අන්තර්ගතය ප්‍රායෝගිකත්වයට නැගීමට නිවසින් ද වැඩි දයකත්වයක් ලබාදීම ඉතා වැදගත්ය. සමාජයේ සෘණාත්මක විය යුතු ආකල්ප ධනාත්මකව සැලකීම තවදුරටත් සිදු නොවිය යුතු අතර එය සිසුන්ගේ සමායෝජනය සඳහා වැරදි ලෙස බලපානු ඇත.

**ප්‍රමුඛ පද:** සමාජානුයෝජනය, සද්චාරය, පාසල් නිල විෂයමාලාව, වර්තමානය, බුද්ධ ධර්මය විෂය.

<sup>1</sup> හික්ෂු විශ්වවිද්‍යාලය, අනුරාධපුරය \*dhammaampe@gmail.com

## **An investigatory study on psychological basis of the celestial concept of Goddess Paththini**

Kusum Herath<sup>1\*</sup>

Among illustrious celestial concepts of Sri Lanka, veneration of Goddess Paththini abides at a foremost eminence. It appears that people affiliate offerings for this Goddess to fulfill their various objectives. It reveals from investigations that this celestial concept is especially of a psychological nature according to the creeds and reverence. The objective of this research is to investigate into the psychological basis of celestial cult of Goddess Paththini. Significance of this research is the potential of revealing the psychological attribution of the celestial concept of Goddess paththini among other divine faiths. The research problem of this study is to ascertain as to whether a psychological basis is present in celestial concept of Goddess paththini among other types of heavenly faiths. Methodology of this research is ascertaining facts by conducting interviews with devotees from various stages of the society of Goddess Paththini and associating preliminary and secondary texts composed on this celestial blessed faith in order to explore into the types of persuasions, practices and obligations offered to Goddess Paththini at Nawagamuwa Dewalaya. It can be concluded that Sinhalar, tamil devotees from all parts of Sri Lanka make offerings to Goddess Paththini at Nawagamuwa Dewalaya to fulfill their objectives. According to nature of their offerings, it was observed that the devotees depend on the reliance of positive results with confidence by anticipating redress, neutral reservation and consolation. The devotees are compelled to make offering to honor their obligations irrespective of caste, creed or nationality. Most devotees regard and respect the compassionate and gracious appearance of Goddess Paththini. Conclusion of this research is that more than in any other celestial concepts, the concept of Goddess Paththini is richly supplemented with a psychological basis in offerings and oblations.

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## **The Contribution of the Handicraft Industry towards the Industry of Tourism**

C. Senarathna \*

Tourism industry is an economic bewitchment for most countries in the globe. In this background tourism sector has become one of the main and effective industries in Sri Lankan service production sector. Foreign exchange that is generated by tourism industry should be distributed among the stakeholders for a sustainable development of the country. Sri Lankans are rich in unrecognized skills to create a large amount of tangible and intangible creations like crafts, traditional arts, dancing, music etc. Through these crafts, Sri Lanka can create a competitive market to which even the locals can be attracted. There are many traditional handicrafts in Sri Lanka. Made using creative minds, feelings, tactics and tools and they could to create an attractive product to the market. Most tourists wish to purchase something to take back to their motherland from traveled destinations as a souvenir. Sri Lanka is a country which encompasses a number of unique tangible and intangible values. Therefore it is advisable to recognize the target groups to sell these products as a market strategy. Handicraft industry in Sri Lanka plays a great role in selling these products in an efficient manner.

In this background, the objective of this research was to identify the obstacles of the handicraft industry and solutions for those with a view to creating a perfect outcome. This qualitative study is mainly based on secondary data: published journals, reports and the internet. It can be seen that, there is no sufficient methodical plan to develop his industry and people who are engaged in the industry, are facing number of problems. High prices of finished goods, low quality productions, high production cost and the less production capacity are some problems that here identified. This situation resulted in creating a low demand of Sri Lankan handicrafts at the international market. Uplifting the traditional craftsmen for a quality and market attracted product via training programmes and workshops, introducing modern technology for finishing an effective outcome are some of the solutions towards creating a proper established market. Giving incentives to produce these tourists' related productions using traditional and intangible values while approaching in a qualitative manner comparing the trade with the international level, paying attention to take necessary steps to re-establish the arts and craft villages and giving awards to encourage locals for their creations are some recommendations that can be suggested.

**Keywords:** *tourism industry, handicrafts, local community, tourists, products.*

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**ශ්‍රී ලාංකීය බෞද්ධ කාන්තාව සහ ප්‍රාදේශීය දේශපාලන ක්‍රියාවලිය පිළිබඳ අධ්‍යයනයක්**

බොදාගම සුමන හිමි<sup>1\*</sup>, කරුපික්කාඩු සොබිත හිමි<sup>1</sup>, පී.ඩබ්.පී. ධම්මික විරකෝන්<sup>2</sup>

ප්‍රාග් බෞද්ධ යුගයේ දී කාන්තාවන්ට ආගමික, දේශපාලනික හා සමාජීය නිදහසක් නොතිබුණු යුගයකි. මෙවන් වකවානුවක බුදුරජාණන් වහන්සේ කාන්තාවට නිදහස් පරිසරයක් උදාකරලීම සඳහා වින්තනමය විප්ලවයක් සිදු කරන ලදී. කාන්තාව පුරුෂයන් හා සමානත්වයෙහි සලකා කටයුතු කළ අතර “ගෙදර බුදුන් අම්මා, ස්වාමියාගේ හොඳම යෙහෙළිය බිරිඳයි” යනාදී දේශනා මගින් මවක්, යෙහෙළියක්, දියණියක්, ගෘහණියක් වශයෙන් ඇයට හිමිවිය යුතු අයිතිවාසිකම් ලබාදීම උදෙසා මහත් කාර්යභාරයක් සිදු කරන ලදී. බෞද්ධ සාර ධර්මවලට අනුව කාන්තාව යනු සාමාජික, ආර්ථික, දේශපාලනික හා ආගමික අයිතීන් හමුවේ තම ශක්තිය බුදු දහමින් පෝෂණය ලබා ඇති බෞද්ධ සංස්කෘතියට උරුමකම් කියන මුළුමහත් මානව වර්ගයාගේ යහපත උදෙසා කටයුතු කළ හැකි තැනැත්තියක් බව පසේනදි කොසොල් රජුට දියණියක් ලැබ දුක්මුසුව සිටිනා විට දී පෙන්වා දී ඇත. මෙකල කාන්තාවක් ලෙස උපත ලැබීම මහත් පාපයක් ලෙස සැලකූ යුගය කාන්තාව ද සමාජ සුභසිද්ධිය වෙනුවෙන් කටයුතු කරන්නට හැකි පිරිසක් ලෙස බුදු දහමේ පෙන්වා දෙයි. ශ්‍රී ලාංකීය ආර්ථිකය විමසන කල්හි කාන්තාව සතු කාර්යභාරය මවක්, දියණියක්, සොයුරියක් හා බිරිඳක් වශයෙන් සාමාජයට විශේෂ සේවාවන් රැසක් ඉටුකරන බව පෙන්වා දිය හැක. සංවර්ධන ක්‍රියාවලියේ දී ගෙවිලියක් සහ කම්කරු ලෙස ශ්‍රමය කැපකරන කාන්තාව අධ්‍යාපනය ලබා නගරයට පැමිණෙන විට සෞඛ්‍යය, අධ්‍යාපන, ආරක්ෂක, පරිපාලන, ගුවන් සේවා, කර්මාන්ත, ව්‍යාපාර, මාධ්‍ය ,ධීවර, දේශපාලනය ආදී ක්‍රේෂ්‍ර රැසක කටයුතු කරන බව පැහැදිලිය. නමුත් ඇතැම් කේෂ්‍රවලට කාන්තා නියෝජනය අවශ්‍යවුවත් ඒවායේ ඇය රැදී සිටින්නේ සුළු වශයෙන්වීම කණගාටුවට කරුණකි. දේශපාලන යනු පිරිමින්ට හුදෙක්ම අයත් කේෂ්‍රයක් ලෙස සිතිය යුතු නැත.

අපේ රටේ දේශපාලන ක්‍ෂේත්‍රයට කාන්තා නියෝජනය සිය දහස් ගණනින් අවශ්‍ය යුගයකි. කාන්තාවන් දේශපාලන නියෝජනය කිරීම නිසා ගමක්, පළාතක්, රටක් සුන්දරවනු ඇත. ජනතා ප්‍රශ්න, තරුණ ගැටලු, ළමා ප්‍රශ්න ආදියෙහි සංවේදී කාන්තා ඇසකින් මනාව ස්පර්ශ වනු ඇත. දේශපාලනයේ යෙදෙන අනෙකුත් පාර්ශව සංවේදී කිරීමට අලුත් ඇසකින් ලෙව දකින්නට කියාදීමට ඇයට හැකිවනු ඇත. මේ තුළින් කාන්තා ප්‍රවණඛත්වය, කාන්තා හිංසනය පිටු දැකීමට හැකිවනු ඇත. කාන්තාවන්ගේ අභිවෘද්ධිය උදෙසා වඩා පුළුල් සහභාගිත්වයක් දක්නට ලැබෙන්නේ කාන්තාවන් අධ්‍යාපනය තුළින් බලගැන්වීම මගිනි . 19 වන සියවස අග දී ක්‍රියාත්මක වූ බෞද්ධ හා හින්දු පුනර්ජීවය තුළ කාන්තා අධ්‍යාපනය සඳහා විශේෂ මෙහෙවරක් ඉටුවිය. මෙම ව්‍යාපාරය උගත් සංස්කෘතියක් රකින,දේශීයත්වය පිළිගත් නව කුල කාන්තාවන් බිහිකිරීමේ කාර්යයට උරදී සිටියේය. ශ්‍රී ලංකීය දේශපාලනයේ ප්‍රාදේශීය දේශපාලන ක්‍රියාවලිය කාන්තා නියෝජනය ශක්තිමත් කිරීමට නම් ක්‍රියාකාරී වැඩ පිළිවෙළකින් යුක්ත වියයුතු බව මෙම අධ්‍යනයෙන් පෙන්වාදිය හැක.

**ප්‍රමුඛ පද:** කාන්තාව, කාන්තා අයිතිවාසිකම්, ප්‍රදේශීය දේශපාලනය, කාන්තා නිදහස, බුදු දහම

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## Use of E-resources among Education Professionals in Sri Lanka: Evaluating the Usage and the Need for Promotion

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Technology continuously develops as societies evolve: it is becoming a part and partial of many things that human beings engage in. But South Asian countries like Sri Lanka do not always show a considerable tendency in utilizing e-resources effectively. Disparities of utilizing internet based learning materials have been reported among different occupations. E-resources can be utilized by the teachers to deliver knowledge effectively, while being up-to-date aware of the current concepts of teaching. Thus we intended to evaluate the use of e-resources in a group of Sri Lankan teachers. This combined qualitative and quantitative (descriptive cross sectional) study was conducted in September 2016 at University of Peradeniya.

Teachers from five schools in Kandy district were selected using non probability purposive sampling. In depth interviews were conducted using a semi-structured questionnaire after obtaining informed written consent. They rated themselves on a five-point Likert scale as how frequently they use e-resources for the educational purposes (5=daily to 1=never). Statistical analyses were conducted using a coding framework with a priori alpha of .05. A total of 24 [male (33.3%, n=8), female (66.7%, n=16)] were interviewed. The subjects aged from 24-52 years with a mean of 35.2±8.4 years. Majority (75.0%, n=18) were Sinhalese, followed by Tamils (16.7%, n=4) and Muslims (8.3%, n=2). Majority of the teachers did not access e-resources frequently. The median and mode of the score was 3 (=less than once a week, more than once a month). The score was non-normally distributed [skewness=0.125(SE=0.472), kurtosis=-1.272(SE=0.918), Shapiro-Wilk test:  $W(24) = .844, p = .002$ ]. Independent sample Mann Whitney  $U$  test revealed that there was no significant difference of the frequency of using e-resources between males and females ( $p > .05$ ). Spearman's rank order correlation coefficient test found a negative correlation between the frequency of e-resource usage and the age ( $r_s = -.422, n = 24, p = .04$ ). More than three quarters (n=16) reported that they were not adequately educated or trained about how to use e-resources to support their teaching learning process. Only two were aware of the online courses. Except three teachers aged  $\geq 45$  years, all accessed facebook daily.

The results suggest that the majority is competent in accessing internet, especially the young. But there is a need of promoting the usage of e-resources among teachers in Sri Lanka to enhance their continuous professional development as well as for effective delivery of knowledge in the classroom.

**Keywords:** Teachers, online material, internet, e-resources.

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**ලංකාවේ වර්ෂ නිරූපණය සඳහා යොදාගත් කටපයාදී ක්‍රමය**

හසිත වාමිකර ගුණසිංහ<sup>1\*</sup>

සන්නිවේදනයේ ඉදිරි පියවරක් ලෙස අතින් මිනිසා ලේඛන කලාවට පිවිසීමත් සමග සංඛ්‍යාත්මක අගයයන් ද ලිඛිත මාධ්‍යයෙන් ඉදිරිපත් කිරීමට උත්සුක වූ බව පෙනේ. ආරම්භයේ දී අක්ෂර භාවිතයෙන්ම සංඛ්‍යාත්මක අගයයන් නිරූපණය කරනු ලැබූව ද, පසුව ඒ සඳහාම වෙන් වූ විශේෂිත සංකේත භාවිත කරන ලදී. එක් එක් ශිෂ්ටාචාරවලට අනන්‍ය වූ ලක්ෂණ සහිත අංකන ක්‍රම බිහිවන්නේ ඒ අනුව ය. ලාංකේය ශිෂ්ටාචාරය තුළ ද එක් එක් කාලවකවානුවේදී අංකනය සඳහා භාවිත කරන ලද බවට හඳුනාගත හැකි දේශීය මෙන්ම විදේශීය අංකන ක්‍රම කිහිපයකි.

ලාංකීකයන් විසින් වර්ෂ නිරූපණය කිරීමේ කාර්යය සඳහා භාවිත කරන ලද අංකන ක්‍රම පිළිබඳ අධ්‍යයනය කිරීම අරමුණු කොටගත් මෙම අධ්‍යයනයේ ගැටළුව බවට පත්වූයේ කටපයාදී ක්‍රමය කිනම් අන්දමින් රජරට රාජධානි සමයේ පටන් මේ දක්වා ලංකාව තුළ භාවිත වන්නේ ද යන්න සොයාබැලීමයි. සාහිත්‍ය මූලාශ්‍රය අධ්‍යයනය සහ සම්මුඛ සාකච්ඡා ක්‍රමය මෙහි දී යොදාගනු ලැබූවේ අධ්‍යයන ක්‍රමවේදය වශයෙනි.

ව්‍යංජන අක්ෂරවලට සංඛ්‍යාත්මක අගයයන් ආදේශ කොට අංකනය සඳහා යොදාගැනෙන කටපයාදී ක්‍රමය, ක්‍රි.ව. පස්වන සියවසේ පමණ ඉන්දියාවේ දී නිර්මාණයට වන්නට ඇතැයි පිළිගැනේ. එහෙත් මෙම ක්‍රමය පිළිබඳ ලංකාවෙන් හමුවන පැරණිතම සාධකය දකගත හැකි වන්නේ පොළොන්නරු යුගයට සමකාලීනව ය. මහනුවර යුගය වන විට වැඩි අවධානයක් හිමිව තිබූ කටපයාදී ක්‍රමය, පහතරට මුහුදුබඩ පළාත් ආශ්‍රිතව වැඩි වශයෙන් භාවිත වී ඇති අන්දම දකගත හැකිය.

කටපයාදී ක්‍රමයේ ඇති විශේෂත්වය වන්නේ එක් සංඛ්‍යාවක් නිරූපණය සඳහා අක්ෂර කිහිපයක් භාවිත වීමයි. එමගින් අංකනය සඟවමින් කේතනය කිරීමක් සිදුවන හෙයින් මෙකී ක්‍රමය පිළිබඳ දැනුවත් අයට පමණක් සංඛ්‍යා හඳුනාගැනීමේ අවකාශය හිමි වේ. මේ හැරුණු විට දීර්ඝ අංකන පහසුවෙන් මතක තබාගැනීමට කටපයාදී ක්‍රමය යොදාගත් අන්දම ජ්‍යාතිෂය, තාරකා ශාස්ත්‍රය හා ගණිතය වැනි විෂයයන් යටතේ සම්පාදනය වූ භාරතීය පාඨ ග්‍රන්ථවලින් දකගත හැකිය. එපමණක් නොව දක්ෂිණ භාරතීය සංගීත ප්‍රස්ථාරකරණය සඳහා ද භාරතීයයන් විසින් මෙම ක්‍රමය යොදාගනු ලබන බව කියැවේ.

අංකනය පිළිබඳ පැරණි ලාංකීකයන් සතු වූ පුළුල් ආකල්පය පිළිබිඹු කෙරෙන කටපයාදී ක්‍රමයට අතිරේකව මෙරට භාවිත කරන ලද සිංහල ඉලක්කම්, ලිත් ඉලක්කම් හා භූත සංඛ්‍යා ආදී අංකන ක්‍රම සියල්ලම පාහේ වර්තමානය වන විට අභාවිතයට පත්ව ඇති අතර හින්දු අරාබි ඉලක්කම් ක්‍රමය පමණක් පොදුවේ භාවිත කෙරෙන බව පෙනෙන්නට තිබේ.

**ප්‍රමුඛ පද :** පැරණි අංකන ක්‍රම, කටපයාදී ක්‍රමය, බ්‍රාහ්මී ඉලක්කම්, සිංහල ඉලක්කම්, ලිත් ඉලක්කම්, භූත සංඛ්‍යා

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව \*hachagu@gmail.com

## **Female Leadership as Revealed by Historical Sources (Content Analysis from Historical and Archaeological Perspectives)**

S. Ranasinghe<sup>1\*</sup>

For sake of safety, stability and integrity of the prevalent administration machinery the peace, their sacrificial commitment and the mediation of the Women factor played a very vital role. The stability and strength the power of intervention and commitment of the community of Women was a deciding factor for the safety and smooth running of the public administration machinery of ancient Sri Lanka. The Women and the ruler were not only the idealist forerunners in the dynamics of the field of politics of the social fabric of Sri Lanka, but also they were the carrier elements of the human culture. The women leadership which has not come up for an open serious discussion in the historical society has topped up to be an open topic of discussion.

Intervention of the Women in the fields of politics does not come within the purview of the attitudes of the Women. The Women community established soon after the arrival of *Arahath Mahinda Thero* in Sri Lanka which spread all over Sri Lanka. Furthermore, the manner in which relationship were built between the Women and the ruler, the impact the Women made on the polity, the service ruler, rendered for the ruler, and what were the kind of benefits the ruler yielded from that support, the intervention the Women made on the ancient days polity, their role and the response that society offered towards that intervention of the Women all these are expected be studied critically in this paper. In the way so as to how the various and multiple recorded media very regarding the integration of the material and spiritual concepts, in the same way their historical roots also are found deposited in multiple fields. In the same way, this research is recorded as a comparative study of archaeological facts and pre-colonial system of records, all integrated and merged.

Intervening of the Women into the political field became a powerful backing for the authority and power of the ruler going up immensely. It has tended to act directly and indirectly as well, both to freeze the pattern of the rule to a routine and tradition. In the same way, it was an effective force in feeding the rulers with a code of ethics and one that opened the ways and means of avoiding attacks and challenges to them shooting up from the open society. The cooperation extended by the rulers for the good of the Women community to the political institution and political leadership become a powerful force in shaping the leadership and the institution. But it also turned out to be a violent and sentimental force that disturbed the ancient political institution. Thus, the Women become the dynamic symbol of the force of the state balancing its historical political route. Also it has shown that those are dynamics and changing elements and also gifted them to the modern political fabric.

**Keywords:** *Women, Ruler, Material and Spiritual concepts, Political, Sri Lanka.*

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**බුදුසමයෙහි උපැවිදි කිරීමේ නිර්ණායක පිළිබඳ විමසුමක්**

පඤ්ඤාලෝක කුබුගොඩරේ හිමි<sup>1\*</sup>, සෝබිත කාරාපික්කාඩ හිමි<sup>1</sup>

ක්‍රි.පූ. 06 වන ශතවර්ෂයේ බුදුරදුන් ධර්මාන සමයෙහි භාරතීය ශාසන සම්ප්‍රදායන් ප්‍රධාන වශයෙන් දෙකක් දක්නට ලැබුණි. එනම්, බ්‍රාහ්මණ සම්ප්‍රදාය හා ශ්‍රමණ සම්ප්‍රදාය වශයෙනි. වෛදික යුගයේ සිට පරිණාමීයව ආ හින්දු ආගමෙහි කුඩාප්‍රාචීනිය ක්‍රි.පූ. 06 වන ශතවර්ෂයේ සිදුව තිබුණි. බමුණු ආධිපත්‍ය යටතේ ගොඩනැගුණු එම බ්‍රාහ්මණ ආගමෙහි බමුණන් ගොඩනැගූ ශාසන සම්ප්‍රදාය බ්‍රාහ්මණ සම්ප්‍රදාය නම් විය. බ්‍රාහ්මණ සම්ප්‍රදාය සෘජු හෝ වක්‍ර වශයෙන් ප්‍රතික්ෂේප කර ඉන් පරිබාහිර සම්ප්‍රදායක් ගොඩනැගූ අචේලක පරිබ්‍රාජක යනාදී පිරිස් ශ්‍රමණ සම්ප්‍රදායට අයත් වේ. ශ්‍රමණ සම්ප්‍රදායෙහි මස්තකප්‍රාචීනිය ලෙස බෞද්ධ ශ්‍රමණ සම්ප්‍රදාය හඳුන්වා දිය හැකිය. හික්බු යන ප්‍රමුඛ පදයෙන් හැඳින්වූ හික්සුව පැවිදි කිරීම හා උපැවිදි කිරීම සම්බන්ධයෙන් දක්නට ලැබෙන නිර්ණායක රාශියකි. මෙහි දී අපගේ විශේෂ අවධානය යොමු වන්නේ හික්සුවක් උපැවිදි කිරීම පිළිබඳ බෞද්ධ නිර්ණායක කවරේද යන්නයි. විශේෂයෙන් හික්සු විනය පිළිබඳ වඩාත් කතා බහට ලක්වන මෙවැනි යුගයක මේ පිළිබඳව අධ්‍යයනය කිරීම වඩාත් උචිත බව හැඟේ.

බෞද්ධ විනය ග්‍රන්ථයන්ට අනුව හික්සුවට හිමිවන ප්‍රධාන දඩුවම් තුනකි. 1) බුහ්ම දණ්ඩනය 2) පැවිදි සමාජයෙන් ඉවත් කිරීම 3) උපැවිදි කිරීම. මේ අනුව උපැවිදි කර පිටත්කර හැරීම සිදුකළ හැක්කේ සාමාජිකයන් හික්සුවක් සඳහා පමණි. විනය පිටකයෙහි මහාවග්ග පාලියෙහි දැක්වෙන ආකාරයට දුර්ගුණ දහයකින් යුත් සාමාජිකයන් සිවුරු හරවා පිටත් කළ හැකිය. ඒ සඳහා සෘජු ලෙසම උපාධ්‍යාය, ආචාර්ය යන දෙදෙනාට බලය තිබේ. නමුත් උපසම්පන්න හික්සුවක් සම්බන්ධයෙන් ගනු ලබන සෑම විනය ක්‍රියා මාර්ගයක්ම ප්‍රාතිමෝක්ෂ දේශනයන්ට අනුව සිදුකෙරේ. එය ඉතාම වගකීම් සහගත ක්‍රියාවලියකි. අපගේ පර්යේෂණයට අනුව විශේෂයෙන් සතර පාරිච්ඡිකාවන්ට පත් වූ හික්සුව පර්යේෂණ මණ්ඩලයක් මගින් පෝය සීමාවක පැවැත්වෙන පර්යේෂණය අවසානයේ උන්වහන්සේට අදාළ චෝදනා ඉදිරිපත් කර සංඝ සමාජයේ කටයුතුවලින් බැහැර කිරීම සිදුකළ හැකිය. විනය පිටකයෙහි මේ සඳහා "අසංවාසො" (සංවාසයට නුසුදුසු) යන පදය බහුලව භාවිතා කර ඇත. එමගින් කිසිවිටෙක සිවුරු ගලවා ඉවත් කිරීම අදහස් නොවූනද සම්බුද්ධ පරිණිර්වාණයෙන් පසුව රාජ්‍ය මැදිහත්වීම් සමග බොහෝ හික්සුන් උපැවිදි භාවයට පත්කර ඇති අයුරු පැහැදිලි වේ. නව හික්සු කතිකාවතෙහි ද (2015.12.11) උපැවිදි කිරීම යන්න දඩුවමක් ලෙස දක්වා නොමැත. ඒ අනුව විශේෂයෙන් අප මෙහි දී අවධානය යොමු කරනුයේ හික්සුවක් උපැවිදි කළ හැකිද ? ඒ කෙසේද ? ඒ සඳහා රාජ්‍ය මැදිහත්වීම බලපානු ලබන්නේ කෙසේද යන කරුණු පිළිබඳවයි.

**ප්‍රමුඛ පද: පැවිද්ද" උපැවිද්ද" සාමාජික " උපසම්පදා" හික්සු විනය**

<sup>1</sup> හික්සු විශ්වවිද්‍යාලය, අනුරාධපුරය \*kumbugoda@gmail.com

## **Application of Buddhist Middle Path for Mass Communication Process: A Phenomenological Approach.**

S. Senarath<sup>1\*</sup>, N. Dissanayake<sup>1</sup>

The Middle Path (*majjhimā paṭipadā*) is the precious way to apply in solving every problem, including mass communication. According to the teaching of Lord Buddha, the Middle Path (*majjhimā paṭipadā*) is not a condition between two extremes like the Daoist *yin* and *yang* opposites or complements. It also different from the Aristotelian “*The Golden Mean*” and the “*Confucian doctrine of the Mean*”. The Middle Path is transcending both axes of extremes.

The Buddhist middle path means the most effective way leading to the cessation of *dukkha* (un-satisfactoriness) that lies between the extremes of searching for happiness through the pleasures of the senses, and the other extreme searching for the same through self-mortification in different forms of asceticism.

The West claims the credit for ‘inventing’ the social sciences, including communication, as disciplines (Gunaratne, 2015). Most of the research in communication studies show an Anglo-American bias. In this regards, this field needs revision with complementary research incorporating the Eastern phenomenological perspective (Gunaratne, 2015, Senarath, 2015, 2016). The time is ripe for the emergence of [a new] genre [of communication studies] based primarily on Buddhist principles (Gunaratne, 2015).

Buddhist phenomenological approach could be one of the best way to uncover the universal problems which western based scientific method alone cannot explore (Gunaratne, 2015, Senarath, 2015, 2016).

**Keywords:** *Buddhism, Middle Path, Phenomenological approach, de-westernization, Mass Communication.*

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## **The Impact of Celebrity Endorsement in Mobile Telecommunication Industry of Sri Lanka: With Reference to The Undergraduates in Government Universities**

A. Embuldeniya<sup>1\*</sup>

Mobile Telecommunication Industry is a fast growing industry that acquires more consumers to their respective service providers day by day. Most of the mobile telecommunication service providers tend to endorse their service by a celebrity or celebrities. Celebrity is a personality who is known to the public for his or her accomplishments in the areas. Celebrity endorsement is a form of advertising used by all most all well-known products and services to enhance their profitability.

This research aims to analyze undergraduates' behaviour in using telecommunication services in relation to celebrity endorsement for advertising. The research study emphasized on the undergraduates' category of the society as it represents the young generation with the layers of the society. Primary data was collect through structured questionnaire regarding the factors considered about the celebrity concerned such as trustworthiness, expertise, attractiveness, similarity, and respect in contrast other contributing factors of the mobile telecommunication such as network coverage, rates per minute, and other additional features in choosing telecommunication service provider. Undergraduates in government universities in a particular time are identified as the population of the research while the internal undergraduates belong to University of Kelaniya are the target population of which the sample was two hundred (200) undergraduates. The sample selected by stratified random sampling technique included to probability sampling methods while identifying the different faculties as strata. Hypotheses were constructed in order to gain the objectives of the research. Therefore Descriptive analysis, Chi-square test, and Analysis of Variance (ANOVA) were used to analysis of data.

The findings of the research conclude that there is no significant relationship between celebrity endorsement and undergraduates' behaviour in consuming mobile telecommunication services and there is no difference in buying intention among the undergraduates in different faculties. Therefore celebrity endorsement is a non-effective aspect in terms of telecommunication advertising with reference to the undergraduates in Sri Lanka.

**Keywords:** *Celebrityendorsement, Telecommunication, Undergraduates, Government Universities.*

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## **The Impact of Wage Level to Employee Job Satisfaction in Apparel Sector of Sri Lanka**

A.M.N.J. Abeykoon<sup>1\*</sup>

In today's competitive business world job satisfaction represent the one of the most complex areas facing today's managers when it comes to managing their employees. Job satisfaction can be considered as one of the main factors when it comes to efficiency and effectiveness of business organization. Because job dissatisfaction causes lack of loyalty, increase absenteeism, increase number of accident and increase employee turnover. Job satisfaction is inversely related to turnover intention and low turnover has been shown to increase organizational productivity and performance. When analyzing job satisfaction, the logic that a satisfied employee is a happy employee and a happy employee is a successful employee. Wage level is essential factor when considering the job satisfaction.

The study focused on identifying the relationship between wage level and employee satisfaction. Primary data were collected from 60 employees who have employed the muscles in operation sector in garments at kurunegala district. This sample was collected from 832 employees of population. Simple random sampling method was used to select samples for this study. Questionnaire and interviews were used to collect primary data. Secondary data were collected through Central Bank report, report of census and statistics department, Books, and magazines. Bar chart, pie chart and line chart were used to present the data. Descriptive, chi Square test and Pearson correlation analytical tool were used for data analysis and SPSS software was used to analysis data. According to the result and analysis, there is a positive correlation between wage level and job satisfaction but majority of employees were satisfied about their over time allowances and salary increment than their basic salary. However, wage level is the not only factor but also there are other factors which effected employee job satisfaction. Such as transport facilities, sanitary facilities, working condition and social status. Therefore, recommendation is to provide attractive employee package for employees, increase basic salary, create satisfy working environment to increase the job satisfaction of employees.

**Keyword:** *Job satisfaction, Wage Level, Employee Turnover, Organization.*

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## **The Impact of the Use of Online Social Networks on Employee Performance (With Reference to Department of Cultural Affairs)**

S.M.T.N. Senanayake<sup>1\*</sup>, S.M.H.R. Senanayake<sup>2</sup>

Social network site is a platform to build social networks or social relations among people who share similar interests, activities, backgrounds, or real life connections. "People seek and share ideas, information, experiences, expertise, opinions, and emotions with both acquaintance and strangers on the interest, based on the effect of the wisdom of crowds" (Surowiecki, 2004). Some organizations are very fair about the impact of social networks on employee performance. But others are strongly unfair about it. The job related activities expected of a worker and how well those activities were executed is called employee performance. Research problem is the impact of social networks on employee performance. Majority of employees in Sri Lanka the government and private organizations use or log in to social networking sites while they are working. This study will be conducted to identify the impact of using social networks by the employees while on duty on employee performance? Main objective in this research is To identify the impacts of online social networks on employee performance. Research methods was to conducting a research survey to evaluate the relationship between online social networks and employee performance. Out of total 80, 50 employees at the department of cultural affairs were used as the sample. Data collection is an important aspect of any research study. Both secondary data and primary data are very helpful for gather information. Primary data was collected through a structured questionnaire and observation. Secondary data will be collected through relevant books, reports, articles, journals, related websites etc. For the quantitative data analysis, MS excel, was used as the statistical tools. The analysis showed that female employees are using online Social networks than males. They are 56% while the rest 44% is Males. Female are using most online Social network technology while on duty. Employees are using online social networks in various age categories. There are 47% between 20-28 age category employees, 27% between 29-35 age category and 22% between 36-45 age category employees are using online social networks while on duty. When consider about the age group of above 45, 4% percentage are using online social networks. Above indicates that a majority of respondents had been visiting online social media sites regularly. According to the findings, 30 respondents have visited every day. According to the findings, only 25 out of 50 respondents agree that using online social networks is beneficial to the office work. 5 respondents strongly agreed with this statement. 10 respondents have a neutral point of view towards it. Sum of 15 employees out of 50 are disagree with this statement. Therefore, on the whole it can be concluded that use of online social networks positively impact the office work. Therefore, the research findings show that the usage of online social networks while on duty has a positive relationship on employee performance.

**Keywords:** *Social Network, Government Employee Performance, Work place Effect.*

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**Ihagama; a Sharp Brainy Strategist Revealed by the Governor Robt. Brownrigg's Letter Dated on 5th November 1816**

S. B. H. Mudiyansele \*<sup>\*</sup>

The name "Ihagama" is of a Buddhist Priest who lived in British Colonial Era in Ceylon. The Objective of this research is to investigate about "Ihagama" as a contemporary strategist who influenced the battle of 1818. The Strategies Adapted to win the battle were holding of secret meetings, deploying of sleuths, using Bikkuhu as sleuths, trying to develop foreign relationship with the intention of getting a king from Burma, trying to integrate British hostile forces, conducting oblations and psalms, offering bribes etc. Historical Methodology was used for the Data collection of this research. Since 2nd March 1815 Sinhala People started fighting against the British Government. In this battle the Leadership was given by Bikkus who lived in upcountry at that time. Among them, some Buddhist Bikkhus emerged as fighters for the freedom of the Nation. Leadership and activities of "Ihagama" was a huge threat to the British Government. As British were informed that "Ihagama" was the leading personality in the anti-British movement in the Ceylon, the British authorities in Ceylon took action to curb his Organizing with the help of the loyal aristocrats and spies who lived in Ceylon. Finally it could be concluded that "Ihagama" is one of the most patriotic leaders and a Sharp brainy strategist who was interested in organizing the activities to safeguard the country and the Buddhist Religion from the British Tyranny.

***Keywords:*** "Ihagama", British Governance, Buddhist Priests, Strategies, Battle.

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**සාහිත්‍යය මූලාශ්‍රයවලින් හෙළිවන චතුරංගනී සේනාව පිළිබඳ අධ්‍යයනයක්.  
(අනුරාධපුර සහ පොළොන්නරු යුග ඇසුරින්)**

පීචන්ති හර්ෂණි<sup>1\*</sup>

ශ්‍රී ලංකාවේ දේශපාලන ඉතිහාසය පිළිබඳව අධ්‍යයනය කොරතුරු ලබාගැනීමේ දී සාහිත්‍යය මූලාශ්‍රය ඉතා වැදගත් වේ. සාහිත්‍යය මූලාශ්‍රය ගණයෙහිලා දේශීය මෙන්ම විදේශීය මූලාශ්‍රයන් දැක්විය හැකිය. සාහිත්‍යය මූලාශ්‍රයන්ගෙන් හෙළිවන ශ්‍රී ලාංකීය දේශපාලන ඉතිහාසය තුළ දැකිය හැකි වැදගත් අංශයක් වනුයේ චතුරංගනී සේනාවයි. එය ඇත්, අස්, රිය, පාබල යන සේනාංකයන්ගෙන් යුක්ත වේ. දේශපාලනික වශයෙන් ස්ථාවරත්වය පවත්වාගෙන යාමටත් ප්‍රදේශවල බලය තහවුරු කරගැනීමටත් ආක්‍රමණවලින් මිදීමටත් චතුරංගනී සේනාව වැදගත් වේ.

අනුරාධපුර හා පොළොන්නරු යුගයන්හි රජුන් සතුව චතුරංගනී සේනාවක් තිබුණේ ද යන්නත් එහි කාර්යය හා වැදගත්කම පිළිබඳවත් අනාවරණය කරගැනීම මෙම පර්යේෂණයේ අරමුණයි. මෙහි දී ක්‍රමවේදය වශයෙන් පර්යේෂණ මාතෘකාවට අදාළ ප්‍රාථමික සාහිත්‍යය මූලාශ්‍රයන් ඔස්සේ කරුණු ඒකරාශී කරණු ලැබීණි. ලාංකික රජුන් සතුව පැවති සිවුරග සේනාව හෙවත් චතුරංගනී සේනාව පිළිබඳව ලාංකීය සාහිත්‍යය මූලාශ්‍රයවල ප්‍රධාන වශයෙන් කරුණු ඉස්මතු කර නොමැති වුව ද ඇතැම් රජුන්ගේ රාජ්‍ය කාලයන් විමසීමට ලක්කිරීමේ දී එම පාලකයන් සතුව චතුරංගනී සේනාවක් පැවති බව හෙළිකරගත හැකිය. නමුත් මහාවංසය යනාදී සාහිත්‍යය මූලාශ්‍රයවල බොහෝ අවස්ථාවල සඳහන් වනුයේ 'මහසෙන්', 'මහබල' යනුවෙනි. කෙසේවුවත් මෙරට පාලකයන් සතුව ප්‍රබල සිවුරග සේනාවක් සිටි බව ආක්‍රමණයන්ට මුහුණදෙමින් ලක්දිව එක්සේසත් කිරීම හා අභ්‍යන්තර සාමය පවත්වාගෙන යාම තුළින් හෙළිවේ.

චතුරංගනී සේනාව හා එහි කාර්යයභාරය පිළිබඳව කරුණු රැසක් භාරතීය රාජ්‍ය පාලන මූලධර්ම අන්තර්ගත මූලාශ්‍රයක් වන අර්ථශාස්ත්‍රයෙහි වේ. පුරාණ යුගයේ පටන්ම මෙරට රජුන් සතුව චතුරංගනී සේනාවක් සිටි බව හෙළිවුව ද අර්ථශාස්ත්‍රයෙහි සඳහන් චතුරංගනී සේනාව පිළිබඳ ඇතැම් න්‍යායන්හි ආභාසය සිය සේනා සංවිධානයේ දී ලක් රජුන් ලබාගන්නට ඇතැයි ද අනුමාන කළ හැකිය.

සාහිත්‍යය මූලාශ්‍රයගත කරුණු කාරණාවලට අනුව අනුරාධපුර හා පොළොන්නරු යුගයන්හි ක්‍රියාත්මක වූ චතුරංගනී සේනාව ප්‍රබල තත්ත්වයක පැවතිය ද ඇතැම් අවස්ථාවල දී දුර්වල තත්ත්වයට පත්ව තිබූ බව පෙනීයයි. රාජ්‍යය අවධිවල පැවැත්ම උදෙසා චතුරංගනී සේනාව ඉතාමත් වැදගත් දේශපාලනික මූලිකාංගයක් බවට පත්ව තිබූ බව අනාවරණය කරගැනීම මින් අපේක්ෂිතය.

**ප්‍රමුඛ පද:** අනුරාධපුරය, පොළොන්නරුව, දේශපාලනය, චතුරංගනී සේනාව, සාහිත්‍යය මූලාශ්‍රය

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව \*nisansalaharshani200@gmail.com

**අනුරාධපුර යුගය ආරම්භයේ සිට පොළොන්නරු යුගය අවසානය දක්වා ක්‍රියාත්මක වූ වරපුරුෂ සේවය.**

ප්‍රාර්ථනා කරුණාරත්න<sup>1\*</sup>

අතීතයේ සිට සෑම රාජ්‍යයක් ම රාජ්‍ය පාලනය ස්ථාවරව පවත්වා ගැනීම සඳහා වරපුරුෂ සේවාව යොදාගත් බවට සාධක හමුවේ. මෙම ලක්‍ෂණය ශ්‍රී ලංකාවේ රාජ්‍ය පාලනය ගොඩනැගීම සඳහා පොදු වූවක් නොව සෑම රාජ්‍යකටම විශේෂිත වූ පාලන අංශයක් ලෙස ක්‍රියාත්මක වූ අයුරු දක්නට ලැබේ. රාජ්‍ය නිලධාරීන් හා ඔවුන්ගේ රාජකාරීන් අතර වරපුරුෂයන් හා ඔවුන්ගේ සේවයන් රාජ්‍යතන්ත්‍රයේ ප්‍රවාහක බලවේගය වූ බව ඉතිහාසය පිරික්සීමේ දී පැහැදිලි වේ. මේ අනුව අනුරාධපුර රාජධානියෙන් ඇරඹුණු ලංකාවේ ස්ථාවර දේශපාලන ක්‍රියාවලිය තුළ වරපුරුෂ සේවාව අද දක්වාම ක්‍රියාත්මක වුවා දැයි පරීක්‍ෂා කිරීම මෙහි අරමුණවේ.

මේ සඳහා ප්‍රස්තුත කාල පරිච්ඡේදය වූ අනුරාධපුර යුගයේ සිට පොළොන්නරු රාජධානිය අවසානය දක්වා ලාංකීය පාලන තන්ත්‍රයේ ක්‍රියාත්මක වූ වරපුරුෂ සේවාව පිළිබඳ පර්යේෂණ සිදු කිරීම සඳහා ප්‍රාථමික හා ද්විතීයික මූලාශ්‍රය භාවිතා කළ අතර මෙරට, වරපුරුෂයන් කෞටිල්‍ය අර්ථශාස්ත්‍රය වැනි මූලාශ්‍රයවල විවිධ නාම භාවිතා කරමින් හඳුන්වා ඇත්තේ, ගුඩ පුරුෂ, සත්කුන්, අපසර්ප හා චාර ආදී වශයෙනි. බොහෝ මූලාශ්‍රයවල මෙම රාජකාරියට ප්‍රමුඛතාවක් ලබා දී ඇත. කෞටිල්‍ය අර්ථශාස්ත්‍රයේ වරපුරුෂයාගේ ස්වරූපය, ඔවුන්ගේ ප්‍රභේද ඔවුන්ගෙන් අපේක්‍ෂිත සේවය හා රාජ්‍යතන්ත්‍ර විෂයෙහි ඔවුන්ගේ ක්‍රියාකාරීත්වය යන කරුණු විමසා බලයි. ලංකාවේ ක්‍රියාත්මක වූ වරපුරුෂ සේවය පිළිබඳ මූලාශ්‍රය අධ්‍යයනයේ දී මෙකී ලක්‍ෂණ සැලකිල්ලට ගන්නට ඇති බව සිතිය හැකිය.

දේශපාලනික ව්‍යාකූලත්වයක් ඇති වූ සෑම අවස්ථාවකදීම සතුරාගේ ඉදිරි කටයුතු පිළිබඳ තොරතුරු සපයා ගැනීම සඳහා බොහෝ අවස්ථාවල වරපුරුෂයන් විවිධ වෙස්ගෙන අවශ්‍ය තොරතුරු සපයා දී ඇත. අනුරාධපුර යුගයේ දී වරපුරුෂ සේවය වඩාත් කැපීපෙනෙන ලෙස යොදා ගත්තේ කාවන්තිස්ස හා දුටුගැමුණු රාජ්‍ය කාලවල දී බව පැහැදිලි වේ. පොළොන්නරු යුගයේ දී බාහිර හා අභ්‍යන්තර වශයෙන් පැවති දේශපාලන ව්‍යාකූලත්වයන් හේතුවෙන් බොහෝ පාලකයන් වරපුරුෂයන් යොදාගත්ත ද මේ අතර කැපී පෙනෙන්නේ, ඉ වන පරාක්‍රමබාහු රජුය. මේ අනුව රාජ්‍ය පාලනය ගෙනයාමේ දී ඇතිවූ දේශපාලන ව්‍යාකූලත්වය හමුවේ වරපුරුෂ සේවය වඩාත් ප්‍රයෝජනවත් වූ බව මින් නිගමනය කළ හැකිය.

**ප්‍රමුඛ පද :-** අනුරාධපුර, පොළොන්නරු, වරපුරුෂ සේවාව, කෞටිල්‍ය අර්ථශාස්ත්‍රය, ශ්‍රී ලංකාව

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව \*sumuduprarthana92@gmail.com

**පැරණි ලක්දිව පැවති රෝග හා ප්‍රතිකාර විධි පිළිබඳව විමර්ශනයක් (අනුරාධපුර හා පොළොන්නරු යුග ඇසුරෙන්)**

සුධර්මා ප්‍රේමසිරි<sup>1\*</sup>

“ආරෝග්‍යා පරමා ලාභා” යනු බුදුන් වහන්සේගේ දේශනාවන්හි අන්තර්ගත වන්නා වූ සුවිශේෂී ඉගැන්වීමකි. ඒ අනුව අතීත ලාංකීය ජනයා ද නිරෝගිකම පරම ලාභයක් ලෙස සිතා කටයුතු කළ බව ඉතිහාසගත තොරතුරු අධ්‍යයනය කිරීමේදී පැහැදිලි වේ. නිරෝගිභාවය උතුම් සුවයක් වශයෙන් සැලකෙන අතර මිනිසාගේ මූලික අවශ්‍යතාවයක් වන ආහාර, නිවාස, ඇඳුම් පැළඳුම් යනාදියට අමතරව වෛද්‍ය අංශය සඳහා ද හිමි වනුයේ සුවිශේෂී ස්ථානයකි. මිනිසාගේ අනෙකුත් සියලු ම අංශයන්හි තීරකයා බවට පත් වනුයේ නිරෝගි බවයි. මේ හේතුවෙන් අතීත ලාංකීයයා නිරෝගි බව කෙරෙහි සැලකිලිමත් වන්නට ඇතැයි හමුව තිබෙන සාධක ඇසුරින් උපකල්පනය කළ හැකිය. වර්තමාන සමාජයේ වුව ද සෞඛ්‍ය මිනිසාගේ මූලික අවශ්‍යතාවලින් ප්‍රධාන වන අංශයක් වශයෙන් නම් කර ඇත්තේ ද නිරෝගිභාවය උතුම් සුවයක් වන නිසා වන්නට ඇතැයි සිතිය හැකිය. වසර දහස් ගණනක ඉතිහාසයකට උරුමකම් කියන ශ්‍රී ලංකාව තුළ ක්‍රමයෙන් වර්ධනය වූ දියුණු වෛද්‍ය ක්‍රමයක් පැවති බවට ඉතිහාසගත තොරතුරු හමු වේ.

අතීත ලාංකීය සමාජයේ පැවති රෝග මොනවාද? ඒ සඳහා භාවිතා කළ ප්‍රතිකාර විධි මොනවාද යන්න පිළිබඳව අධ්‍යයනය කිරීම මෙහි මූලික අරමුණ වේ. එහිදී උණ, වසංගත, අතිසාර, වර්ම රෝග ආදී නොයෙකුත් රෝග සඳහා විවිධ ප්‍රතිකාර ක්‍රම භාවිතයට ගෙන තිබුණි. ඒ අතර බෙහෙත් ඔරු භාවිතය, ජන්තාසර භාවිතය මගින් සිදු කළ ස්වේද ප්‍රතිකාරය, ශල්‍ය කර්ම සිදු කිරීම, පුහුඬා වෙද කර්මය භාවිතයට ගැනීම, ආගමික සහ වෙනත් ක්‍රමෝපායන් යොදා ගත් බවට සාහිත්‍යය හා පුරාවිද්‍යාත්මක සාධක හමු වේ. මෙහි දී අධ්‍යයන කාල පරාසය ලෙස අනුරාධපුර හා පොළොන්නරු යුගය යොදා ගත් අතර මහාවංසය, දීපවංසය, අභිලේඛන වැනි ප්‍රාථමික මූලාශ්‍රයන් මෙන් ම ද්විතියික මූලාශ්‍රය අධ්‍යයනය ද පර්යේෂණ ක්‍රමවේදය වශයෙන් යොදා ගැනුණි. ලක්දිව පැවති රෝග සඳහා ඉතා උසස් මට්ටමේ ප්‍රතිකාර විධි භාවිතයට ගෙන තිබෙන බව නිගමනය කළ හැකිය.

**ප්‍රමුඛ පද - වෛද්‍යවරයා, ප්‍රතිකාර, ආරෝග්‍යශාලා, රාජ්‍ය අනුග්‍රහය, නිරෝගිභාවය**

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## **What Are the True Reason for Divorces in Sri Lanka?**

W.N.M. Fernando<sup>1\*</sup>

The Objectives of the researcher is to look in to the reasons legally stated as the causes for the divorce and to what extent they differ from the 'true' causes for divorce. It was also inquired into the reasons given by both male or female and tried to bring out the differences between them with regarded to the reasons for divorced. The researcher also proposes steps that could be taken to reduce the number of divorces.

This particular research was based on the Western province and mainly Gampaha district. Gampaha district was chosen for the research as people of different cultural and social backgrounds live in Gampaha. A hundred questionnaires were distributed covering 50 families comprising males and females in different economic, educational backgrounds and holding different jobs.

The methods use by the researcher was the survey conducted from 1 march 2016 to 2016 September 01. The data is collected through qualitative and quantitative approach by the distribution questionnaires. It was collected through helpers, phones and by the researcher herself. Analysis was done by probability sample through stratified Sample.

Most of the true reasons are different from the legal reasons. The main reason which they called upon to courts was malicious desertion. If the reason was adultery subsequent to marriage it has to be proven the proper way, like by a police report. So it is very difficult to prove. And incurable impotency also has to be proven by a doctor. So most of them use malicious desertion or constructive malicious desertion for the divorce as reason because they do not want to answer questions about their character or sexual life. And also many people are not divorced but are only legally separated. Some are separated but not legally. If they are legally separated for two years they can seek divorce. And if they are not in a same house and stay without sex also have reason for divorce. So the new approach is not to divorce but only legal or non-legal separation. The true reasons found out from females are homo sexuality cases, lack of understanding, sexual disability, family interference, and communication problems. The male's true reasons as found out are homo sexuality cases, family interference, and communication problems

Researcher proposes a free counseling system for everyone in Sri Lanka, to teach sexual education in the schools, and to change the law to safe guard privacy.

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## **A Study on the Orientation Program Conducted by the University Senior Students for the Freshers**

D. Herath<sup>1\*</sup>

There is a criticism in the university and society regarding the orientation program conducted by the senior students of the universities for the freshers. Some group of senior students and the Student's Union activists try to carry out this "home grown" orientation program uninterruptedly. The university administration tries to control this orientation program in response to innumerable complaints made by the students subjected to this program. It has resulted in creating a conflict situation between the university administration and the student activists. The aim of this research is to find out the opinion of the university students towards the above mentioned orientation program.

The students from the four Faculties of University of Kelaniya, i.e. Faculty of Social Sciences, Humanities, Commerce and Management and Science of the University of Kelaniya were used as a research sample. Hundred students from each Faculty were selected according to the random sample method. Questionnaire, participatory observation, interview and case study methods were used to collect data.

The orientation program conducted by the senior students has created controversy owing to misunderstanding between students and administration regarding surreptitious political interferences in student affairs, unauthorised activities, and hidden agendas. This study recommended that it is necessary to organize useful and systematic program that are transparent, supportive, and helpful in getting to know each other and socialise within a framework of the university life.

**Keywords:** *Orientation program, Controversial, Students, Administration, Systematic.*

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## **Pulathisi Ravaya: The Lost Opportunity in Rural Broadcasting**

D. B. Herath<sup>1\*</sup>, W. Rupasinghe<sup>1</sup>, D. Jayasekara<sup>1</sup>, M. Aththanayaka<sup>1</sup>

Sri Lanka is one of the first countries which started radio broadcasting in the early 20th century. This broadcasting unit under the British colonial rule was maintained for the benefit of the rulers to entertain their officials and the troops located in several areas of the Indian sub-continent. After the end of the Second World War radio began to air more local content since independence radio broadcasting continued as a government department. 1979 was the year in which the Colombo centered broadcasting monopoly ended with the opening of the Rajarata Sevaya as a first regional Radio Broadcasting Service. Since then few stations like Ruhuna and Kadurata started, they inaugurated another format of radio broadcasting popularly named “Community radio”.

Pulathisi Ravaya was yet another Broadcasting service which was started in 1995 under the control of SLBC and was maintained by the Mahawali Development Authority. It functioned until 2002 and terminated without any known legitimate reason. This study tries to analyze Pulathisi Ravaya by using the case study method. For collecting data, we have deployed several methods such as field study, content analysis of the programme scripts, interviews and primary and secondary sources such as administrative reports and reminiscences of the broadcasters.

We found that this well-established radio service terminated due to lack of cooperation, misunderstanding and the power struggle between the stakeholders of the radio. This study suggests that exploring the possibilities of re-inaugurating it and filling the vacuum for radio broadcasting like Pulathisi Ravaya in the North Central Province

**Keywords:** *Radio Broadcasting, Pulathisi Ravaya, regional Radio, Community radio, Broadcasting Monopoly.*

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## **A Study of South Indian Influences on the Politics in Sri Lanka During the Post Conflict Period (2009-2015)**

H.E.N. Priyadarshani<sup>1\*</sup>, Ravindra Samarawickrama<sup>2</sup>

While an important place belongs to the relationships of Indo-Lanka since the past, the tendency, which can be seen currently, is the interference of South India alias Tamilnadu to the Sri Lanka politics after the war. The activities of several political parties especially in Tamilnadu, have made an influence for this situation. According to that making influences by South India to the decision of the central government in the Human Right Session of the United Nations, poser of fishermen of Lanka, attacks to the Sri Lankan pilgrims in India are some of the incidents, which take prominent place and because of these situations, brain-teasers have risen in the Sri Lankan politics. Therefore, this research is worthy and timely important in subjective wise. This study aimed to answer why the south Indian factor affects strongly towards the politics in Sri Lanka during the post conflict Period. This study study the south Indian interference results towards the ethnic conflict in Sri Lanka and study the Indo-Lanka relationship in association with the foreign policies. As the methodology of this survey, the secondary data were utilized and the limitations of the survey had to study since 2009 to 2014. Results and conclusions of this study, Indo-Lanka relationship takes a strong place and situated location of Sri Lanka in South Asia is also considered as a significant matter. Since the origin of the Tamils, who live in Sri Lanka occurred inside India, especially South India acts by introducing a part of the Tamil, who lives in North as a component of their own. And the politics in Tamilnadu stands as the representatives of the Sri Lankan Tamil based on the doubt of occurring unjust from the Sinhalese Nationals in Sri Lanka for the Tamils in the North and the incidents, which happened in the past. Under these circumstances, it can be indicated that Indian interference to the Sri Lankan politics is becoming strongly.

***Keywords:*** India, Sri Lanka, Tamilnadu, Influences, United Nations.

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**ශ්‍රී ලංකාවේ ප්‍රාදේශීය ආණ්ඩුකරණය තුළ යහපාලන සංකල්පයේ ක්‍රියාකාරීත්වය (කැස්බෑව නගර සභාව කෙරෙහි විශේෂ අවධානය යොමුකරමින්)**

එච්.ඊ.එන්. ප්‍රියදර්ශනි<sup>1\*</sup>

ප්‍රජාතන්ත්‍රවාදී සමාජයක පදනම ශක්තිමත් වන්නේ යහපාලනය තුළිනි. යහපාලන සංකල්පය ලෝකයේ දියුණු දේශපාලන භාවිතාවක් ලෙස සාකච්ඡාවට බඳුන්වන සංකල්පයකි. රජයේ පොදු ආයතන, පොදු කටයුතු මෙහෙයවා ක්‍රියාත්මක කිරීම, මහජන සම්පත් කළමනාකරණය, මහජනතාවගේ සංවර්ධන කටයුතු, මිනිසාගේ ආරක්ෂාව ඇතුළු සියලුම මානව අයිතිවාසිකම් සහතික කරන ක්‍රියාකාරීත්වය රාජ්‍ය පාලනය වේ. මෙකී පාලන බලය සහභාගීත්වය, නීතියේ ආධිපත්‍ය, විනිවිදඛණ, ප්‍රතිවාරාත්මක බව, සම්මුති පාදකවීම , සමානාත්මතාවය , කාර්යක්ෂමතාවය , වගවීම යන ලක්ෂණ සහිත යහපාලනයක් රාජ්‍ය පාලනය තුළ පවත්වාගෙන යා යුතු ය. වර්තමානය වන විට ලාංකික සමාජය වසර ගණනාවක් පැවති යුද්ධයේ ප්‍රතිඵල, දේශපාලන පොරොන්දු කඩවීම්, අල්ලස හා දූෂණය, අයිතිවාසිකම් උල්ලංඝනය, දිනෙන් දින වැඩිවන වංචා, යනා දී අර්බුදයන්ට මුහුණ පා සිටී. විශේෂයෙන්ම යහපාලන සංකල්පය ප්‍රාදේශීය ආණ්ඩු තුළට කොතෙක් දුරට ගලපාගෙන පවතී ද සහ ඒ හරහා ජාතික දේශපාලනය ශක්තිමත් කිරීමට ලබා දී ඇති දායකත්වය විමසා බැලීම ඉතා වැදගත් වේ. පර්යේෂණයේ ප්‍රධාන අරමුණ ලෙසට ප්‍රාදේශීය ආණ්ඩුකරණය තුළ යහපාලන සංකල්පයේ ක්‍රියාත්මක භාවය අධ්‍යයනය හා සෙසු අරමුණු ලෙසට ප්‍රාදේශීය ආණ්ඩුකරණය තුළ නිලධාරීන්ගේ සහ මහජන නියෝජිතයින්ගේ කාර්යභාරය අධ්‍යයනය, ප්‍රාදේශීය ආණ්ඩුකරණය තුළ ප්‍රතිපත්ති තීරණය හා ක්‍රියාවට නැංවීම කෙරෙහි ජනතා සහභාගීත්වය අධ්‍යයනය යනාදිය දැක්විය හැක. පර්යේෂණයේ ගැටලුව ලෙසට යහපාලන සංකල්පය ප්‍රාදේශීය ආණ්ඩුකරණයට ඇතුළත් කර තිබුණ ද එම සංකල්පයෙන් බලාපොරොත්තු වන නිශ්චිත ඉලක්ක කරා ප්‍රායෝගිකව ළඟා වී නැත්තේ ඇයි යන්න ලෙස සකසා මෙම පර්යේෂණය සිදුකරන ලදී. අධ්‍යයන ක්‍රමවේදය ලෙසට ප්‍රාථමික දත්ත හා ද්විතියික දත්ත භාවිතා කළ අතර දත්ත විශ්ලේෂණය ප්‍රමාණාත්මක හා ගුණාත්මක වශයෙන් සිදුකරන ලදී. ඒ සඳහා පරිගණක මෘදුකාංග භාවිතා කරන ලදී. පර්යේෂණ ප්‍රතිඵල ලෙසට දේශපාලනීකරණය තදින් ක්‍රියාත්මක වීම, ජනතා සහභාගීත්වය දුරස්ථ මට්ටමක පැවතීම, අකාර්යක්ෂමතාවය වේ. පර්යේෂණයේ සීමාවන් ලෙසට සමස්තය ගෙන අධ්‍යයනය කිරීමේ අපහසුතාවය නිසාවෙන් පාලන තන්ත්‍රයේ එක් කොටසක් පමණක් ගෙන අධ්‍යයනය, පක්ෂග්‍රාහීවීම් හා කාලය වැනි සීමාවලට නතු විය. විශේෂයෙන් ප්‍රාදේශීය ආණ්ඩු කටයුතු වල දී ගනු ලබන ප්‍රතිපත්ති, තීන්දු තීරණ වලදීත් ඒවා ක්‍රියාත්මක කිරීමේදීත් ජනතාවගේ, නියෝජිතයින්ගේ සහ නිලධාරීන්ගේ සහභාගීත්වය අත්‍යවශ්‍ය වේ. මෙහි දී ජනතා සහභාගීත්වය දුරස්ථ මට්ටමක පවතින විට ඒ තුළ දේශපාලනීකරණය තදින් ක්‍රියාත්මක වීම, ජාතික තලයේ ප්‍රතිපත්ති සම්පාදන ආයතන විසින් කලින් කලට පනවනු ලබන නීතිවලට අනුගත වෙමින් පාලනය ගෙනයාමට ප්‍රාදේශීය නියෝජිතයන්ට සිදුව ඇත. මෙම කාරණා හේතුවෙන් යහපාලනයක් පවත්වා ගෙන යාම දුර්වල මට්ටමක පවතී යනුවෙන් නිගමනය කොට දැක්විය හැකිය.

**ප්‍රමුඛ පද:** යහපාලනය, ප්‍රාදේශීය ආණ්ඩුකරණය, ප්‍රජාතන්ත්‍රවාදය, ජනතා සහභාගීත්වය, අයිතිවාසිකම්.

<sup>1</sup> ශ්‍රී ජයවර්ධනපුර විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව. \*nilupriyadarshani120@gmail.com

## **The Most Effective Barrier, do Undergraduate Students Encounter When Taking Online Courses Offered by University**

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As the popularity of the Internet grows, so does the potential for online learning. A great deal of evidence exists which shows that no significant differences should be expected regarding the effectiveness of well-designed online learning compared with well-designed in-person learning (Clark, 1983). The advent of new technologies are providing educators with opportunities to create a variety of effective learning environments, however, many adults students still prefer traditional, academic settings. The purpose of this study is to analyze student barriers to the online courses in the University. This research further aimed to understand which students will face barriers when attempting to learn online, what are those barriers and ultimate aim is to identify how we can help individuals in their learning? The main objective in this study is to identify most effective barrier faced by undergraduate students when taking online courses offered by university. Research sample unit based on infinite universe. It may be changing every time. Therefore, researcher choose snowball sampling method. The purpose of collecting this demographic data was to increase external validity for generalizability applications. According to above research design the researcher has to get four objectives for this study. The methodology applied in the four heading such as source of data. After that the researcher has selected study samples and collected primary data under the observation method. Furthermore researcher has identified independent and dependent variables. Finally analysis this data factor lording method, a frequency by ANOVA. To gain a better understanding about online course retention rates, participants were asked to respond to an item about their experience with online education. Items were meant to distinguish groups of students by their experience with online learning. By dividing research study participants into groups, the researcher was better able to grasp the differences between perceived and actual barriers to online education.

**Keywords:** *Online courses, Learning, Barriers, Undergraduate, ANOVA.*

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## **The Way of Buddhist Monk's Image has used by the Political Movements of Sri Lanka after the Independence**

A. Wijayasinghe<sup>1\*</sup>

The relationship between the state of Sri Lanka and the Buddhism was established on the day when the Arahath Mahinda Thero introduced Buddhism to Sri Lankan society. After that Buddhist monk became a prominent figure in Sri Lankan society. This situation prevailed from the Anuradhapura kingdom to Kandyan kingdom. When Sri Lanka became a colony of British, Buddhist monk had given his guidance for the rebels conducted by local people. The Vidyalkara Declaration (Vidyalkara Prakashaya) which was declared in 1946 gave a disciplinary permission for Buddhist monks which encouraged them to engage in political activities without any fear. That situation paved the way to Buddhist monk for emerge as a prominent figure in 2004 parliamentary election as election candidates and won nine seats in parliament.

This study is mainly focused on the way of Buddhist monk's image has used by the political movements of Sri Lanka during the time frame of 1947 to 2015. The collection of data for this study was mainly done through the methods of textual analysis and interviews.

The data which was collected according to the above methods clearly suggest that the Buddhist monk had captured a prominent place in Sri Lankan history of politics. As well as the image of Buddhist monk had used by the various types of political movements in various aspects in order to grab the public opinion towards their victory.

***Keywords:*** *Buddhist Monk, Image, Political Movements, Independence.*

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## **Depiction of Mental Disorders in Human Behavior Through Cinema: Related to Ashoka Handagama's Cinematic Approach**

A. Wijayasinghe<sup>1\*</sup>, A. Rajapaksha<sup>1</sup>

According to the Critics, cinema can be considered as the most powerful medium of art which can be used to deliver powerful messages towards the human society. In that aspect, the director of the film has a major responsibility in creating and delivering such messages to the audience through using creative elements of cinema. Most number of directors tries to reveal the unseen reality of human life through the cinema. Ashoka Handagama can be considered as a director who always tries to reveal the bitter truth of human nature through his cinematic approach.

Most number of cinema creations done by Handagama created a controversial atmosphere in the Sri Lankan society. Some of his cinema creations were banned due to that reason. But Handagama tried to reveal some human mental disorders which prevailed in the Sri Lankan society where the public do not like to accept it. This research mainly focused on how Handagama tried to depict mental disorders of human nature through his cinematic approach. Content analysis and in-depth Interviews were used as the research methods to collect data regarding this.

According to the data which was collected from the above methods, clearly suggest that number of mental disorders in human behavior had depicted through Ashoka Handagama's cinematic approach. At the same time, these disorders have rally prevailed in the society where public do not like to accept that reality. In this context, Handagama's cinema becomes controversial which paved the way for banning his films.

***Keywords:*** Ashoka Handagama, Cinematic Approach, Mental Disorders, Cinema.

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## **The Significance of Promoting Lesser-Known Intangible Heritage in Cultural Tourism Perspective: with Special Reference to Hewagam Korale**

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Hewagam Korale has significances from archaeological, historical and anthropological aspects which are directly related to Sri Lankan culture. The research area belongs to Palle Pattu, Meda Pattu and Udugaha Pattu of Hewagam Korale is located at Colombo district in Western Province, Sri Lanka. The main objective of this research is to explicate the lesser-known intangible heritage, and promoting lesser-known intangible heritage of Palle Pattu, Meda Pattu and Udugaha Pattu in cultural tourism perspective. This research is based on cults, rituals and believes on gods and goddess with the collected data from the field research and library survey methods. Communities of the research area are engaged with various cults, rituals and believes on gods and goddess, such as; cult of god Vishnu, god Katharagama, god Gambhara, god Ranwala, god Dedimunda and goddess Pattini. Among these, cult of god Ranwala and goddess Pattini are famous cults which are connected with diverse ritual methods. Various lesser-known ritual methods were taken place in this area with Perahera ceremonies, Gammadu, *Devadana* (Almsgiving), lightning oil lamps and *puhul* lamps, and offering harvest, flowers, fruits, cloths and jewelries. Apart from these special worshiping methods which have ranged historical background, there are other unique features and intangible significance can be seen in this research area. At present, Colombo district is not functioned as an intangible cultural tourist attraction. Nevertheless, this area has an opportunity to promote lesser-known intangible heritage in cultural tourism perspective which can be developed both domestic and foreign tourists' attraction to Colombo district in different and innovative approach by developing a museum on cults, rituals and believes, presenting cultural programs on ritual methods and folk stories, promoting the Perahera pageant season of *devala*, and safeguarding intangible heritage by documenting the ritual methods as video and audio mode. Hence, aspects of heritage and functions of intangible heritage in the study area, importance of safeguarding intangible heritage, and proposal for promoting lesser-known intangible heritage of Colombo District through Palle Pattu, Meda Pattu and Udugaha Pattu; have been discussed in this research.

**Keywords:** *Cultural tourism, Colombo District, Hewagam Korale, Lesser-known intangible heritage, Tourists' attraction.*

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**ජාතික ආණ්ඩු ප්‍රතිපත්තිය ශ්‍රී ලංකාවේ යහපාලන සමාජයක් පිහිටුවීමට දක්වන දායකත්වය පිළිබඳ ජනතා ආකල්ප (ජා ඇල ප්‍රාදේශීය ලේකම් කොට්ඨාසය ඇසුරින්)**

හිමාෂා පෙරේරා<sup>1\*</sup>

2015 ජනවාරි මස 8 වන දින යහපාලන සමාජයක් ශ්‍රී ලංකාව තුළ තහවුරු කරන බවට වූ දේශපාලන පොරොන්දුව මත මෙහිපාල සිරිසේන මහතා ජනපතිවරණ තරඟ බිමට අවතීර්ණ විය. එහිදී සිය විරුද්ධ පිළි නියෝජනය කළ මහින්ද රාජපක්ෂයන් පරාජය කරමින් 51.28%ක ඡන්ද ප්‍රතිශතයක් ලබා ගැනීමට එතුමා සමත් විය. කෙසේ වෙතත් එතුමාගේ මූලිකත්වය යටතේ පසුකාලීන ව 2015 මැයි 15 වන දින සම්මත කරන ලද 19 වන ආණ්ඩු ක්‍රම ව්‍යවස්ථාවේ 45(6), 45(5) වගන්ති යටතේ ජාතික ආණ්ඩු ප්‍රතිපත්තිය ක්‍රියාවට නැංවීමේ කොන්දේසි ඉදිරිපත් කර ඇත. 2015 අගෝස්තු මස 17 වන දින පවත්වන ලද 15 වන පාර්ලිමේන්තු මැතිවරණයේ කිසිදු දේශපාලන පක්ෂයක් ආණ්ඩුවක් පිහිටුවීමට තරම් ප්‍රමාණවත් ඡන්ද ප්‍රතිශතයක් ලබා ගැනීමට අසමත් වූ අතර, එක්සත් ජාතික පක්ෂය විසින් මැතිවරණයට පෙර ප්‍රතිපත්ති ප්‍රකාශයේ සඳහන් කර තිබූ පරිදි ජාතික ආණ්ඩුවක් පිහිටුවීමට පාර්ලිමේන්තුවේ අනෙකුත් පක්ෂවලට ආරාධනා කරන ලදී. එම ආරාධනාව පිළිගත් ශ්‍රී ලංකා නිදහස් පක්ෂය හා එක්සත් ජාතික පක්ෂය අවබෝධතා ගිවිසුමක් මගින් ජාතික ආණ්ඩු ප්‍රතිපත්තිය ක්‍රියාත්මක කිරීමට අවශ්‍ය පසුබිම සකසන ලදී. මෙම අධ්‍යයනයේ මූලික අරමුණ වන්නේ, ජාතික ආණ්ඩු ප්‍රතිපත්තිය ශ්‍රී ලංකාවේ යහපාලන ගුණාංගවලින් සපිරි සමාජයක් බිහි කිරීමට දක්වන දායකත්වය පිළිබඳ ජනතා ආකල්ප පිරික්සීමයි. අධ්‍යයන ප්‍රදේශය වශයෙන් ගම්පහ දිස්ත්‍රික්කයේ ජා-ඇල ප්‍රාදේශීය ලේකම් කොට්ඨාසය තෝරා ගත් අතර ප්‍රාදේශීය ලේකම් කොට්ඨාසයේ ජනගහනය අතුරින් පනස්දෙනෙකු අධ්‍යයන නියැදිය ලෙස අහඹු ලෙස තෝරා ගැනිණි. අධ්‍යයනය ප්‍රාථමික සහ ද්විතියික මූලාශ්‍ර මත පදනම් වූ අතර ප්‍රාථමික දත්ත සහ තොරතුරු ලබා ගැනීමේ දී ප්‍රශ්නාවලි සහ සම්මුඛ සාකච්ඡා උපයෝගී කරගැනිණි. පර්යේෂණයේ ප්‍රමාණාත්මක දත්ත සරල සංඛ්‍යානමය විධික්‍රම ඔස්සේ ද ගුණාත්මක දත්ත සිද්ධි අධ්‍යයන ක්‍රමවේදය සහ විස්තරාත්මක ක්‍රමවේදය ඔස්සේ ද විශ්ලේෂණය කරන ලදී. මෙම අධ්‍යයනයේ දී ප්‍රතිචාරින්ගෙන් 40%ක් ප්‍රකාශ කළේ ජාතික ආණ්ඩු සංකල්පය යහපාලන සමාජයක් පවත්වාගෙන යාමට අනුවන බවයි. එසේම, 20% එය ශ්‍රී ලංකාවට උචිත ප්‍රතිපත්තියක් බව ද, 10%ක් ජාතික ආණ්ඩු ප්‍රතිපත්තිය සබැඳිව තමන් සතුව දැනුමක් නොමැති බව ද, 30%ක් ජාතික ආණ්ඩු ප්‍රතිපත්තිය යහපත් වූව ද, එය ශ්‍රී ලංකාවේ යහපාලන සමාජයක් ගොඩනැගීමට අනුවන බව ද, ප්‍රකාශ කරන ලදී. අධ්‍යයනයේ නිගමනය වන්නේ ජාතික ආණ්ඩු සංකල්පය ශ්‍රී ලංකාවේ යහපාලන සමාජයක් ගොඩනැගීමට එතරම් සුදුසු නොවන බවයි.

**ප්‍රමුඛ පද:** රාජ්‍ය ප්‍රතිපත්තිය, ජාඇල ප්‍රාදේශීය ලේකම් කොට්ඨාසය, ජනපතිවරණය, යහපාලනය, ජාතික ආණ්ඩුව.

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## **Implications of Language on Career Choices of 16 Years Old Female Students: A Sociological Study Based on Trilingual Mixed School**

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Sex-role attitudes are known to influence career choices. The objective of this study was to assess the factors affecting career choices in a group of Sri Lankan female students attending a senior secondary school.

The protocol of the study confirmed to the Declaration of Helsinki. The study was conducted in a trilingual mixed school from January to March 2016. A combined quantitative and qualitative approach was employed. In the quantitative study, Sri Lankan females in the Ordinary Level classes following studies in three different languages (Sinhala, English, and Tamil) were selected using the cluster sampling method. Students who were already occupied were excluded. A self-administered questionnaire was used to collect the socio-demographic data, their future career choice and the self-perceived factors associated with their choice. Face validation of the questionnaire was obtained before the study. Comparative qualitative study was based on the Grounded theory. The sample was selected using non-probability purposive sampling. In-depth interviews were conducted in their native language. A semi-structured questionnaire was used to elicit the accounts of the factors influencing their future career choices. Interviews were recorded and fully transcribed. Interviews were conducted until the saturation of the themes.

Sixty students (20-Sinhala language, 20-Tamil language, 20-English language) participated in the study. The subjects were 16 years old. Monthly family income was approximately similar in all three categories. (37000-Sinhala language, 39000-Tamil language, 40000-English language). Mode “major occupation category” of the fathers according to the International Standard Classification of Occupations-08 (ISCO-08) was “Elementary Occupations” in all three groups. All the subjects chose their future career as “Professional” major group according to the ISCO-08. 30% (n=18) of them chose sub-major group of “Health Professionals” followed by “Science and Engineering Professionals” (8.3%, n=5), “Business and Administrative Professionals” (8.3%, n=5), “Information and Communications Technology Professionals” (5%,n=3), “Legal, Social and Cultural Professionals” (6.7%,n=4) and “Teaching Professionals” (38.3%,n=23). The English medium students had a wide range of choices (n=10) compared to Sinhala (n=7) and Tamil (n=5) medium students. Among the factors determining their choice of future career, “External influences” were identified as most influential factors. Self-efficacy beliefs were found only among few subjects (n=9). Interviews for the in depth study were conducted with 25 subjects who were randomly selected from the main sample. We found that the parental influence played a major role in determining future careers. Unlike Sinhala and Tamil medium students, gender stereotypes, social acceptance and monetary outcomes were de-emphasized in the choice of the future career by English medium students. The study population had a limited range of interests in occupations. All wanted to be “Professionals” in the future. Career choices were largely determined by the external influences. English medium students were less restricted in their future career choice.

**Keywords:** *Occupation choice, Career development, Gender stereotyped jobs.*

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## **Postgraduate Students' Satisfaction in Higher Education Institutions, Sri Lanka**

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In accordance with the world changes and globalization, higher education is concerned as a service industry that highlighting on meeting the expectations and needs of their customers. Students of the universities and colleges are mainly considered as their intimate customers. Therefore, the study relate to determinants of postgraduate students' satisfaction in higher education: applying Herzberg's two-factor theory. All the required data gathered by using the stratified sampling method and simple random sampling techniques data were analyzed through multivariable and descriptive analysis methods to verify the objectives and to check the acceptance or the rejections of the null hypotheses. After an in-depth study, the outcome of the objectives and the hypotheses were discussed according to the conceptual framework. The study was based on primary data collected through questionnaires and they were analyzed using correlation, regression, and Cronbatch's alpha. By looking at empirical data and a conceptual model, the results of this study clearly indicated that students' college experience was positively related to their satisfaction at the higher education institutions, Sri Lanka. Further the results showed that the faculty, advisory staff, classes and experiences have a very significant and positive impact on the satisfaction. The faculty performance was the most leading factor for the student satisfaction. Additional implications for the higher education institutions are discussed.

**Keywords:** *Higher Education Institutions, Postgraduate Students, Experience, Satisfaction.*

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## **Impact of Dependent Origination (*Pratītyasamutpāda*) towards Semiotics**

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Dependent origination or dependent arising (*Pratītyasamutpāda*) is the central idea of Buddhist thought (6th BCE in India), which discloses the entire creation of human physics in terms of the mechanism of living matters in the body and mind, while semiotics is the modern science of linguistics for understanding the structure of signs and symbols in meaning making in the use of human language and communication, which is produced in the early 20<sup>th</sup> century in Europe and USA. This present study reveals the exposure of Buddhist thought of dependent origination on the modern theory of semiotics. While dependent origination is functioning for a definite answer for the composition of human being, problems associated with the human behavior which could be managed by the understanding of the practice of dependent arising. At the same time semiotics has been using not only for meaning making in the use of signs, but also it is highly significant in the use of descriptive analysis of social systems and human behavior in analytical philosophy. After diagnostically reading these two theories, this study assumes that the Buddhist thought of the creation of living objects has been fundamental in forming the semiotics, which is one of the modern western analytical philosophies. Despite of the fact that Buddhist thought centrally explores the existence of human being for its cessation from suffering (*dhukka*), same exposition can be utilized for identifying ones' intra-personal communication using dependent origination. On the other, semiotics is a tool of modern analysis for human intra-personal communication. However, finally this study finds that the Buddhist thought of dependent origination could be immensely accommodating to understand semiotics as it is used for modern social analysis ranging from anthropological hermeneutics to cyber cognition.

**Keywords:** *Dependent origination, anthropological hermeneutics, semiotics, creation of human physics, analytical philosophy.*

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**පැරණි ශ්‍රී ලාංකීය දේශපාලන සංවිධානය තුළ හික්ෂුවගේ ක්‍රියාකාරීත්වය (අනුරාධපුර යුගයේ සිට දඹදෙණි යුගය අවසානය දක්වා ප්‍රාථමික මූලාශ්‍රය ඇසුරින් කෙරෙන අධ්‍යයනයකි)**

මංජුල ප්‍රේමරත්න<sup>1\*</sup>

දේශපාලනය හික්ෂුවගේ ආකල්පයන්ට එතරම් විෂය නොවන නමුදු සමාජය හැසිරවීමේ මූලික උපාංගය වූ පාලන සංවිධානය යහපත් මාර්ගයට යොමුකරලීමේ දී හික්ෂුවගේ දායකත්වය ඉතා වැදගත් විය. මූලාශ්‍රයට අනුව සෘජුව ම දේශපාලනය කෙරෙහි හික්ෂුවගේ බලපෑම නොතිබුණ ද වක්‍රාකාරයෙන් ඇති කළ බලපෑම පාලන සංවිධානයේ හැඩ ගැසීමට බෙහෙවින් හේතුබූව විය. ඒ අනුව මෙම පර්යේෂණයෙන් විමර්ශනයට ලක් කෙරෙන්නේ පැරණි ශ්‍රී ලාංකීය දේශපාලන සංවිධානය තුළ හික්ෂුවගේ ක්‍රියාකාරීත්වය කෙසේ වී ද යන්න පිළිබඳ ව යි. එය පර්යේෂණ ගැටලුව බවට පත්විය.

මෙහිදී අධ්‍යයන ක්‍රමවේදය වූයේ මූලාශ්‍රය අධ්‍යයනය යි. විශේෂයෙන් ම ප්‍රාථමික මූලාශ්‍රය කෙරෙහි විශේෂ අවධානයක් යොමු කරන ලදී.

පාලන ක්‍රියාවලිය තුළ ලංකාව වැනි රටකට හික්ෂුවගේ දායකත්වය අවශ්‍ය ද යන්න සොයාබැලීම මෙහි අරමුණ යි. පාලක පන්තියට අවශ්‍ය වූ අධ්‍යාපන ඥානය බොහෝදුරට ලබාදුන්නේ හික්ෂුන් අතිනි. එනමින් බලන කල හික්ෂුන් පාලක පන්තියේ ආචාර්යවරයන් ද විය. එමෙන් ම මුල්කාලීන ව පුරෝහිතයාගෙන් ඉටු වූ කාර්යය පැවරුණේ ද හික්ෂුන්ට ය. ඒ අනුව සෑම විශේෂිත අවස්ථාවක ම පාහේ හික්ෂුන්ගේ උපදේශකත්වය පාලකයන්ට ඉතා වැදගත් වූ බව මෙම පර්යේෂණය තුළින් පෙනී යයි. එපමණක් නොව ඇතැම් විට ඉතා තීරණාත්මක අවස්ථාවන්හි දී හික්ෂුව පාලකයාගේ ආරක්ෂකයා බවට ද පත්විය. මේ අනුව ශ්‍රී ලාංකීය දේශපාලන සංවිධානය තුළ හික්ෂුවගේ මැදිහත් වීම නිසා යහපත් මෙන් ම අයහපත් ප්‍රතිඵල ද ඇති වූ නමුත් මෙය සසුනේ දියුණුවට හා ස්ථාවරත්වයට හේතු වූ බව නිගමනය කළ හැකි ය. එමෙන් ම මේ තත්ත්වය හික්ෂුව පසුකාලීන ව දේශපාලන සංවිධානය තුළට එක්වීමට හේතුකාරකයක් වූ බවත් රජුගේ අත්තනෝමතිකත්වයට සීමාවක් වූ බවත් නිගමනය කළ හැකි ය.

**ප්‍රමුඛ පද:** හික්ෂුව, පාලන සංවිධානය, දේශපාලනය, ක්‍රියාකාරීත්වය.

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**Impact of Information and Communication Technologies on Student's Attitude (Case Study of Postgraduate Students of University of Kelaniya, Sri Lanka)**

N. Suraweera \*

Today every individual has become education minded in changing the society and the world with the advancement of science, technology, education, culture and civilization. In this age of information, education plays a prominent role in everybody's life. Everybody desires to acquire education and the emphasis on the best quality education is increasing day by day. In the age of revolution of Information Technology, it reconsiders and re-adapts to the changing environment of teaching and learning. New media technologies have revolutionized education and the learning process. It has made teaching easier and the teaching method, student centric. Information and communication technologies can be used to bridge the gap between students and teachers. Nowadays, many Sri Lankan universities are gradually using different types of information and communication technologies for teaching and learning process. As new technologies are growing in a rapid phase there is a digital divide between students, teachers and the university administration. In order to cope with the fast pace of students in understanding the technology, teachers will have to update different technologies fast in classroom teaching. This research mainly deals with present scenario of information and communication technologies which graduate students are using and how it impacts the attitude of the student.

In this study, 57 questions were assembled based on the objectives and they were categorized in to four parts. First part (part A) containing socio-demographic economic profile of respondents. Second part (part B) dealt with the exposure to information and communication technologies. Third part (part C) dealt with the comparison and the forth part (part D) of the questionnaire was designed to measure the impact of information and communication technologies on students' attitudes for their education purpose.

Students in Universities extensively use information and communication technological tools for different academic purposes. From assignments to making notes, from alternate information to industrial content, their preference is new media. Gone are the days when students referred books in libraries for enriching themselves. In this era of e-generation with information and communication technologies tools and the phenomenal spread of information and communication technologies, going online has turned easy to clarify their doubts instantly and satisfy their learning instincts. It is encouraging an outreach learning concept and producing a positive and efficient set of students as confident individuals who are bound to be a better workforce in the future.

**Keywords:** *New media technology, Education, Teachers, Students, Post graduate.*

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## **Empowering Youth Generation through Skill Development Programme in Sri Lanka (Case Study of National Youth Corps Training Center in Sri Lanka)**

N. Suraweera \*

Youth are very crucial component of any country. According to central bank report, approximately 26 percent of the Sri Lankan population comprise of youth. The Ordinary Level (O/L) and Advanced Level (A/L) examinations are very competitive and they are set with high standards. Each year, about 200,000 and 90,000 students leave the school system, out of which a large number of students become school drop outs, at the O/Level and A/Level examinations, respectively. Though the dropout rates are high, the provisions taken to cater this segment through initiatives such as vocational training, is a major challenge in Sri Lanka.

The government of Sri Lanka has introduced many training programmes with the objective of reducing the number of dropouts. To enhance their personality with skill development, vocational training programmes have been implemented under the Ministry of Youth Affairs and Skills Development. In the year 2002, the National Youth Corps Training Center (NYC), one of the largest government youth training institutions of that era, ushered a different orientation, by focusing on training discipline, personality development and job oriented vocational training.

This paper examines the impact of skill development training programmes in empowering youth of Sri Lanka. It was found that the youth corps center program influenced the youth in a positive way in empowering their personality, discipline and vocational training. The study was conducted through survey method. A questionnaire was used to collect data from 100 students representing 3 different youth corps training centers in Sri Lanka.

***Keywords:*** Sri Lankan youth, skill development training programmes, Empowering, National Youth Corps Training Center, vocational training.

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## **The Impact of Devolution on Provincial Development: With Reference Based on the Provincial Council System in Sri Lanka**

P. Mudalige<sup>1\*</sup>

Provincial Councils (PCs) introduced the concept of devolution to Sri Lanka. Establishment of PCs in 1988 was perceived as constituting a radical departure from the centralized form of governance Sri Lanka had practiced since emerging from colonial rule. The guiding principle set out in the constitution for the transfer of finance to provinces is achieving balanced provincial development specifically defined as the need to reduce social and economic disparities as well as differences in per capita income between the provinces. The main objective of this research is to analyze, what extent devolution has been taken place in the Provincial Council System (PCS) in favour of Provincial Development and also to examine in institutional and financial capacity of the PCs in Sri Lanka. In Order to achieve these objectives, different sources were used, including Secondary data from Published and Unpublished books, Articles, government reports and other relevant documents in relation to PCs. Mixed method and descriptive analytical method were used to analyze data in this research. The 13<sup>th</sup> amendment to the constitution has given adequate financial powers for the PCs to be able to maintain their financial stability. However, due to various reasons the majority of such provisions have not been enforced. This was a major setback in financial autonomy in provinces. As a result, PCs have had to depend on the central government grants. The Study found that the PCs did not largely contribute to provincial development in Sri Lanka. In conclusion the process of devolution through PCs system in Sri Lanka has been not in progress in terms of institutional capacity.

**Keywords:** *Devolution, Provincial Councils, Development, Financial Autonomy.*

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## **National Non-Governmental Organization's Influence on Policy Making: Special Reference to Sri Lanka in Post-War Period**

H. S. G. Fernando<sup>1\*</sup>

Non-governmental organizations have become influential actors in the world of politics. NGOs are basically defined as “a non-profit entity whose members are citizens or associations of citizens of one or more countries and whose activities are determined by the collective will of its members in response to the members of the one or more communities with which the NGO cooperate”. As there are several classifications of NGOs, they can be classified as international NGOs, national NGOs, humanitarian NGOs, human rights NGOs, advocacy NGOs, regional NGOs and etc. Most of the time, national NGOs have become critical non-state actors in each and every country. According to realist theorists, nation states always strategically think to maintain their sovereignty for their survival and largely ignore those non-government actors which having no real power in international politics. Constructivists and institutionalists have spawned a variety of theories that have explanative power with regard to NGO roles in international relations which will be considered more fully.

The emergence of NGOs in Sri Lanka basically started due to the causes of civil war in North. The increased refugee flows, conflict resolution and poor food and health care services encouraged humanitarian NGOs to function in Sri Lanka. Not only the international NGOs, but also the national NGOs also contributed largely for the humanitarian crisis in Sri Lanka. After the eradication of the conflict in Sri Lanka, national NGOs take part in influencing the policy making mechanisms to strengthen the post-war harmony. Therefore this research is mainly examine what kind of influence the national NGOs impose on the policy making process in Sri Lanka in post-war period. The main objective of this study is to find the impact of national NGOs in policy making and what kind of fields that have been influenced by NGOs to prosper better policy making mechanisms. The study has been conducted using both primary and secondary data and used qualitative data analysis techniques. Secondary data have been collected from books, journals, reports, and academic publications. Primary data have collected by interviewing diplomats, government officers, and NGO staff members through unstructured questionnaire method through convenience sampling method. The study has identified that national NGOs influence in policy making in strengthening good governance, transparency and accountability, justice, and collaborative for projects of Sri Lanka. Through different strategies they make the public aware of information and promoting essential polices to be implemented in the country.

**Keywords:** *National NGOs, Policy Making, Post-War, Good Governance.*

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## **Reviewing Doctor-Patient Relationship: Where Sociology Meets Medicine**

S. Liyanagunawardena<sup>1\*</sup>

The doctor-patient relationship forms the crux of the medical encounter and is linked to patient-related outcomes such as patient satisfaction, compliance and health. It has inspired much research interest particularly in the western world. It has become a major research area under medical sociology. This paper attempts to review the literature on doctor-patient relationship by examining it under three broad, inter-related themes: a) power, b) communication and c) social aspects.

In terms of power dynamics, the doctor-patient relationship is considered to be inherently asymmetrical. Traditionally, the doctor is depicted as authoritative, and the patient is submissive and passive. However, the current idea is a patient-centred model, where the patient's voice is not clear given due recognition. Most importantly medical decision making, which used to be the responsibility of the doctor, has become a collaborative process under patient centrism. This attempt of redistributing power, though may be rather difficult to implement, has led to a proliferation of research on patient expectations, empowerment and participation.

Research on a communicative theme focuses on doctor-patient relationship as a process towards achieving medical communication. However, many have depicted it as defective. An often reported reason behind this ineffectiveness is the inadequacy of doctors' communication skills. Institutional and other factors and limitations (e.g. limited resources, large numbers of patients) are also found to impede the communicative goals. The social dimension of the relationship may also affect medical communication, as the social gradient between the doctor and the patient may have an adverse impact. The high social status ascribed to doctors may distance them from patients. On the other hand, when the patients represent an ethnicity or race other than the doctor's, or when they are from low educational or socio-economic backgrounds, the relationship may become strained.

A majority of the global literature on doctor-patient relationship being based on a few countries, the overall picture that emerges from a literature review such as this would approximate the conditions in developed western countries, and hence not a fair representation of the scenario in, for instance, a developing country in Asia. Further research in such contexts is therefore required for a more accurate understanding of the phenomenon and its implications.

**Keywords:** *doctor - patient relationship, literature review, power dynamics, communication, social background.*

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## **Social Awareness of Archaeologically Significant Places in Colombo District**

A. Embuldeniya<sup>1\*</sup>, P. Embuldeniya

Colombo district has long term historical background since pre-historic period. The main objective of this study is to identify the awareness of archaeologically significant places in Colombo district which can be further used for safeguarding archaeological significances, and tourism development programs. Adding values to the existing archaeological places in Colombo district is a specific objective of this study. There could be seen archaeological remains related to multi-ethnic community of Sri Lanka such as religious places, architectural constructions, etc. Colombo district is consists with the Divisional Secretariat Divisions of Colombo, Dehiwala, Homagama, Kaduwela, Kesbewa, Kolonnawa, Kotte, Maharagama, Moratuwa, Padukka, Ratmalana, Seethawaka, and Thimbirigasyaya. The population of the study is entire population of people in Colombo district. As the population has spread over a large geographical area, cluster sampling method has used in selecting the sample while identifying the 13 divisional secretariats as clusters. Furthermore, the sampling proceeds as two stages cluster sampling as selected divisional secretariat of Homagama has 81 Grama Niladari Divisions which allow selecting two stages cluster among them. Thereby, Galawilawatte South Grama Niladari Division has been selected as the target population which has 820 families. 200 families have been selected by randomly among the target population and the questionnaires were distributed via postal method and follow-ups have done in order to enhance the response rate. Therefore, this study is based on field research and library survey methods. Descriptive analysis, Chi-square tests and ANOVA were used to analyze data with the assistance of SPSS and Microsoft excel. The results of this study shows that the people lives in Colombo district are unaware about the existing archaeological places in Colombo district and regardless of the demographic characteristics such as gender, age, level of education, occupation, etc. people are unaware of archaeologically significant places in Colombo district. Therefore, there is a gap that can be filled by the relevant parties in both government and private sector to enhance the value and importance of these places while promoting new programs.

**Keywords:** *Archeological Significances, Colombo District, Social awareness.*

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**පැරණි දේශීය වෛද්‍ය ශාස්ත්‍රයේ රෝග නිවාරණ ක්‍රම කිහිපයක් පිළිබඳ අධ්‍යයනයක්**

හිරාන් මධුශංක<sup>1\*</sup>

ඕනෑම රටක් සතුව ඒ ඒ රටට ආවේනික වූ යම් ශාස්ත්‍ර විශාල ප්‍රමාණයක් පවතී. පරම්පරා ගණනාවක් තිස්සේ පූර්වකාලීනයන්ගේ අත්දැකීම් හා දැනුම මත පදනම් වෙමින් පැවත එන මේ ශාස්ත්‍ර නැවුම් දේ හා නැවුම් අත්දැකීම් සමඟින් තවත් ඉදිරියට විකාශනය වේ. එහෙයින් එය පදනම් වන්නේ ශාස්ත්‍රයට අත්‍යවශ්‍යම වන අත්දැකීම් යන සංකල්පය ඔස්සේ ය. වෛද්‍ය ශාස්ත්‍රයේ මූලිකම පදනම වන්නේ ද එකී අත්දැකීම් යන්නයි. ලංකාවේ පැරණි දේශීය වෛද්‍ය ශාස්ත්‍රය වෙත වෙනත් රටක හෝ වෙනත් ශාස්ත්‍රයකට හෝ අභියෝග කළ නොහැකි තරමේ පවතින්නා වූ විශේෂිත ශාස්ත්‍රයකි. මූලාශ්‍රය රහිතව වුවත් එය සක්විති රාවණ යුගයට පවා දිව යන්නේ යැයි පවතින මතයයි. නූතනත්වය හෝ තාක්ෂණයෙන් බැහැරව ස්වභාවදහමත් සමග ගතව පොත්ත සේ බැඳෙමින් සිදුවන මෙහි කිසිදු අයුරකින් මිනිස් දිවියට හෝ සිරුරට අහිතකර තත්ත්වයක් නොමැත. රෝග නිවාරණය සඳහා ඉදිරිපත් වන්නේ අත්දැකීම් හා ශාස්ත්‍රීය ඥානයන් විවිධ වූ ස්වභාවික ඔසුන් පමණි. ඒ මඟින් එකල පැරණි සමාජයේ පැවැති ඕනෑම රෝගයක් සුවපත් කිරීමට අපේ පැරැන්නෝ අති දක්ෂයෝ වූහ. එසේම සර්වාංග වෛද්‍යකම, සර්ප වෛද්‍යකම, කැඩුම් බිඳුම් හා යන්ත්‍ර මන්ත්‍ර තවත් බොහෝ දේශීය වෛද්‍ය ශාස්ත්‍රයේ වන ඇතුළු අංග වෙයි.

විවිධ වූ රෝගයට විවිධ වූ ප්‍රතිකාර මෙන් ම කෙම් ක්‍රම යන්ත්‍ර මන්ත්‍ර මඟින් සිදු කරන්නා වූ පිළියම් විසඳුම් ද බොහෝ විය. අවට පරිසරය ම භාවිත කරමින් සිදු කරන මෙම දේශීය වෛද්‍යකම මඟින් මිනිස් සිරුර කුමන හෝ ආකාරයකින් හෝ බල ගැන්වීම මිස නූතන බටහිර වෛද්‍ය ක්‍රමය මෙන් හානිදායක නොවීය. බටහිර ක්‍රමයේ මෙන් නොව මෙහි දී එක් රෝගයකට නියම වූ ඔසුවක් වෙනත් ලෙසකින් සිරුරට හිතකර වේ. දේශීය ඥාන සම්භාරය තුළ ගැබ්ව පවතින මේ දේශීය වෛද්‍ය ශාස්ත්‍රය වර්තමානය වන විට දී ප්‍රයෝජනයට ගන්නේ අල්ප වශයෙනි. ඊට ප්‍රධානම හේතුව කාර්ය බහුල දිවියක් ගත කරන්නාවූ මිනිසා බටහිර වෛද්‍ය ක්‍රමයට සෘජුවම හුරු වී සිටීමයි. එහෙයින් දේශීය වෛද්‍යකම පසුබෑ ඇත්තා සේම අදාළ පරම්පරාගත දැනුම ද සැඟව යමින් පවතී. දේශීය වෛද්‍ය ශාස්ත්‍රය නැවත නගා සිටුවීමට හෝ ඊට එළඹීමට නොහැකි නම් එකී දැනුම් සම්භාරයක උරුමකරුවන් වූ අප ඒ පිළිබඳ යමක් දැන ගැනීම හෝ අගනා කටයුත්තකි. මෙම පර්යේෂණයේ අරමුණ වන්නේ මෙකී පාරම්පරික දැනුම හා එකල පැවැති යම් රෝග නිවාරණ ක්‍රම පිළිබඳ එවැනි හඳුන්වාදීමක් සිදු කිරීමත් එය නූතන බටහිර වෛද්‍ය ක්‍රමය හා යම් සැසඳීමක් සිදු කිරීමත් ය. මෙම ක්‍ෂේත්‍ර කෙරේ උනන්දු වන අයට එය යම් උත්තේජනයක් වීම, ඒ හරහා ඔවුන්ගේ ගවේෂණය පුළුල් වීම එහි සාධනීය ප්‍රතිඵල වේ. මෙහි අධ්‍යයන ක්‍රමවේද ලෙසින් මූලාශ්‍රය අධ්‍යයනය (පුස්තකෝලපොත්) හා ක්‍ෂේත්‍ර ගවේෂණයන්, පාරම්පරික වෛද්‍ය ශාස්ත්‍රයේ යම් පැතිකඩ කිහිපයකුත් ඊට ආශ්‍රය කර ගනු ලබයි.

**ප්‍රමුඛ පද:** රෝග, දේශීය ඥානය, වෛද්‍ය ශාස්ත්‍රය, ස්වභාවදහම, බටහිර වෛද්‍යකම.

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව. \*hiran6361@gmail.com

## **The Role of Public Representatives in Providing Divisional Developmental Services and Public Awareness**

I. Hettiarachchi<sup>1\*</sup>

In democratic states, local governance has been given much importance. The process of local governance paves the way for inter-relationships between the state and the public and the effectiveness of this inter-relationship depends upon the active contribution of local government officials in making citizens' lives better. So, the main objective of this study is to examine whether the local government institutions at present have been able to provide meaningful divisional developmental services to the general public. This study also aims at examining the role and contribution of local government officials/ people's representatives and the awareness of the general public with regard to divisional developmental services. In conducting this study, it is assumed that though people's representatives play a major role in providing developmental services, their duties in this regard have not been properly fulfilled and the general public does not possess a thorough knowledge about the public developmental services provided by local government institutions. This study is based on both primary and secondary data. Questionnaires were distributed and discussions were conducted to obtain primary data while relevant books, research reports, articles have been referred to get secondary data. Through multi-stage and random sampling methods, 60 registered respondents from Bisowela, Asideniya and Namberiyawa Grama Niladari divisions of Galigamuwa Divisional Council were selected for the study. Additionally, interviews were conducted with the chairman, 6 public representatives from both the government and the opposition and 5 officials in Galigamuwa Divisional Council. This study concludes that even though at divisional level, power has been delegated to sub-state entities, the necessities of citizens have not been adequately fulfilled by local government institutions. Also, a majority of public representatives are not fully aware of their role in providing divisional developmental services. Further, this study concludes that the lack of adequate funds and the unequal distribution of community development programmes are some of the reasons behind ineffective divisional developmental services. As recommendations, this study proposes that public representatives in every divisional council should be given proper training to educate them on their role in providing divisional developmental services and public awareness programmes on divisional developmental services should also be conducted. Also, it is recommended to allocate increased funds for community development programmes.

**Keywords:** *Local Governance, Divisional Developmental Services, Public Representatives, Divisional Council, Public Awareness.*

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## **Should Euthanasia Be Allowed or Not :Ethical Dilemma of Philosophical Approach**

H. N. De Zoysa<sup>1\*</sup>

Euthanasia is one of the controversial issues discussed in medical ethics .Ethical issues in the medical field are invariably accompanied by legal issues, and the typical causes include societal and professional misconduct .Euthanasia can be defined as the intentional killing of a dependent human being for their benefit .A patient might have an incurable disease and ask his doctor to stop the treatment which is keeping him alive, which causes a conflict between autonomy and non-maleficence .According to the Hippocratic Oath, doctors are not allowed to let patients die even if they were in serious situation .The intent of this paper is to examine the ethical issues related to euthanasia in a philosophical context .Sub objectives of this study are to find out why euthanasia should be allowed and why euthanasia should be forbidden.

Research methodology used in this study was largely based on qualitative approach which analyses the relevant documentary sources from books, journals and web sites relating to this area .A descriptive research design was applied in this study .There are several types of Euthanasia such as active and passive euthanasia, voluntary and involuntary euthanasia, indirect euthanasia and assisted suicide .Egoism and utilitarianism are two moral theories that apply to euthanasia and both theories can be used to support and oppose the moral dilemma of euthanasia. Findings shows that practicing euthanasia has a lot of undesirable and harmful outcomes. It is virtually an act helping people die. It promotes abuse, gives doctors the right to murder and is contradictory to religious beliefs.

**Keywords:** *Euthanasia, Ethical Dilemma, Medical Ethics, Egoism, Utilitarianism.*

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## US Hegemony and Global Governance

R.M.S.S. Rathnayake<sup>1\*</sup>

In today's globalized world, national borders are increasingly becoming less and less important and transnational actors have come to dominate the international arena. Concepts such as denationalization and deterritorialization occupy a significant place in global political discourse while opportunities for governance beyond the Westphalian nation-state have been created. The idea of global governance moves one step further from globalized markets and societies and extends the sphere of politics to the global level. Although noted for its inherent ambiguities, the concept of global governance revolves around political integration of states and centralizing human societies through formal and informal mechanisms on a global scale. After the disintegration of the Soviet Union, the United States was designated as the undisputed superpower or hegemon providing political leadership to the world. However, as the process of global governance dwindles down the importance of nation-states and embarks on a course of transnational integration and institutionalism, global governance and US hegemony have become two conflicting ideas. In this backdrop, this study aims at examining the impact of global governance on hegemonic intentions of the United States and whether the US hegemony can survive in a context of global governance. This study includes three main objectives, first of which being to critically analyze the concept of global governance using available literature and international relations theory, thus identifying the key aspects of the concept. Secondly, the study aims at investigating the extent of US hegemony in the current world order and the third objective of this study is to examine the impact of global governance on US hegemony. This study is qualitative in nature and is mainly based on secondary data. As per the study, the US hegemony will not be diminished in a context of global governance. The study concludes that at times, the United States can be seen as a driver of global governance with its political role in establishing and maintaining international or global institutions that govern international relations today. According to the concept of global governance, international organizations or institutions may take over the role of a hegemon in the international arena. However, as per the study, the US would profit from global governance using its influence and power over international organizations, thus surviving at a powerful position in the global milieu.

**Keywords:** *Global Governance, Globalization, Institutionalism, US Hegemony, International Cooperation.*

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## **Attitudes of the Villagers in the Post War, Special Reference to Mannar District**

M. Janani D. Peiris<sup>1\*</sup>

In thirty years period of conflict became as main actor in Sri Lankan socio economic and political backgrounds. As the consequences of the conflict, Sri Lankan main streams had harmful damages. These damages directly affected to the development. North and Eastern province are the most conflict affected regions in Sri Lanka. North was the first conflict affected region. Eastern is the totally different from when comparing with North, conflict vulnerability totally wiped out from the Eastern province. Besides, this research is based on the study of the attitudes of people who had gone through the painful war happened in Sri Lanka. Hence, the main objective of this research is to identify the actual mental attitudes of the village folk and the improvement areas within the context of post war in North Sri Lanka. The universe and the sample are gathered from the area of Illuppaikadavai in Mannar district, Sri Lanka, an area where the war affected people lives. Both primary and secondary data were used to conduct this research. Primary data were collected through questionnaires and interviews with 35 participants. The study problem is to ascertain as to how be the thinking attitude and the views they hold in the post war context. Quantitative data were presented through the summary of the results for the statistical tests through charts and graphs when necessary. This study found that villages in Mannar district hold mental attitudes and they were lack in not only an educational knowledge but also in knowledge of social background. Hence the mentality of the public needs revamped in order to fulfill this task, mass media will have to play a major role. Affected people have reminiscences of the war situation. Action should be taken to change the mentality. Although the development work will not suffice thus, educational values and moral values should be given priority. At the same time, they should understand that all are Sri Lankans and must work as one family.

***Keywords:*** *mental, attitudes, Postwar, Mannar district.*

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**A Study on the Contribution of Medical Faculties' Library Services and How Does it Fulfil the Requirements of Medical Students' Necessersities: A Case Study on University of Kelaniya and University of Sri Jayawardhanapura**

T. U. Kumara<sup>1\*</sup>

The main objective of this study is to identify the library services provided by the Medical Faculty libraries. Other objective of this study are to examin the collection of books in libraries to check the quality and quantity of resources necessersities of the students who are using libraries, to identify the way of providing information regarding newly introduced books, to indentify the mutual understanding between students and officers at libraries, to study the service in the magazine section, and to examin the readers' attitudes. The samples consisted of the medical students of University of Sri Jayewardenepura and University of Kelaniya. Questionnaiers were distributed as a main part of data collection method. Secondary data were gathered by using of internet resources, books, magazines and articles and data were analyzed using Excel. It was revealed that a large amount of students of the medical faculties are using faculty libraries to gain the information. Also it was recorded that students are highly referring the. Printed media to obtain the knowledge than the electronic media. Moreover, the capacity and fastness of lending sections of said libraries are not sufficient to fulfill the students' requirements. The Magazine section was used by less number of students. However, it was also it was revealed that the students had satisfied attitudes towards the libraries. This study made recommendations as; expanding the opening hours to create an effective information services, increasing the quantity of books at lending sections, implementing the consultations programmes for readers, and improving the internet facilities.

**Keywords:** *information, medical students, library, University.*

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## **Gender and Media Reporting (With Special Reference to Selected Socially Concerned Incidents)**

S. Priyadarshani<sup>1\*</sup>

Media has a key role in forming social consciousness. Gender is a power oriented cultural construction. Ideology of patriarchy directly and indirectly influences media reporting's of incidents involving women and the depiction of women is also stereotypical.

Objective of this study is to analyze whether the reportage of incidents of the attack involving a girl at Wariyapola (2014), murder of Siwalohanadan Vidya (2015), murder of Seya Sadewemi (2015) and murder of Malki Sadamali Premachandra (2016) all of which took great public attention cause gender issues. The main problem of this research is whether the Sri Lankan media reportage causes gender issues. Content analysis and case studies were used as the research methodology. Data were gathered using in-depth interviews and reviews of literature qualitatively.

The conclusion of this research was that Sri Lankan media reporting's create gender issues. The incidents involving women have been reported with the male dominated view point as the 'women' as a representation of the entertainment culture and fortifying stereotypical social ideas of the women. Serious ethical problems also can be identified in the reportage of the selected incidents.

**Keywords:** *reportage of incidents, Gender, Ideology of Patriarchy, Stereotype.*

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## **A Study of Personal Ornaments Made of Animal Bones and Teeth as a Social Identities**

Ven. Uduwila Uparathana<sup>1\*</sup>

The Historical period is an interesting phase for observing the changes which affected the material culture and the ideology of the ancient group in Sri Lanka. The production of personal ornaments made of animal bones and teeth improved and new types appeared. A new kind of ornament object was often linked to a new costume expressing a particular social identity, and therefore to new social messages. This paper focuses on the personal ornaments of the early historic groups of Sri Lanka and taken into consideration their geographical distribution, the raw materials employed, the exchange networks, the interrelation between different groups and the funerary practices. The analysis of the changes in materials, shapes of the objects can also give an insight into early historic social identities.

**Keywords:** *Historical period, personal ornaments, animal bones and teeth, social groups.*

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## **A Study of Prehistoric Settlement in Sri Lanka Through Archaeological Evidence**

Ven. Pahiyangala Sumangala \*

According to the latest excavation, it is revealed that the settlement of Sri Lanka dates back more than 6<sup>th</sup> century BC. These periods can be divided as Prehistoric, Proto historic and historic period. Main objective of this study is to identify when and how the human settlement of Sri Lanka established in the ancient times. Research method is included both primary and secondary data collection methods excavation reports of prehistoric and historic. First evidence of prehistoric settlements was found from the excavations at Balangoda area by Dr. S.U Deraniyagala and it was identified that those skeleton remains date back to 28000 years ago. They belonged to Homo Sapiens. There are large number of prehistoric sites in Sri Lanka which are extremely rich with evidences of prehistoric settlement sites. Pahiyana Cave 47000-5000 years BP, Batadomba Cave 36000- 13000 years BP, Belilena 30000-9000 years BP, Pothana 5800 years BP, Bellanbadhipelassa 12000 years BP, Aligala 5500-4100 years BP can be mentioned as the examples of prehistoric settlement sites. In Sri Lanka, proto historic period dates back between 2500-600 BC. This period is regarded as transitional period when permanent settlement, agriculture, iron usage, pottery industry can be identified as prominent aspects. As archaeological evidences of this period, Red ware 5300 BC and Black and Red ware 3100 BC from Dorawakakanda site, burials from the Pomparippuwa site such as Ranchamadama, Ibbankatuwa, Haldummulla and remains of a foundation of a house from Ranchamadama were found from several excavation. During the excavation at Anuradhapura inner city covering 5 km, it was excavated evidences of pottery usage, agriculture, brick usage of the ancient shelters in Sri Lanka. According to the inscription found from the sites such as Rambukkana, Diyagama, Pokunuwitw and Galapatha, it is clear that ancient settlement in the country prevailed continuously from historic period. According to the archaeological evidences, it is also clear that the ancient settlements of Sri Lanka which was limited by the historical chronicles, have been prevailed in various areas in different periods.

**Keywords:** *settlement, prehistoric, proto historic, agriculture, chronicles.*

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**හගුරන්කෙත පොත්ගල් මාලිගා රජමහා විහාරයේ පුස්තකාල පොත් එකතු පිළිබඳ ග්‍රන්ථ විද්‍යාත්මක අධ්‍යයනයක් (නුවරඑළිය දිස්ත්‍රික්කය ඇසුරෙන්)**

ලැගුම්දෙනියේ පියරතන හිමි<sup>1\*</sup>

මෙම අධ්‍යයනයේ ප්‍රධාන අරමුණ වන්නේ ශ්‍රී ලංකාවේ පුස්තකාල පොත් පිළිබඳ ග්‍රන්ථ විද්‍යාත්මක අධ්‍යයනයක යෙදීමයි. පුස්තකාල පොත් බහුල වශයෙන් පවතින ප්‍රධාන රජමහා විහාරවල පුස්තකාල එකතු අධ්‍යයනයට යොදා ගන්නා ලදී. ඒ අනුව හගුරන්කෙත පොත්ගල් මාලිගා රජමහා විහාරයේ නියැදිය වශයෙන් තෝරා ගැනිණි. ඊට හේතුව විහාරය සතු පුස්තකාල පොත් එකතුව ග්‍රන්ථ විද්‍යාත්මක තත්වයන් පිළිබඳ සාධාරණීයකරනය කළ හැකි යැයි අපේක්ෂා කෙරිණි. මෙම අධ්‍යයනයට ලක් කළ පුස්තකාල පොත් එකතුව තුළ විවිධ විෂයන් ආවරණය නොවුණ ද ත්‍රිපිටක කෘතීන්, සියම් කෘතීන්, පද්‍ය කෘති මෙන් ම සාහිත්‍ය කෘතීන් පිළිවෙල දැකිය හැකි විය. වැඩි වශයෙන් ත්‍රිපිටක යන කෘතීන් දැකිය හැකි විය.

මෙම පොත් එකතුවේ කෘතීන් 246 ක් දැකිය හැකි විය. එම ග්‍රන්ථ 246 ම අධ්‍යයනයට ලක් විය. මෙම අධ්‍යයනයට ලක් කරවූ කෘතීන්වල විෂය ක්ෂේත්‍රය හඳුනා ගැනීමට අතිරේකව ඒවායේ ග්‍රන්ථ විද්‍යාත්මක ලක්ෂණයන් කෙරෙහි සුවිශේෂ අවධානයක් යොමු කිරීමට මෙම අධ්‍යයනයේ දී හැකිවිය. මෙම අධ්‍යයනයේ දී පුස්තකාල පොත් පිළිබඳ වාර්තා ගත කිරීමේ දී භාවිත කළ යුතු ග්‍රන්ථ විද්‍යාත්මක විස්තර, වර්ගීකෘත, අකාරාදී ආදී අනුක්‍රමවලින් පෙළ ගැස්වීමේ අවශ්‍යතාවයක් පවතී. ඒ අනුව මේ සඳහා ලේඛන රැගත් ග්‍රන්ථ නාමාවලියක් සම්පාදනය සිදුකොට ඇත. පෙළ ගැස්වීමේ විධි ක්‍රමය යන කරුණු කෙරෙහි විශේෂ අවධානයක් යොමු කර, එකී විහාරස්ථානය පිළිබඳ ග්‍රන්ථ නාමාවලියක් සම්පාදනය කරනු ලැබේ.

**ප්‍රමුඛ පද:** පුස්තකාල පොත් ,ලේඛන කලාව, පොත්ගල් රජමහා විහාරය, ග්‍රන්ථ නාමාවලි, දේශීය ඥාණය.

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව. \*piyarathana1010@gmail.com

## **An Examination on the Link between the Structure Sri Lankan Towns and Three Wheelers Special Reference to the Present Context of Homagama**

H. D. A. D. Wijesiri<sup>1\*</sup>, S. Mariyathas<sup>1</sup>

Three-wheelers can be identified as one of the most common and convenient transport modes in Sri Lanka due to its effective and door to door transport service. On the other hand, number of three-wheeler population is gradually increasing in Sri Lanka. As a result, a remarkable number of three-wheel parks and speedy movement patterns of three-wheelers can be seen in Sri Lankan towns. Therefore, this research explores the link between the town structure and the three-wheeler parks and its movement patterns in the existing context of Homagama. In order to achieve the research objective, GIS technical maps, movement pattern maps, sections, field observations and questioners were used.

The analysis of data in this research reveals that there is a strong link between town structure and three-wheeler parks and its movement patterns. Furthermore, the research explores that three-wheel parks attempt to arrange their parking locations based on nodes and they depend on the other elements of town structure (landmarks, districts/land use clusters, activity clusters, edges, and paths). As well as it illustrates three-wheeler movement patterns determine by the alternative roads of the specific context. This research analysis causes to gain the attention of the policy makers to plan the city while identifying the hidden links of the town structure.

**Keywords:** *Town structure, three-wheeler, Three-wheel parks, Three-wheeler movement pattern.*

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**රජරට ශිෂ්ටාචාර අවධියේ වාණිජ හා ආගමික වශයෙන් පදවිය ප්‍රදේශයේ පැවති වැදගත්කම**

සුධර්මා ප්‍රේමසිරි<sup>1\*</sup>

ආර්යයන්ගේ පැමිණීමත් සමඟ ලංකාව තුළ ජනාවාසකරණයෙහි ආරම්භය සිදු වූ අතර ඔවුන් එදා පැවති ජල මූලාශ්‍රය පදනම් කර ගනිමින් ජනාවාස ගොඩනගා ගත් බව පෙනේ. එලෙස ඇරඹී ඔවුන්ගේ ජීවන රටාවන් ක්‍රම ක්‍රමයෙන් පුළුල් වූ අතර, වැව් අමුණු තැනීම ආදී කටයුතුවල නිරත වෙමින් වර්තමානයේ දක්නට ලැබෙන විසල් වාරි කර්මාන්ත මෙන් ම දාගැබ්, ගොඩනැගිලි ආදියෙහි ද ආරම්භකයෝ වූහ. අතීතයේ ඔවුන්ගේ විවිධ ක්‍රියාකාරකම් මත ගොඩනැගුණා වූ රජරට ශිෂ්ටාචාරය වූ කලී මෙතෙක් ලක්දිව ඉතා දීර්ඝ කාල වකවානුවකට උරුමකම් කී ඉතා සශ්‍රීක රාජධානියක් විය.

උතුරුමැද පලාතේ අනුරාධපුර දිස්ත්‍රික්කයට අයත් පදවිය ප්‍රදේශය අතීතයේ සිට ජනාවාස පැවතිය යැයි සැලකිය හැකි වන්නා වූ ඓතිහාසික පුරාවරයකි. දශක ගණනක බිහිසුණු යුද්ධය හේතුවෙන් වැළලී තිබුණ ඓතිහාසික හා පුරාවිද්‍යාත්මක වටිනාකමකින් යුත් පදවිය ප්‍රදේශයේ වැව ආශ්‍රිත පුරා විද්‍යා නටබුන් මගින් වැදගත් තොරතුරු රාශියක් හෙළි කර ගත හැකි ය. රජරට ශිෂ්ටාචාර අවධියේ දී පදවිය කෘෂිකාර්මික වශයෙන් සමෘද්ධිමත් ප්‍රදේශයක් වූවා මෙන් ම ආගමික වශයෙන් හා වෙළඳාම අතින් ද ඉතා වැදගත් විය. ක්‍රි.පූ. ශත වර්ෂවලට අයත් ශිලාලිපි පදවිය හා අවට ප්‍රදේශවලින් හමු වී ඇත්තේ සුළු වශයෙනි. රජරට ශිෂ්ටාචාරයේ ආරම්භක අවධියේ දී මෙම ප්‍රදේශය ජනාකීර්ණ නොවී තිබීම මෙයට හේතු වන්නට ඇතැයි සිතිය හැකි ය. එහෙත් කල් යාමේදී ප්‍රදේශය වාණිජ මධ්‍යස්ථානයක් වශයෙන් වර්ධනය වී ඇති බව පෙනේ.

ක්‍රි.ව. 11 හා 12 වන ශත වර්ෂ පමණ වන විට පදවිය ආගමික වශයෙන් මෙන් ම ඉතා වැදගත් වෙළඳ නගරයක්ව පැවති බව මූලාශ්‍රය තොරතුරු අනුව උපකල්පනය කළ හැකි ය. හමු වී ඇති දෙමළ ශිලා ලිපිවලට අනුව දකුණු ඉන්දියානු වෙළඳ ශ්‍රේණි වන සෙට්ටි, නානාදේශී හා අයින්නුර්වාර් නම් වෙළඳ ශ්‍රේණි පිළිබඳව සඳහන් වේ. වෙළඳාමේදී භාණ්ඩ එකතු කරන ලද හා බෙදා හරින ලද මධ්‍යස්ථානයක් වශයෙන් පදවිය එකල ප්‍රසිද්ධ ව පවතින්නට ඇත. එසේ ම ආගමික වශයෙන් වැදගත් වන නටබුන් රාශියක් හමු වී තිබීම ද වැදගත් ය.

රජරට ශිෂ්ටාචාර අවධියේ දී ආගමික හා වාණිජ අංශයෙන් පදවිය ප්‍රදේශයේ පැවති වැදගත්කම පිළිබඳ ව විමර්ශනය කිරීම මෙහි මූලික අරමුණ වේ. එමෙන් ම ආගමික ක්ෂේත්‍රය එක් ආගමක් පමණක් කේන්ද්‍ර කර ගනිමින් පැවතුනාදැයි විමසා බැලීම, සෙසු අරමුණ අතර වේ. ප්‍රාථමික හා ද්විතියික මූලාශ්‍රය අධ්‍යයනය පර්යේෂණ ක්‍රමවේදය වශයෙන් යොදා ගැනුණි. පුරාවිද්‍යාත්මක හා ශිලාලිපි මගින් පදවිය ප්‍රදේශය 11 හා 12 වන ශත වර්ෂය පමණ වන විට ආගමික හා වාණිජ ක්ෂේත්‍රයන්හි මහත් වැදගත්කමකින් යුක්ත වූ බව නිගමනය කළ හැකි ය.

**ප්‍රමුඛ පද:** පදවිය, වාණිජ, ආගමික, රජරට ශිෂ්ටාචාරය, ශිලා ලේඛන.

<sup>1</sup> කැලණිය විශ්වවිද්‍යාලය, ශ්‍රී ලංකාව. \*jpsudarma@gmail.com

## **An Econometric Analysis of External Debt and Nigeria Economic Growth**

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This paper undertook an econometric analysis of external debt and Nigeria economy using time series dataset for the period 1988 to 2008 employing the Autoregressive Distributive Lag (ARDL) procedure to cointegration because the variables entered are I(1) and I(0). All the variables entered are statically significant in the long run. The result reveal that External debt significantly and positively influence on Nigeria economic growth. Also, financial deepening and foreign private investment is found to significantly and positively promote growth, while government expenditure negatively but significantly affects economic growth during the period under review. However, the Error Correction Model (ECM) is significant and shows the correct sign.

In other words, the implication of Error Correction Model when it is significant is that at least there is convergence in the model implying that there is a long run relationship among the variables entered. Usually, the more the value of the ECM term is near to (-1), the stronger the equilibrium but it must be significant. In other words, it indicate that in the long run the variables move together denoting that there could be short run deviations from the equilibrium but in the long run they adjust and move together and eventually, the entire system adjust itself back to equilibrium with the speed of adjustment of about 88.5 per cent.

**Keywords:** *External Debt, ARDL, Nigeria, Growth, Foreign Private Investment.*

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# Poster Presentations

## **Knowledge Regarding Childhood Diarrhoea among Mothers Having Children Under the Age of Five Years in Batticaloa District**

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Diarrhoea is one of the major causes of morbidity and mortality among Children under the age of five in all over the world, special in developing countries. The main aim of this study was to assess the mothers' knowledge regarding childhood diarrhea. A community based Cross-Sectional study was conducted among 252 mothers by structured interview administer questionnaire from January to October 2015. Multi-stage sampling technique was used to select study areas and units. Among the 252 mothers Hindus, Housewives, Senior Secondary education, Mothers had 1-3 children were 76.6%, 83.7%, 51.2% and 95.2% respectively. The health care workers (83.7%) and community (67.7%) were the main sources of information. Majority (77%) of mothers had heard about diarrhoea as a disease. 87.3% knew the correct meaning of diarrhea. Just above half (53.6%) of the mothers had very good knowledge regarding the causes and risk factors of diarrhea such as contaminated food and drink (93.7%), unhygienic environment (84.5%), Contact the patient with diarrhoeal disease (71.4%) and Worm infestation (51.2%). Less than half of mothers (44.8%) had very good knowledge about important signs and symptoms of diarrhea such as frequent Watery stool (97.6%), Thirsty (88.1%), Dry skin (66.1%) and Oliguria (46.4%). Out of total respondents, 62.7% had very good knowledge about consequences of diarrhea such as Lethargy (97.2), weight loss (92.5%) and Dehydration (80.6%). Majority of mothers (96.4%) had very good knowledge regarding prevention of diarrhea such as use of clean water (98%), proper hand washing (98%) and proper feces disposal (97.6%). The knowledge of the mothers had significant relationship with their age, educational level, and number of children, occupation, family income and sources of knowledge. Although mothers had good awareness regarding causes, signs and symptoms and prevention of diarrhoea, they were less in some specific areas.

**Key Words:** *Knowledge, Childhood Diarrhoea, Management, Mothers, Batticaloa*

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**Pre-University Web Usage Behavior among New Medical Entrants**

Indrajith Solangaarachchi<sup>1\*</sup>, Chithra Abeygunasekera<sup>1</sup>, Thulani Beddage<sup>1</sup>, Suwin Hewage

With the development and wide accessibility of Information and Communication Technology (ICT) students would be expected to move away from traditional sources of information, such as books, towards the internet. With the objective of studying information seeking behaviour and the use of internet prior to university entrance, a survey was carried out on first year MBBS undergraduates at the Faculty of Medicine, University of Kelaniya in 2016. Data were collected using a self-administered questionnaire distributed at the orientation programme for students.

Of the 155 students that responded to the questionnaire, 65% were females and 52.9% were from the Western Province. The most frequent method of finding required information prior to entering the university, as noted by the responders, was searching the internet (98.7%). Referring library books (80.0%) and their own textbooks (61.9%) were the next most common methods. This is also reflected by 87.1% of the students stating that they accessed the internet at least several days per week. Finding information was mentioned by most (94.2%) as the reason for going online. But, a considerable number also used the internet for entertainment (85.8%) and accessing social media websites (78.1%). The main devices used when accessing the web were smart phones (87%) and personal desktops/laptops (79.4%). When it comes to frequency of internet usage, comparative analyses failed to show significant differences between the two genders ( $\chi^2 = 2.242$ ,  $p = 0.134$ ) or those residing in and outside the Western Province ( $\chi^2 = 1.534$ ,  $p = 0.215$ ).

Even with the inclination towards the internet as a major source of information, the reliance on text books (either their own or of colleagues or from the libraries) seem to have still maintained its relevance (with 94.2% as compared to the 98.7% that referred to the web). Wide availability of devices and methods of accessing the internet, along with the ever increasing influence of ICT in education as well as day-to-day life is reflected in these findings.

**Keywords:** *Information Seeking Behaviour, Internet, Access to Information, Students, Medical, Surveys and Questionnaires*

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**Drug related problems among patients with diabetes; a descriptive analysis of data from an urban hospital in Sri Lanka**

Nilani Mamunuwa<sup>1\*</sup>, Shaluka Jayamanne<sup>1</sup>, Judith Coombes<sup>2,3</sup>, Asita De Silva<sup>1</sup>, Cathy Lynch<sup>3</sup>, Dilmi Wickramasinghe<sup>1</sup>

Drug related problems (DRPs) result in reduced quality of care and even morbidity and mortality. The aim of this study is to assess the frequency and nature of DRPs and their causes among patients with diabetes attending an outpatient clinic.

The prospective study was conducted in medical clinics of Colombo North teaching hospital and included 400 outpatients with diabetes. The identified DRPs were classified according to Pharmaceutical Care Network Europe tool (PCNE V6.2).

A total of 151 DRPs were detected. The highest number of DRPs (61.58%) related to treatment effectiveness while 21.19% related to treatment costs, 9.93% related to adverse effects and 7.28% related to other non-classified problems. The most common DRP identified was 'effect of drug treatment not optimal' (39.73%) followed by 'unnecessary drug treatment' (16.55%) and 'untreated indication' (12.58%). Half (50.33%) of the DRPs detected were caused by the way patients use the medicines, in spite of proper prescribing and instructions. This included 'deliberate under-use of the drug' (61.84%), 'drug not taken at all' (15.78%), 'inability to use the drug as directed' (9.21%) and 'drug overuse' (6.57%). 31.12% of the DRPs were related to selection of drugs including 'inappropriate drug' (40.42%), 'drug required not given' (23.4%) and 'duplications' (21.27%).

DRPs are frequent among diabetes outpatients. Early detection and addressing the causes of the actual and potential DRPs may improve the quality use of medicines and ensure safe, appropriate and cost-effective out-patient care.

**Keywords:** *Drug related problems (DRPs), diabetes, PCNE classification*

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## Estimation of Flavonoid Content of Plant *Datura Metel*

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Flavonoids are a class of plant secondary metabolites. Flavonoids were referred to as Vitamin P from the mid-1930s to early 50s, but the term has since fallen out of use. Since *D. metel* is a rejuvenating herb this study was planned to estimate the flavonoid content in *D. metel* because flavonoids also determine the antioxidant capacity of the plant. The plant was obtained from Government herbal garden, Navakkiri, Puththur, Jaffna and taxonomically authenticated. The collected plants were washed thoroughly in running tap water and it was separated into leaf, flower, stem, and root immediately. Then they were dried in sun shade and were powdered. Then powders were stored in air tight dry labeled plastic containers. Cold and hot water extract were prepared from the powders.

The concentration of flavonoids in various plant part extracts of the *D. metel* was determined by aluminum chloride method using spectrophotometry and the flavonoid content expressed as mg of tannic acid equivalent/ gm of DW. The assay was performed in duplicates and data presented as mean  $\pm$  SD. One percent tannic acid used as standard. The concentration of flavonoids in cold and hot water extracts of different parts ranged from  $358 \pm 23.38$  to  $495.68 \pm 43.63$   $\mu\text{mol/g DW}$  and from  $444.70 \pm 43.63$  to  $562.50 \pm 71.97$   $\mu\text{mol/g DW}$  respectively. Both cold and hot water extracts of flower had the highest flavonoid concentration  $495.68 \pm 75.73$ ,  $562.5 \pm 71.97$   $\mu\text{mol/g DW}$  respectively. The lowest flavonoid concentration was found in the root. According to the study both cold and hot water extract of flower were showed highest amount of flavonoid content.

**Key words:** Flavonoid, *D. metel*, Aluminum chloride, Tannic acid, Spectrophotometry

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## **Prevalence of NS-1 Status of Clinically Suspected Dengue Patients in a Selected Out-Patient Setting**

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Dengue infection is one of the rapidly emerging arboviral infections in the world. It is a cause of significant morbidity and mortality especially in developing countries. Although most dengue infections are asymptomatic, dengue fever can be manifested with or without complications. Early diagnosis of dengue is important both clinicians and the patients, where appropriate management of dengue patients reduces both morbidity and mortality. Traditionally dengue infection is clinically suspected with full blood count aided by clinical features although dengue infection cannot be confirmed by either of these methods. Confirmatory tests for detection of the dengue virus are by virus isolation or by nucleic acid detection. which are not suitable for routine diagnosis. NS-1 rapid antigen test has become available for early detection of dengue NS1 antigen, which can be performed at the point of care.

Estimate the prevalence of NS1 positivity in dengue suspected patients with acute febrile illness in a selected study setting

Blood samples from clinically suspected patients within the first five days of fever were sent for NS1 diagnosis to the molecular laboratory in the department of Biochemistry Faculty of Medicine Ragama. Clinical diagnosis was made by a medical officer. Serum was used for the NS1 diagnosis using Inbios Diagnostic kit (USA).

22.2% of samples were tested positive for NS-1 antigen in a total of 54 samples collected. There were 53.7% males. 9.2% patients were below 10 years of age, 37% patients between 11-20 years of age, 20.3% patients between 21-30 years and 31.4% patients above 31 years of age. 30 % of patients between 11-20 years were NS-1 positive. 36.3 % of patients between 21-30 years of age and 11.7% patients above 31 years of age were also NS-1 positive.

NS-1 antigen prevalence was highest among patients between the ages of 11-30 years. Initial clinical assessment of dengue infections is of low specificity as the disease manifests as an undifferentiated febrile illness. Therefore, the inclusion of an antigen test will improve the specificity of diagnosis in a similar out-patient setting which will enable clinicians to make decisions on the further management of the condition.

**Keywords:** *Dengue, NS-1 antigen, prevalence, specificity, clinical diagnosis*

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**Assessment of artificial blood feeding methods and efficacy of different blood meal sources in mass rearing of *Aedes aegypti* for innovative vector controlling strategies**

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### **Background**

Mass rearing of vector mosquitoes of dengue is a crucial requirement for implementation of innovative vector controlling strategies such as Sterile Insect Technique (SIT), Incompatible Insect Technique (IIT) and transgenic mosquitoes. Selection of the artificial membrane-feeding technique and blood meal source have been recognized as key considerations in mass rearing of vectors.

### **Methodology**

Three artificial membrane feeding techniques (Glass plate method, Metal plate and Hemotek membrane feeding method) and three blood sources (human, cattle and chicken) were evaluated based on feeding rates, fecundity and hatching rates of *Ae. aegypti*, under laboratory conditions. One-way ANOVA, cluster analysis, analysis of variance (ANOSIM) and principal coordinates (PCO) analysis, were used to investigate the significance in the variations among blood feeding.

### **Results**

Feeding rates of *Ae. aegypti* significantly differed among the membrane feeding techniques as suggested by one-way ANOVA ( $p < 0.05$ ). The metal plate method was identified as the most efficient and cost effective feeding technique. Blood feeding rate of *Ae. aegypti* was higher with human blood followed by cattle and chicken blood, respectively. However, no significant difference was observed among mosquitoes fed with cattle blood and human blood, in terms of fecundity, oviposition rate and fertility.

### **Conclusions**

Metal plate feeding technique could be recommended as the most effective membrane feeding technique for mass rearing of *Ae. aegypti*, due to its high feeding rate and cost effectiveness. Since, obtaining human blood for insectary colony maintenance is problematic due certain ethical issues, cattle blood could be recommended for mass rearing *Ae. aegypti*.

**Keywords:** *Aedes aegypti*, blood feeding, techniques, blood meal, mass rearing.

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## Prevalence of dengue vector breeding habitats among selected Schools in Gampaha District of Sri Lanka

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*Aedes aegypti* and *Aedes albopictus* are the vectors responsible for the transmission of dengue viruses in Sri Lanka. Gampaha District has been ranked as the second most Dengue affected area. Recently, health authorities have identified that over 54 percent of schools have dengue mosquito breeding sites. However, the entomological information on the dengue vectors in School premises are not available. Therefore, the present study was carried out to identify the different breeding sites of dengue vector mosquitoes within school premises of randomly selected schools in Gampaha District of Sri Lanka.

The premises of the selected schools (n= 34) were surveyed from May to October in 2016 for the availability of potential breeding habitats and the presence of vector breeding through entomological surveys. Collected vectors were identified morphologically and categorized into species level. All data on breeding habitats and number of vectors identified were recorded.

According to survey, out of 34 schools surveyed; infested water-holding containers by *Ae. albopictus* were observed at 16 schools (47, 05%). Tree holes (*Bridelia retusa* tree), leaf axils of banana tree and fallen leaves were observed as natural breeding sites while, discarded plastic food containers plastic paint containers, broken pet bottles, tire marks on the ground, water retaining flower pots and plastic barrels were observed as artificial breeding sites. Breeding of *Ae. aegypti* was not identified among the school premises surveyed. Improper management of solid waste has affected positively in creating suitable habitats for vector breeding. Therefore, continuous monitoring of dengue vector breeding habitats and school based vector controlling interventions should be implemented through proper awareness and active participation for eliminating breeding habitats.

**Keywords:** *Aedes*, *Breeding School premises*.

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**Eliminating female *Aedes* mosquitoes by spiking blood meals with toxicants as a sex separation method in the context of the sterile insect technique and Incompatible Insect Technique**

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Ivermectin and spinosad have longevity reducing effects in several insect species, including disease transmitting mosquitoes after feeding blood contaminated with above toxicants on hosts. Therefore, this approach could play an enormous role in mosquito control operations by its use in the female elimination process during mass-rearing, enabling the release of only sterile males in the context of the sterile insect technique (SIT) and incompatible insect technique (IIT) with *Wolbachia* bacterium.

Blood meals of cattle origin were spiked with different concentrations (2, 4, 6, 8 and 10 ppm) of Ivermectin (Ivotec, 1% w/v) and Spinosad (Spinosyn, 12% w/v) and offered to a batch of adult *Ae. aegypti* (n = 300) and *Ae. albopictus* (n = 300) having 1:1 sex ratio in order to obtain an optimal dose for quick and total female elimination. After 24 hours all remaining females and males were aspirated out and transferred in to new cages separately. An additional blood meal with the initially fed concentrations of ivermectin and spinosad was provided after 24 hours, followed by a 48-hour observation of mortality. This experiment was repeated by feeding cattle blood containing a mixture of ivermectin and spinosad in 1:1 ratio from each concentration.

Spiked blood with 8 ppm ivermectin and spinosad killed all the fed females of *Ae. aegypti* and *Ae. albopictus* within 24 to 48 hours. It was observed that the number of fed females gradually increased, when decreasing the toxicity in combination of ivermectin and spinosad (1:1) in blood for both species. Male mortality did not show any significant differences during the study. Mixed feeding of blood with 8 ppm ivermectin and 8 ppm spinosad have shown as the viable treatment to eliminate female *Ae. aegypti* and *Ae. albopictus* from laboratory colonies.

**Keywords:** *Dengue, Aedes, Vector control, Sex Separation*

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**Characterization of a Dengue Positive Population in Colombo Municipal Council (CMC) Medical Officer of Health (MOH), Colombo**

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Dengue that has caused 29,777 suspected infections in 2015 has emerged the most challenging health issue faced in Sri Lanka. Approximately 51% of dengue infections are reported from the Western Province. The susceptibility of a population to dengue is influenced by a combination of socio-economic, environmental and epidemiological factors. The current study was conducted to characterize a population of dengue patients residing in a high dengue risk area in terms of their socio-economic appearance. An interviewer administered questionnaire was used to collect information on the socio-economic aspects of a group of 140 randomly selected dengue positive patients residing in Colombo Municipal Council (CMC) Medical Officer of Health (MOH) area. Out of 140, a majority (63.6%, n=89) were females, while the age groups of 31-40 and 21-30 years were recognized as the most susceptible age groups for dengue. High proportion of the patients (79.3%, n=111) were having an educational level below secondary school (O/L) with a total family income below 20,000 LKR (80.7%, n=113). All the homesteads were smaller (<5 perch) in size, with small roads for access (77.1%, n=108) and/or a footpath (22.9%, n=32) as the access route. Majority of the households (69.3%, n=97) were temporary with moderate conditions (51.4%, n=72), that were mainly utilized for both residential and commercial purposes (63.5%, n=89) at once. In a majority of households' solid waste was disposed within 7 days (62.1%) via the Municipal Council or by keeping near the main roads (37.9%). Source separation of waste, home gardening and composting by the study population was minimal (n=137, 97.9%). Pipe water remained as the only water source while approximately 27.9% (n=39) households were lacking sanitary facilities. Use of mosquito coils and bed-nets were the most preferred mosquito biting prevention methods. Low educational level, income, poor living conditions and limitations in solid waste disposal methods were recognized as potential risk factors for high infection rates of dengue in this population. Special focus should be given to these key areas by the relevant vector controlling authorities in order to facilitate controlling of dengue outbreaks within the CMC area.

**Keywords:** *Dengue, Socio-economic, Colombo Municipal Council*

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