



International Journal of

perspectives in education

ISSN 2456 - 3412

VOLUME - 5

ISSUE - 2

JULY - 2017

International Journal of Perspectives in Education

Print ISSN 2456-3412, Volume 5, Issue 2, July 2017

MANAGING EDITOR

Mohamed Ali, Secretary, Muslim College of Education, Kanniyakumari District,
Tamil Nadu-INDIA

EXECUTIVE EDITORS

Dr. Radharamanan Pillai, The Arba Minch University, Ethiopia

Dr. Pramod. V. S. Muslim College of Education, Kanniyakumari District, Tamil Nadu -
India, The TNTEU University

EDITORIAL BOARD

Dr. C. P. Sreekandan Nair	Formerly Faculty & Dean, SreeSankaracharya University of Sanskrit Kerala, India
Dr. Geetha. M.S	Formerly Principal, Govt Training College, Trivandrum, Kerala. India
Dr. R. Mukundan	Formerly Principal, NVKSD College of Education Attoor, Kanniyakumari District, Tamil Nadu, India

EDITORIAL BOARD

Dr. Yechale Kebede Bizuneh	Vice -President, Arbaminch University, Ethiopia, Africa
Dr.B.William Dharma Raja	Professor & Head, Department of Education, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India
Dr. Emerson Cabudol	Faculty Member, Business Department, Higher College of Technology, Women's College, Al Ain, UAE
Dr. Zaheer Abbas	Faculty of Management Sciences, International Islamic University, Pakistan
Dr.N.Janardhanan	Head, Centre for Post Graduate Studies and Research in English, Muslim Arts College, Tamil Nadu, India
Prof. Jayaraman	Professor, Centre for Post Graduate Studies and Research in English, Muslim Arts College, Tamil Nadu, India
Dr R. Ramesh Reddy	Professor, Department of Civil Engineer, Arba Minch University, Ethiopia

Dr. Ahmed Mahmud	Lecturer, Department of English Language and Literature, Madda Walabu University, Ethiopia
Dr. Mohammed Kawo	Lecturer, Department of English Language and Literature, Madda Walabu University, Ethiopia
Dr. Tesfaye Alemelu	Professor, Department of English, Arba Minch University, Ethiopia
Dr. Reji. D. Nair	Faculty Member, Business Department, Higher College of Technology, Women's College, Al Ain, UAE
Dr.K.Reji Kumar	N.S.S. College, Kerala University, Kerala, India
Dr.K.Krishnan Kutty	Professor, N.S.S. College, Kerala University, Kerala, India
Dr.Ajith Prasad	Professor, N.S.S. Rajakumari College, M.G. University, Kottayam, Kerala, India
Dr. P.Subramaniyan	Assistant Professor, Department of Educational Planning and Administration, Tamil Nadu Teachers Education University, Chennai, Tamil Nadu, India
Dr.Blessed Singh	Professor, Scott Christian College, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India
Dr. M.R. Harikrishnan	Professor, M.G. College, Kerala University, Kerala, India
Dr. P.H. Adalyn George	Professor, Women's Christian College, Nagercoil Manonmaniam Sundaranar University, Tamil Nadu, India

EDITORIAL ADVISORY BOARD

Dr. A. Sukumaran Nair	Formerly Vice-Chancellor, M.G. University, Kottayam, Kerala, India
Dr.Ramachandran Nair	Formerly Vice Chancellor, Kerala University. Kerala, India
Prof. Dr. S. Sivasubramanian	Formerly Vice Chancellor, Bharathiyar University, Coimbatore, Tamil Nadu, India
Dr. R. Sukumaran Nair	Formerly Faculty & Dean, SreeSankaracharya University of Sanskrit, Kerala, India
Dr. S. Mani	Professor & Head, Dept. of Educational Planning and Administration, Tamil Nadu Teachers Education University, Chennai, Tamil Nadu, India

Dr.N.Ramakrishnan,	Professor & Head, Dept. of Educational Technology, Tamil Nadu Teachers Education University, Chennai, Tamil Nadu, India
Dr. P. Ganesan	Professor and Head, Department of Pedagogical Sciences, Tamil Nadu Teachers Education University, Chennai, Tamil Nadu, India
Dr. Madhavan	Professor of English and Foreign Languages, University Hyderabad, India
Dr. M. Soundararajan	Professor and Head, Department of Value Education, Tamil Nadu Teachers Education University, Chennai, Tamil Nadu, India
Dr.G. Baskaran	Professor & Dean, Faculty of English & Foreign Languages, Gandhigram Rural Institute Deemed University, India
Dr. K.A. Janardhanan	Human Resource Manager, Noorul Islam University, Nagercoil, Tamil Nadu, India
Dr. Omer Al-Buk	Dean of Humanities and Social Science, 7th October University, Libya
Dr. Selvinkumar	Vice Chancellor International Tamil University, USA
Dr. S. Pakiam	Formerly Registrar, Manonmaniam Sundaranar University, Tamil Nadu, India
Dr. James R. Daniel	Formerly Principal, Scott Christian College, Nagercoil, Tamil Nadu, India
Dr. B. Sobhanan	Formerly Professor and Head in History, Kariavottom Campus, University of Kerala, India
Dr. TaregnTedesse	President, Science and Technology, University of Addis Ababa, Ethiopia
Dr. Prem Khattry	Formerly Professor, Tribhuvan University, Federal Democratic Republic of Nepal
Dr. K.Y.Benedict	Principal, Martheophilus Training College, Trivandrum, Kerala University, Kerala, India
Dr.Raveendran Nair	Formerly Director, SCERT, Trivandrum, Kerala, India
Dr. G. Edwin Sheela	Principal, Muslim Ars College, Thiruvithancode, Kanniyakumari District, Tamil Nadu, India

Subscription rates

Institutional: Indian 2500 INR; Foreign 38 USD \$ for single copy.

Individual: Indian 2000 INR; Foreign 30 USD \$ for single copy.

Ordering Information:

The Subscription amount to be sent through Bank Draft drawn in favour of Finance Officer, (+917402735588) payable at IDBI, Thuckalay, Account Number 157910 400 00 30773 and IFS code- IBKL 0001579. Subscriptions purchased at the personal rate are strictly for personal, non-commercial use only. The reselling of personal subscriptions is prohibited. Personal subscriptions must be purchased with a personal cheque or credit card. Proof of personal status may be requested. For more information on our sales packages please visit <http://www.muslimcollegeofeducation.com> Older volumes are held by our official stockists to whom all orders and enquiries should be addressed:

Email: muslimcollegeofeducation@gmail.com or Tel: +91 7402735588, +91 7402735503.

Copyright 2016 General Secretary, Muslim Educational Society, Kanniyakumari District, Tamil Nadu -INDIA. All rights reserved. No part of this publication may be reproduced, stored, transmitted, or disseminated, in any form, or by any means, without prior written permission from Dr. H. Mohamed Ali, to whom all requests to reproduce copyright material should be directed, in writing.

Disclaimer: Muslim College of Education and our publisher Dr. H. Mohamed Ali, make every effort to ensure the accuracy of all the information (the "Content") contained in our publications. However, Muslim College of Education and our publisher Dr. H. Mohamed Ali, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Muslim College of Education and our publisher Dr. H. Mohamed Ali.

The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Muslim College of Education and our publisher Dr. H. Mohamed Ali, shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content. Terms & Conditions access and use can be found at <http://www.muslimcollegeofeducation.com> (under the title - Journals). We grant authorization for individuals to photocopy copyright material for private research use, on the sole basis that requests for such use are referred directly to the requestor's local Reproduction Rights Organization (RRO)

Subscription records are maintained at Muslim College of Education (MCA), No.1 New Street, Thiruvithancode, Kanniyakumari District, Tamil Nadu INDIA.

International Journal of Perspectives in Education is published Biannually in January, and July by The Kumari Press, Monday market, Thuckalay, Kanniyakumari District, Tamil Nadu, India. Please note: There are no International Journal of Perspectives in Education issues with ISSN 2456 – 3412.

S. No	Contribution	Article	Page No.
1.	Dr. Reji. D. Nair	Islamic Banking and Economic Recession: An Empirical Discourse in the Midst of Global Recession 2007-2010	1-16
2.	Dr. L. Anila	In Vitro Studies on Antioxidant Properties of Gallic Acid from <i>Mangifera Indica</i>	17-27
3.	Sini Naseera	Role of Celebrity in The Effectiveness of Advertising	28-36
4.	R. M. Regitha	Benefits and Challenges in Integrating ICT in Education	37-43
5.	Prem. K. Khattry	The Sublimity of Paravidyain Education	44-50
6.	Dr. J. Shakila K. Lakshmi Tulasi	Parental Involvement: A Key for Children's Academic Performance	51-56
7.	Manoj Chandrasenan	Sensuousness of Poetry Made Tangible: The Digitalized Approach	57-61
8.	A. Siva Jothi S. Robinson Chellathurai	The Upper Total x -Edge Steiner Number of a Graph	62-67

Islamic Banking and Economic Recession: An Empirical Discourse in the Midst of Global Recession 2007-2010

Dr. REJI. D. NAIR

Assistant Professor in Economics, University of Abu Dhabi

The present paper discusses the role of Islamic Banking in circumventing the global recession. The soundness of Islamic banks is accounted for by the fact that they use a classical banking model, with financing derived from deposits, rather than being funded by borrowings from wholesale markets. Consequently, when the credit crunch came and borrowing from wholesale markets was halted, Islamic banks were not exposed. The paper concludes that there can be no doubt that Islamic finance has an exciting future, and the quest for a financial system based on moral values rather than greed and fear, is bound to enhance its position in the global system.

Keywords: Islamic Banking, Financial Crisis, Economic and Financing.

Introduction

Islamic banking is gaining popularity in emerging economies as it bolstered financial institutions avoid the worst of the economic meltdown. With irresponsible banking practices taking the blame for bringing about the global economic crisis, there been a surge of interest in Islamic finance. Islamic

Volume 5, Issue 2, July 2017

International Journal of Perspectives in Education (IJPE)

A Multi-disciplinary Biannual Journal

ISSN 2456-3412

Islamic Banking and Economic Recession

banking refers to a system of banking or banking activity that is consistent with the principles of Islamic law (Sharia) and its practical application through the development of Islamic economy (Amin, S, 1978). Sharia prohibits the payment or acceptance of interest fees for loans of money (Riba, usury), for specific terms, as well as investing in businesses that provide goods or services considered contrary to its principles (Haraam, forbidden). While these principles were used as the basis for a flourishing economy in earlier times, it is only in the late 20th century that a number of Islamic banks were formed to apply these principles to private or semi-private commercial institutions.

According to ratings agency Moody's, the global Islamic finance sector is worth \$700 billion and has the potential to be worth \$4 trillion. Islamic finance has been growing by 15 to 20 percent per year for some time and people are looking for alternatives to conventional banking products after the economic crisis (CNN-WB, 2007). There are a lot of non-Muslim countries, including the UK, France, Japan, Hong Kong and Singapore encouraging Islamic finance. In the West, banks including Lloyds TSB, HSBC, Deutsche Bank and Citibank all offer Islamic finance products.

There are many differences between Islamic and conventional banking practices. One fundamental difference is that Islamic banks do not charge interest rather than borrowers and lenders; the system is based on buyers and sellers. Conventional banking is biased to the seller; Islamic finance is trying to level the ethics between the two parties. While Islamic banks allow taking advantage of financial services that are consistent with religious beliefs, it is the ethics underpinning Islamic finance that is attracting the interest of conventional finance institutions keen to learn lessons from the banking crisis.

Although Islamic banks have suffered from the global repercussions of the economic downturn, they emerged largely unscathed from the initial banking meltdown that brought about that financial turmoil; because Islamic banks are not allowed to deal in mortgage-backed securities or credit-default swaps, two of the practices behind the so-called banking crisis' (Ibid). Now it's too early to say if Islamic finance has dealt with economic downturn better than conventional finance. However, the Islamic system has many more layers of risk assessments and management, which could help protect it from the problems afflicting conventional banks.

Reji. D. Nair

The present paper is an empirical discourse on the relevance of Islamic banking to deal with the financial crisis; it discusses the role of Islamic Banks in the midst of Global recession as a remedy to prevent such incidences in future. This paper has seven sections, other than the introduction and conclusion. The principles of Islamic banking and the approaches used in business transactions are discussed in section-2. History of Islamic banking including concepts and techniques are briefed in section-3; section-4 analyses modern Islamic banking from the backdrop of growth of Islamic banking.

The origin of financial crisis starting from the sub-prime crisis is detailed in section-5. Having given the background of economic recession and Islamic banking, section-6 discloses the role of Islamic banking in settling financial recession. The lessons learned from the recession as enclosed in section-7 pointing to the importance of justice and ethics in financial transactions, on which Islamic Banking is rooted. Spread of Islamic Banking in the West is briefed in section-8 through the opportunities aroused out in Western Europe.

Principles of Islamic Banking

Islamic banking has the same purpose as conversional banking except that it operates in accordance with the rules of Shariah, known as Fiqh al - Muamalat (Islamic rules on transactions). The basic principle of Islamic banking is the sharing of profit and loss and the prohibition of Riba (usury). In an Islamic mortgage transaction, instead of loaning the buyer money to purchase the item, a bank might buy the item itself from the seller, and re-sell it to the buyer at a profit, while allowing the buyer to pay the bank in installments.

However, the bank's profit cannot be made explicit and therefore there are no additional penalties for late payment. In order to protect itself against default, the bank asks for strict collateral (Muslehuddin, M, 2007). The goods or land is registered to the name of the buyer from the start of the transaction, called Murabaha. Another approach is IjarawaIqtina, which is similar to real estate leasing. Islamic banks handle loans for vehicles in a similar way (selling the vehicle at a higher than market price to the debtor and then retaining ownership of the vehicle until the loan is paid).

An innovative approach applied by some banks for home loans, called Musharaka al-Mutanaqisa, allows for a floating rate in the form of rental. The bank and borrower form a partnership entity, both providing capital at an agreed percentage to purchase the property. The partnership entity then rents out the property to the borrower and charges rent. The bank and the borrower

Islamic Banking and Economic Recession

will then share the proceeds from this rent based on the current equity share of the partnership. At the same time, the borrower in the partnership entity also buys the bank's share of the property at agreed installments until the full equity is transferred to the borrower and the partnership is ended. If default occurs, both the bank and the borrower receive a proportion of the proceeds from the sale of the property based on each party's current equity (Umer. C.M, 2008). This method allows for floating rates according to the current market rate such as the BLR (base lending rate), especially in a dual-banking system like in Malaysia.

There are several other approaches used in business transactions. Islamic banks lend their money to companies by issuing floating rate interest loans, which is pegged to the company's individual rate of return. Thus, the bank's profit on the loan is equal to a certain percentage of the company's profits (Rozenberg, C.I, 2006). Once the principal amount of the loan is repaid, the profit-sharing arrangement is concluded and is called Musharaka. Further, Mudaraba is venture capital funding of an entrepreneur who provides labor while financing is provided by the bank so that both profit and risk are shared. Such participatory arrangements between capital and labor reflect the view that the borrower must not bear all the risk/cost of a failure, resulting in a balanced distribution of income and not allowing lender to monopolize the economy.

Islamic banks and banking institutions that offer Islamic banking products and services (IBS banks) are required to establish a Shariah Supervisory Board (SSB) to advise them and to ensure that the operations and activities of the banking institutions comply with Shariah principles. On the other hand, there are also those who believe that no form of banking that involves interest payments can ever comply with the Shariah. In Malaysia, the National Shariah Advisory Council, which has been set up at Bank Negara Malaysia (BNM), advises BNM on the Shariah aspects of the operations of these institutions and on their products and services. In Indonesia the Ulama Council serves a similar purpose (Habib, F.E, 2007). A number of Shariah advisory firms have now emerged to offer Shariah advisory services to the institutions offering Islamic financial services. Issue of independence, impartiality and conflicts of interest have also been recently voiced.

History of Islamic Banking

During the Islamic Golden Age, early forms of proto-capitalism and free markets were present in the Caliphate, where an early market economy and an early form of mercantilism were developed between the 8th-12th centuries, which some refer to as "Islamic capitalism"(Muslehuddin,M, 2007).A

Reji. D. Nair

vigorous monetary economy was created on the basis of the expanding levels of circulation of a stable, high-value currency (the Dinar) and the integration of monetary areas that were previously independent.

A number of economic concepts and techniques were applied in early Islamic banking, including bills of exchange, the first forms of partnership (mufawada) such as limited partnerships (mudaraba), and the earliest forms of capital (al-mal), capital accumulation (nama al-mal), cheques, promissory notes, trusts, transactional accounts, learning, ledgers and assignments (Arjomond. S.A. 1999). Organizational enterprises independent from the State also existed in the medieval Islamic world, while the agency institution was also introduced during the time. Many of these early capitalist concepts were adopted and further advanced in medieval Europe from the 13th century onwards.

Applying interest was acceptable under some circumstances. Currencies that were based on guarantees by a government to honor the stated value (i.e. fiat currency) or based on other materials such as paper or base metals were allowed to have interest applied to them. When base metal currencies were first introduced in the Islamic world, the question of "paying a debt in a higher number of units of this fiat money being riba" was not relevant as the jurists only needed to be concerned with the real value of money (determined by weight only) rather than the numerical value.

The criticism of usury in Islam was well established during the Prophet Mohammed's life and reinforced by several of verses in the Quran. This was accepted to refer directly to interest on loans so that, by the time of Caliph Umar, the prohibition of interest was a well-established working principle integrated into the Islamic economic system (Lopez, R. S. 2001). It is not true that this interpretation of usury has been universally accepted or applied in the Islamic world. Indeed, a school of Islamic thought which emerged in the 19th century led by Sir Sayyed still argues for an interpretative differentiation between usury, which it is claimed refers to consumption lending, and interest which they say refers to lending for commercial investment (Ibid). Nevertheless, there does seem to be evidence in modern times for what describe as a gradual evolution of the institutions of interest-free financial enterprises across the world. For instance, the current existence of financial institutions in Iran, Pakistan and Saudi Arabia, the Dar-al-Mal-al-Islam in Geneva and Islamic trust companies in North America.

Modern Islamic Banking

Interest-free banking seems to be of very recent origin. In due course, the need for commercial banks and their perceived "necessary evil," have

Islamic Banking and Economic Recession

proposed a banking system based on the concept of Mudarabha - profit and loss sharing. In the next two decades interest-free banking attracted more attention. The early 1970s saw institutional involvement (Banaji, J, 2007). The Conference of the Finance Ministers of the Islamic Countries held in Karachi in 1970, the Egyptian study in 1972, the First International Conference on Islamic Economics in Mecca in 1976, and the International Economic Conference in London in 1977 were the result of such involvement (Kuran, T, 2005). The involvement of institutions and governments led to the application of theory to practice and resulted in the establishment of the first interest-free banks. The Islamic Development Bank, an inter-governmental bank established in 1975, was born of this process.

The first modern experiment with Islamic banking was undertaken in Egypt under cover without projecting an Islamic image. The pioneering effort, led by Ahmad Elnaggar, took the form of a savings bank based on profit-sharing in the Egyptian town of MitGhamr in 1963. This experiment lasted until 1967, by which time there were nine such banks in the country.

In 1972, the MitGhamr Savings project became part of Nasr Social Bank, which currently is still in business in Egypt. In 1975, the Islamic Development Bank was set-up with the mission to provide funding to projects in the member countries. The first modern commercial Islamic bank, Dubai Islamic Bank, opened its doors in 1975 (Ibid). In the early years, the products offered were basic and strongly founded on conventional banking products, but in the last few years the industry is starting to see strong development in new products and services.

Islamic Banking is growing at a rate of 10-15% per year and with signs of consistent future growth. Islamic banks have more than 300 institutions spread over 51 countries, including the United States through companies such as the Michigan-based University Bank, as well as an additional 250 mutual funds that comply with Islamic principles (PE, 2009). It is estimated that over US\$822 billion worldwide sharia-compliant assets are managed according to the Economist (2008). This represents approximately 0.5% of total world estimated assets as of 2005 (Yun, M, 2010).

According to CIMB group holdings, Islamic finance is the fastest-growing segment of the global financial system and sales of Islamic bonds may rise by 24 percent to \$25 billion in 2010. There are evidences that people worldwide got a little concern about the conventional banking system, and the interest to explore Islamic banking has increased. While Islamic banking has gained ground most rapidly in the Middle East, the focus now is on the Asia-

Reji. D. Nair

Pacific region (Totaro, L, 2009). Assets in the Asia-Pacific region reached \$450 billion roughly 60% of the global industry by 2007; given the industry's 10% to 15% annual growth rate in the last decade, total assets are likely approaching \$1 trillion (Umer C.M, 2007). Within Asia, Malaysia is a growing hub for Islamic finance. Other nations, including, Singapore, South Korea and Hong Kong are also competing for these assets (Yun, M, 2010). Nations are eager to attract investment from the Middle East to fund infrastructure, airports, toll roads and real estate projects.

Origin of Financial Crisis

The US sub-prime mortgage crisis was one of the first indicators of the 2007-2010 financial crises. Coming out the dot-com bubble crash, the central bank kept interest rates low in order to stimulate growth in the economy. At low interest rates however, banks started engaging in sub-prime lending with adjustable rate mortgages (ARMs)⁹. Simply put, you extend a house loan to someone with high credit risk at low interest rates but as the rates adjust upwards which means the monthly mortgage payments shoot up the same high-risk borrower becomes a "very high risk" borrower (Stiglitz, 2003).

While these loans were being issued innovation kicked in and several financial institutions repackaged the very same loans and sold them as "bundled" debt or MBS (Mortgage Backed Securities) to other investors (BIS, 2008b). Rating agencies continued to rate these bundles of debt as relatively safe and high grade, which turned out not to be the case. To make this even worse based on these ratings many investors bought these securities and some also bought credit default swaps (CDS) as insurance against these loan packages.

On the other side insurance companies and other financials took on the credit default risk, i.e. if the loans went bad these insurance companies would pay for the shortfall. Recall these insurance companies were also relying on ratings agencies on the credit worthiness of the loans. With all of this playing out over several years leading up to 2006 as the markets started recovering from the dot-com bubble, interest rates now started going up.

That in turn led to a trigger in sub-prime mortgage defaults, which in turn led to severe drop in MBS prices or the value of bundled loans, which further led to insurance companies having to pay for the shortfall (Ben, B and 2007a). All of this led to freezing up of credit and money markets as capital was getting destroyed and investors just didn't know how bad this could get. As a result, markets collapse fairly quickly and global recovery initiatives started

Islamic Banking and Economic Recession

since the 2007/2008. So far, we could not fully avert the global crisis. The US economy is witnessing a jobless recovery for the most part with unemployment at 9.5% and the European Union crisis seems to have a revolving door, first with Greece and later with Ireland needing a bailout (Yun, M, 2010).

By no means should one assume that as an alternative, Islamic finance framework alone would be a 100% water-tight solution as the regulation and execution within the system is just as important as its underlying principles. However, if we just examine the sub-prime crisis chain of events and the level of leverage and speculation not to mention lack of regulatory oversight, we may deduce that under Islamic finance principles much of the excess would have been "checked at the door" and not have come about at several times during the birth of the crisis (Masud, S, 2009). For example, under Islamic banking regulation loans would not have been repackaged and traded as MBS and CDS would not be linked to these speculative products thus mitigating the chance for a ballooning effect. While Islamic finance continues to evolve rapidly the recent economic crisis has bought it some market share. In the end market decides the value of any goods and services and over last five years the Dow Jones Islamic Index is up 18% compared to the S&P 500 down 8% (Ibid).

Islamic Banks and Economic Recession

A question that is often discussed is if the global economic crisis triggered by the housing bubble burst and the sub-prime credit crisis in the US would have been averted if the Islamic finance framework were in place. It is a question that is asked often and one that has generated global interest. The answer is that in principle, Islamic finance may have prevented the sub-prime crisis leading to the global economic crunch.

The very founding spirit of Islamic finance is anti-speculation and "anti-bubbles"; improper risk management and lack of execution of principles in any financial system can potentially lead to similar negative results (Masud, S, 2009). However, understanding the general concepts behind Islamic finance, one may begin to appreciate the positives of this form of banking that is one of the fastest growing in the world.

As we discussed in the earlier section, Islamic finance prohibits usury or charging interest for the use of money, investing in speculative financial products like certain derivatives and engaging in businesses, products and services that are considered forbidden in Islam. Furthermore, Islamic banking emphasizes partnership in profit and loss sharing, asset-backed investing and more importantly it is not restricted to Muslims alone (Farhad, N, 1994). As a

Reji. D. Nair

matter of fact, several secular states including Singapore have seen an increase in demand for Islamic financial.

In essence under Islamic law (Shartah) one cannot lend money to make money or engage in predatory lending which leads to poor getting poorer and rich getting richer, i.e. exploitation is strictly forbidden. Also, debt cannot be taken on without collateral or an asset backing (Hasan, Z, 1994). One must refrain from gambling (Maisar) and uncertainty (Gitarar). Both buyer and seller are involved in the transaction with a no-pain, no-gain approach to making profits or sharing losses. This sounds common sense, ethical, trust-fostering and would appeal to most people.

One of the major factors behind the success of Islamic banking is that all products of the Islamic banking are asset based unlike conventional banking where papers and securitization of the assets are in vogue. We should not see Islamic banking in isolation as the Islamic banking is not an exception to the global recession. However, as compared to the conventional financial regime, the Islamic financing is relatively safer due to its focus of prudence as well as quality of the assets.

One of the major reasons for stability in the Islamic banking is that unlike conventional financial system it does not create value without assets which protect the Islamic system from any major loss (IRTI, 2007). The global financial meltdown stemmed from the sub-prime or mortgage system in the United States and the European countries, where the value of the mortgage was created with backing of the assets (Ben, B, 2007b). Since Islamic banking does not have the structure of creating value without assets, it becomes relatively safer from any unforeseen damages. However, there are some risks faced by Islamic banking as well as conventional banking (Akkizidis, I, et.al. 2008). If it provides some loans to the trade or industry for purchasing any product or for investment, Islamic banks do it on Halal basis or without interest as it becomes partner in profit or loss.

In the present scenario the highest losses faced by the conventional banks are on personal loans because they are not asset based and if one customer declares that he has no money to pay back. The banks have no way to recover the losses because the personal loans are not backed by the assets. Hence the Islamic banking does not believe in any product which is without asset base. That is the basic reason which saved the Islamic banks from huge losses.

Lessons learned from Recession

Islamic finance is concerned with justice in financial contracts to ensure that none of the parties is being exploited. The bank may advance the clients an interest-free loan to enable them to continue their payments during the recession in anticipation that they will pay in full when the economy rebounds.

Interest or usury is one source of exploitation, especially, as in the case of sub-prime lending the highest rates were charged to lower earners. Such discriminatory charging by conventional banks was justified as reflecting the risks involved. Those on lower incomes, with poorer prospects of finding new employment in the event of redundancy, were less likely to be able to service their interest payments.

Islamic housing finance involves risk sharing between the bank and the client, rather than transferring all the risk to the latter. Under the most commonly used diminishing Musharaka (partnership) contract, the bank and the client form a partnership, with the bank providing up to 90 percent of the purchase price, and the client at least 10 percent. Over a period of usually 10 to 25 years, the client buys out the ownership share of the bank which makes its profit from the rent paid by the client for the share the bank owns (Kuran, T, 2005). In the event of a rental or repayments default, the bank may advance the clients an interest-free loan (qardhassan) to enable them to continue their payments during the recession in anticipation that they will pay in full when the economy rebounds. The client retains their home rather than being faced with eviction—like the victims of the sub-prime crisis.

Of course, Islamic banks have to appraise credit risk, and indeed are more cautious about who they should finance than conventional banks. The banks in the United States charged high arrangement fees for sub-prime borrowers which were used to pay bonuses for those signing up new clients. The banks became mere booking agents, with no long-term commitment to their clients.

When the credit crunch came and borrowing from wholesale markets was halted, Islamic banks were not exposed. In contrast to conventional banks, no Islamic bank has failed and has needed government recapitalization which ultimately becomes a burden on hard pressed taxpayers. All Islamic banks comply with the Basel II capital adequacy requirements and the Islamic Financial Services Board (IFSB)¹⁴ has produced detailed guidelines on compliance. The soundness of Islamic banks is accounted for by the fact that

Reji. D. Nair

they use a classical banking model, financing derived from deposits, rather than being funded by borrowings from wholesale markets.

Consequently, when the credit crunch came and borrowing from wholesale markets was halted, Islamic banks were not exposed. However Islamic banks are not immune from the effects of the global recession and the fluctuations in oil prices will inevitably have a negative impact on Gulf-based Islamic banks. Nevertheless, being state owned, institutions such as Bank Melli, the largest Islamic bank in the world, are well placed to ride out the global financial storm. With assets of over \$50 billion, and profits exceeding \$540 million, it has more than adequate resources to cope (Joanna, S, 2007). Islamic banks enjoy a built-in stabilizer to help them cope with economic downturns, as instead of paying interest to depositors, those with investment *mudaraba* accounts share in the banks' profits.

Thus, if profitability declines in an economic downturn, depositors receive lower returns, but if profits rise, they enjoy higher returns. This profit sharing reduces risk for the banks and means they are less likely to become insolvent. However, as the banks build up a profit equalization reserve, which can be used to finance pay-outs during difficult years, depositors benefit from some protection of their returns during economic downturns. The last years have been difficult, if not disastrous, for equity investors, given the fall in stock market prices globally.

Opportunities in West

Islamic banks have been less affected than many conventional banks in the current global recession as they are prohibited from activities that have contributed to the credit crunch such as investment in toxic assets and dependence on wholesale funds. London has been consolidating its position as the key western centre for Islamic finance in 2008. Two Islamic banks, Gatehouse Bank and European Finance House, have been granted licenses bringing to five the number of fully Sharia compliant banks in the UK (BIS, 2008a). Principal Insurance became the first Shariah compliant independent company authorized to offer *Takaful* to UK residents. In capital markets, four new exchange traded funds and two new equity funds are available.

The International Financial Service London (IFSL's) report indicates that the UK's offering includes a total of 22 banks, far more than in any other western country (IMF, 2008). Professional services are provided by 18 law firms and the Big Four accounting firms. A cumulative total of 18 *Sukuk* issues raising \$10bn have been listed on the London Stock Exchange, second only to

Islamic Banking and Economic Recession

Dubai (Masud, S 2009). With 55 institutions offering educational and training products in Islamic finance, the UK has more providers than any other country worldwide. Evidence of London's growing role in Islamic finance is shown in the UK being the only western country to feature prominently, 8th with assets of \$18bn, in a global ranking of Sharia compliant assets by country (CNN-WB, 2007). Despite its origins overseas, Islamic finance has found a natural home in the UK. Though no sector is immune to the global financial crisis, Islamic finance has shown great resilience.

Conclusion

From the foregone discussion it could be seen that Islamic banking provides a viable alternative to conventional banking and is less cycle prone. The spread of Islamic finance into western markets demonstrates that it now being treated seriously by regulators and finance ministries.

The United Kingdom authorities are promoting London as an international centre for Sukuk issuance to rival Bahrain, Dubai and Kuala Lumpur.

In addition to banking, Islamic Sukuk security issuance has enormous potential. Unlike conventional bonds and notes, Sukuk are backed by real assets, which provides assurance to investors. Although global Sukuk markets were adversely affected by the global recession in 2008, longer term prospects look promising. The Malaysian ringgit Sukuk market has been largely unaffected by the global turmoil in securities markets, and issuers such as the Saudi Arabia Basic Industries Corporation, one of the world's largest petrochemical producers, view Sukuk as a desirable instrument to raise funding for plant expansion.

There can be no doubt that Islamic finance has an exciting future, and the quest for a financial system based on moral values rather than greed and fear, is bound to enhance its position in the global system.

Notes

- The system is based on justice for the two parties how one gets to the justice is extracted from Islamic faith.
- Common terms used in Islamic banking include profit sharing (Mudharabah), safekeeping (Wadiah) joint venture (Musharakah), cost plus (Murabahah), and leasing (Ijar).

- Islamic banking is restricted to Islamically acceptable transactions, which exclude those involving alcohol, pork, gambling, etc. The aim of this is to engage in only ethical investing, and moral purchasing.
- The World Database for Islamic Banking and Finance (WDIBF) has been developed to provide information about all the websites related to this type of banking.
- For example, it was acceptable for a loan of 1000 gold dinars to be paid back as 1050 dinars of equal aggregate weight. That is, the value in terms of weight had to be same because all makes of coins did not carry exactly similar weight.
- The earliest references to the re-organization of banking on the basis of profit sharing rather than interest are found in Anwar Qureshi (1946), Naiem Siddiqi (1948) and Mahmud Ahmad (1952) in the late forties, followed by a more elaborate exposition by Mawdudi in 1950. The writings of Muhammad Hamidullah 1944, 1955, 1957 and 1962 should be included in this category.
- The Vatican has taken the unusual step of expressing support for Islamic banking, suggesting in a 2009 issue of its publication *L'Osservatore Romano* that conventional banks can regain clients' trust by adopting the "ethical principles" that form the cornerstone of Islamic finance.
- Known as IT bubble, was a speculative bubble covering 1995-2000 period, during which stock markets in industrialized nations saw their equity value rise rapidly from growth in the internet sector and related fields, and finally busted.
- To avoid high initial mortgage payments, many sub-prime borrowers took out ARM, which gives them a lower initial interest rate.
- In its simplest form CDS is a bilateral contract between the buyer and seller of protection, where buyer of the CDS makes a series of payments to the seller in exchange of a payoff, if bond or loan experiences a default.
- Many banks had shelved heir consumer financing products in the face of economic slowdown and due to shockwaves of the world financial meltdown particularly the car and home financing, Dubai Islamic

Islamic Banking and Economic Recession

Bank continued to serve the people with these products which did not suffer from major defaults or non-performing loans.

- As the mortgages were sold on to Freddie Mac and Fanny Mae, the arrangers were unconcerned that the sub-prime borrowers might be unable to meet their financial obligations. Indeed, gifts were provided to entice the feckless to sign up, and the mortgages often exceeded the value of the property.
- Basel II is the second of the Basel Accords, which are recommendations on banking laws and regulations issued by the Basel committee on banking supervision; even the new update came in the form of Basel III.
- The IFSB is the body which advises regulators with respect to Islamic finance. The IFSB has an on-going relationship with the bank for international settlements, the institution which developed the Basel standards and is certain to be consulted as Basel III guidelines are drafted for capital adequacy which is likely to be implemented globally in the coming decade.
- Two Islamic housing financial institutions, Amlak and Tamweel are being merged, as both have faced problems given their exposure to the Dubai property market.
- Investors in equities screened for Shariah compliance have also suffered, but less than their conventional counterparts, because they have not invested in the shares of riba-based banks which have fared especially badly during the global financial turmoil. Investors seeking Shariah compliance have portfolios which are more heavily weighted in sectors such as healthcare or utilities where revenue streams are maintained even during cyclical down-turns.

Reference

Akkizidis, I & Khandelwal. S. K (2008), *Financial Risk Management for Islamic Banking and Finance*, Palgrave Macmillan, New York.

Amin, Samir (1978), *'The Arab Nations: Some Conclusions and Problems,' MERIP Reports*, Vol: 68, PP.3-14.

Reji. D. Nair

Arjomand, Said Amir (1999), *'The Law, Agency and Policy in Medieval Islamic Society: Development of the Institutions of Learning from the Tenth to the Fifteenth Century,' Comparative Studies in Society and History*, Cambridge University Press, Vol: 41, PP.263-293.

Bank for International Settlements (BIS, 2008a), *BIS Quarterly Review: International Banking and Financial Market Developments*, Basel, Switzerland.

Bank for International Settlements (BIS, 2008b), *Annual Report*, Basel, Switzerland.

Bernanke, Ben (2007a), *Housing, Housing Finance and Monetary Policy*, Federal Reserve, August 31.

Bernanke, Ben (2007b), *'Sub-prime Mortgage Lending and Mitigating Foreclosures,' BIS Review*, September 20.

Banaji, Jairus (2007), *'Islam, the Mediterranean and the rise of Capitalism,' Historical Materialism*, Brill Publishers, and Vol: 15, No.1. PP.47074.

Cambridge University (2002), *The Cambridge Economic History of Europe*, Cambridge University Press, ISBN: 0521087090.

Chapra, M. Umer (2008), *Innovation and Authenticity in Islamic Finance*, *Eighth University Forum on Islamic Finance*, April 19-20.

Chapra, M. Umer (2007), *'The Case against Interest: is it Compelling?'* *Thunderbird International Business Review*, Vol: 49, No: 2.

CNN World Business (CNN-WB- 2007), *Recession Sparks Interest in Islamic Finance*, August 27.

Farhad, Nomani & Rahnema, Ali (1994), *Islamic Economic Systems*, Zed Books Limited. New Jersey, ISBN: 1-85649-058-0.

Feroz, Eshan Habib (2007), *'The Halal Way to Social Change,' Islamic Horizons*, January-February.

Hasan, Zeeshan (1994), *'The Redefinition of Islamic Economics,' The Daily Star*, August 27.

International Monetary Fund (IMF, 2008), *International Financial Statistics*, Washington. D.C.

Islamic Banking and Economic Recession

Islamic Research and Training Institute (IRTI, 2007), '*Framework and strategies for Development of Islamic Micro-finance Services*', *Islamic Microfinance Development: Challenges and Initiatives*, Islamic Development Bank, Dakar, Senegal.

Joanna, Slater (2007), '*World's Assets Hit Record Value of \$140 Trillion.*' *The Wall Street Journal*, <http://online.wsj.com/article/SB11683921364272112.html>.

Khan, F (2006), '*Comparative Economics of Some Islamic Financing Techniques*,' *Research Paper No: 12*, Islamic Research and Training Institute, Islamic Development Bank.

Kuran, Timur (2005), '*The Absence of the Corporation in Islamic Law: Origins and Persistence*,' *American Journal of Comparative Law*, Vol: 53, PP. 785-834.

Labib, Subhi, Y (1969a), '*Capitalism in Medieval Islam*,' *The Journal of Economic History*, Vol: 29, No:1. PP-79-96.

Lopez, Robert Sabatino, et.al. (2001), *Medieval Trade in the Mediterranean World: Illustrative Documents*, Columbia University Press and ISBN: 0231123574.

Masud. Saud (2009), *Could Islamic finance have prevented the global economic crisis?* *Global Islamic Finance Centre*, December 25.

Muslehuddin, M (2007), *Banking and Islamic Law*, Adam Publishers and Distributors, New Delhi.

Pakistan Economist (PE, 2009), Monday, June 29.

Rozenberg, Gabriel (2006), '*Nobel prize Winner using Micro-credit for Macro benefit*,' *The Times*, December 16.

Stiglitz, Joseph (2003), '*Dealing with Debt: How to reform the Global Financial System*,' *Harvard International Review*, spring, PP. 54-59.

The Economist (2008), '*Wall Street's Crisis*,' March 22, P.25.

Totaro, Lorenzo (2009), '*Vatican Says Islamic Finance may help Western Banks in Crisis*,' *Bloomberg L.P.*, <http://www.bloomberg.com/apps/news>.

In Vitro Studies on Antioxidant Properties of Gallic Acid from *Mangifera Indica*

Dr. L. ANILA

Research Scholar, Bharathiyar University Coimbatore, Tamil Nadu.

Polyphenolic compounds exert a variety of physiological effects in vitro and are able to act as antioxidants by virtue of their hydrogen-donating and metal-chelating capacities. Gallic acid from Mangifera indica kernel was isolated and identified. This article describes an approach to the study of the antioxidant activity of gallic acid. This activity is compared with a known antioxidant quercetin. The 1, 1-diphenyl-2-picrylhydrazyl (DPPH), superoxide & hydroxyl radical scavenging activities and inhibition of ferrous sulphate induced lipid peroxidation of this compound was evaluated to determine its physiological usefulness as protective against oxidative injury. Gallic acid mainly exhibited a potent scavenging effect on superoxide and 1, 1-diphenyl-2-picrylhydrazyl (DPPH) radicals and also acted as a moderate scavenger of hydroxyl radicals. The antioxidative protection of low-density lipoprotein (LDL) was also evaluated and compared with that of quercetin, because the generation of oxidized LDL is one of the most active and specific risk factors contributing to atherogenesis.

Keywords: Hydroxyl Radical, Antioxidant, Gallic Acid and Serum Oxidation.

Introduction

Flavonoids are polyphenolic components of higher plants known to be excellent antioxidants *in vitro*. Dietary flavonoids have been shown to prevent lipid peroxidation, to scavenge reactive oxygen species, to chelate iron ions, essential for the generation of hydroxyl radicals, and to inhibit NADPH-dependent oxidases and consequently superoxide anion production (1; 2; 3). Evidence for the potential role of oxidative stress in various diseases and

Volume 5, Issue 2, July 2017

International Journal of Perspectives in Education (IJPE)

A Multi-disciplinary Biannual Journal

ISSN 2456-3412

Anila

pathophysiological processes suggests that the dietary intake and the therapeutic use of flavonoids may have positive health effects (4; 5; 6).

Polyphenols are reducing agents, and together with other dietary reducing agents, such as vitamin C, vitamin E and carotenoids, referred to as antioxidants, protect the body's tissues against oxidative stress and associated pathologies such as cancers, coronary heart disease and inflammation (2; 7). The variable response to dietary flavonoids could have important physiological consequences since individual flavonoids and their metabolites have differing biological effects (8). A significant body of literature has accumulated, primarily from *in vitro* investigations, regarding the antioxidant properties of flavonoids and other plant polyphenolics (9). In recent years improved understanding of the pharmacological properties of individual flavonoid compounds has led to the developments of flavonoid drugs.

Many fruits and vegetables have already been identified as good antioxidants due to the presence of good quality antioxidants like flavonoids and other polyphenolic compounds in addition to usual antioxidants like ascorbic acid, α -tocopherol, β -carotene etc. (10). However, supplementation of these antioxidants through diet does not always meet the requirements. Effective drugs developed from natural sources come to rescue under such situations. Since 'stress' as well as 'pollution' induces the generation of toxic radicals in the body and modern man is always under the purview of these risk factors, antioxidants from diet alone may not compensate the issue. Accumulation of toxic radicals over periods can cause life threatening diseases like cardiovascular diseases and cancer. Hence it is highly demanding to unmask the best antioxidant hidden in natural sources.

Materials and Methods

Part A: Isolation and characterization

The mango kernel was air dried and the ground dried material was extracted with hot 80% methanol thrice (Petra *et al*, 1999). The combined extract was evaporated to dryness and the residue was dissolved in water and extracted successively with hexane, benzene, ethyl acetate and n-butanol. The respective extracts were evaporated in vacuum yielding residues from hexane, benzene, ethyl acetate, and n-butanol. Ethyl acetate residue was selected for column chromatography because of its high polyphenolic content. Ethyl acetate residue was used for successive column chromatography with eluents such as hexane, chloroform, ethyl acetate, and methanol mixtures in increasing polarity

In Vitro Studies on Antioxidant Properties

and repeated column chromatography of series (CHCl_3 : ethyl acetate, 1: 9) afforded the compound, which was examined further. Yield of compound was 335.2 mg/Kg.

The compound that has been obtained by column chromatographic separation and subsequent crystallization from ethanol appears to be slightly yellow colored crystals, which is soluble in methanol, ethanol and other organic solvents. It was also soluble in dilute sodium bicarbonate solution and gave indication of effervescence. This pointed to an acidic nature of the compound. For its structure identification, it was subjected to spectral analysis. Its UV-visible spectrum showed a λ_{max} at 269 nm and another at λ 396 nm. In presence of sodium hydroxide its absorption spectrum underwent a drastic change thus indicating a phenolic nature for the compound.

Its UV-visible spectrum showed a shift in the λ_{max} in the presence of AlCl_3 (the shift observed was +44 nm) and $\text{AlCl}_3 + \text{HCl}$ (the shift observed was + 12 nm), which is characteristics of the presence of orthodihydroxy groups. These UV- visible spectral parameters points to the fact that the compound presently isolated could be a phenolic acid. Its IR spectrum in KBr disc showed a broad band in the region 2600- 3350 cm^{-1} . This seemingly indicates the presence of OH groups in the molecule.

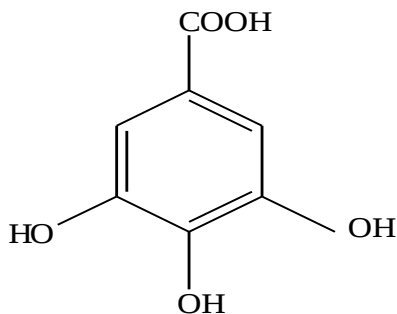
There was a strong peak at 1700 cm^{-1} , which is attributed to a carbonyl function. The ^1H NMR spectrum of the compound was taken in methanol, acetone and DMSO-d_6 . These spectra showed the absence of any methoxy, alkyl or alkene functionalities. There were only aryl hydrogens seen in the spectra. The ^{13}C NMR spectrum also was in accordance with the above conclusion; peaks appeared only in the range 95- 167 ppm. These were at 95.73, 109.0, 120.74, 137.78, 145.18, and 167.76 ppm and are indicative of an aromatic ring bearing oxygen function. The ES- MS showed a peak at m/z 188.

The ES- MS was run in presence of ammonium acetate in methanol and therefore the peak at m/z 188 is assigned to $[\text{M} + \text{NH}_4]$ thereby giving 170 as the molecular mass of the compound under investigation. This is substantiated by the appearance of a peak at m/z 358 which is assignable to $[2 \text{ M} + \text{NH}_4^+]$ peak. Such cluster peaks are the hallmark of electrospray mass spectrum. In addition, similar $[n \text{ M} + \text{NH}_4^+]$ clusters were seen at n values of 3, 4, 5, and 6 at m/z values of 528, 698, 868 and 1038, thus confirming that the molecular mass is 170.

Considering all the data above, it appears that the compound has a carbonyl, at least two hydroxyls and a benzene ring. This leads to a plausible

Anila

structure of $[2\text{HO} + \text{C}_6\text{H}_3 + \text{COOH}]$ with mass 154. If another oxygen is present as in $\text{C}_7\text{H}_6\text{O}_5$, then the molecule could be a trihydroxy aromatic carboxylic acid. The singlet nature of the ^1H NMR peak at 7.06 indicates that the compound could be 3, 4, 5- trihydroxy benzoic acid or gallic acid. The melting point reported for gallic acid is 251°C ; the compound presently isolated melts at 251°C . Thus, the compound isolated could be conclusively identified as gallic acid.



3, 4, 5- trihydroxy benzoic acid or gallic acid

PART B: In vitro studies on antioxidant activities of gallic acid from *Mangifera indica* kernel

Flavonoids and other polyphenolic compounds are the most potent antioxidants. Polyphenols can form complexes with reactive metals such as iron, zinc and copper- reducing their absorption. At first glance, this may seem to be a negative side effect (reducing nutrient absorption), but excess levels of such elements (metal cations) in the body can promote the generation of free radicals and contribute to the oxidative damage of cell membranes and cellular DNA (Sestili *et al*, 2002). In addition to their chelating effect on metal cations, polyphenols also function as potent free radicals before they can cause cellular damage (Bravo, 1998; Damianaki *et al*, 2000; Fuhrman *et al*, 1995; Goldbohm *et al*, 1996; Kuo, 1997). In general, flavonoids and other polyphenolic compounds are thought to deliver health benefits by several mechanisms, including:

- direct free radical quenching
- protection and regeneration of other dietary antioxidants (like vitamin E)
- chelation of metal ions

In Vitro Studies on Antioxidant Properties

Both metal chelating and free radical scavenging activities have been recognized as the antioxidant mechanism for flavonoids in a biological system (Afanas'ev *et al*, 1989; Belinky *et al*, 1998). Flavonoids can act as chain breaking antioxidants by scavenging chain propagating peroxy radicals because they possess phenolic hydrogens responsible for the peroxy scavenging activity. Bors *et al* (1990) have proposed that three structural groups are important determinants for free radical scavenging; (a) the o- hydroxyl (catechol) structure in the B ring, which is obvious radical target site for all flavonoids, (b) the 2, 3- double bond in conjunction with 4- oxo function, which is responsible for electron delocalization (c) the additional presence of both 3- and 5- hydroxyl groups for maximal radical scavenging potentials and strongest radical absorption.

Numerous in-vitro studies have shown that polyphenolic compounds are powerful antioxidants that can protect cell membranes and cellular DNA from the damaging effects of free radical induced oxidative damage (Sestili *et al*, 2002; Rice- Evans *et al*, 1997). Here we have used the purified gallic acid from *Mangifera indica* for in vitro studies including FeSO₄ induced lipid peroxidation (Tripathi and Pandey, 1999), inhibition of superoxide production (Rowley and Halliwell, 1983), antiradical efficiency (Joyeux *et al*, 1995), effect on serum oxidation (Hodgson *et al*, 1999) and inhibition on hydroxyl radical formation (Jeffery *et al*, 1989). The effects of the compound were compared with quercetin, a known antioxidant flavonoid purchased from Sigma Chemical Company, USA.

Statistical Analysis

The data given in tables and figures are the mean of the values from the number of animals specified in the respective tables and figures $\pm$ SEM. Statistical significance was determined by One-way Analysis of Variance (ANOVA) in SPSS 10.0 package. Paired comparison between groups was made by Duncan's multiple range test. 'p' value of 0.05 or less was considered as significant. Values expressed as mean $\pm$ SEM, for n = 6.

Effect of gallic acid from *Mangifera indica* on FeSO₄ induced lipid peroxidation (fig 1):

The lipid peroxidation was inhibited of by gallic acid from *Mangifera indica* in concentration dependent manner. Similarly, quercetin also inhibited in concentration dependent manner. Concentration required to produce 50% inhibition on lipid peroxidation (IC₅₀) was $42.5 \pm 1.275 \mu\text{g}/3\text{ml}$ in the case of gallic acid where as it was $44.63 \pm 1.78 \mu\text{g}/3\text{ml}$ for quercetin.

Inhibition of superoxide production (fig 2):

The superoxide production was inhibited by gallic acid from *Mangifera indica* in a concentration dependent manner. Concentration of flavonoid required to induce 50 % (IC₅₀) inhibition is $4.35 \pm 0.18 \mu\text{g}/3\text{ml}$ for gallic acid whereas $34 \pm 1.36 \mu\text{g}/3\text{ml}$ for quercetin.

Effect of gallic acid on antiradical activity (fig 3):

Antiradical efficiency also increased with concentration. Concentration of flavonoid required to induce 50 % inhibition (IC₅₀) is $3.83 \pm 0.167 \mu\text{g}/2\text{ml}$ for gallic acid from *Mangifera indica* whereas $26.13 \pm 1.12 \mu\text{g}/2\text{ml}$ for quercetin.

Effect of gallic acid on hydroxyl radical scavenging (fig 4):

Gallic acid from *Mangifera indica* and quercetin showed 50 % inhibition on hydroxyl radical production at $6.375 \pm 0.22 \mu\text{g}/2\text{ml}$, $9.5 \pm 0.4 \mu\text{g}/2\text{ml}$ and $11.063 \pm 0.47 \mu\text{g}/2\text{ml}$ respectively.

Effect of gallic acid on serum oxidation (Fig 5):

The lag time to lipoprotein formation was measured from the plot of absorbance against time. The lag time was defined as the intercept between the tangent of the absorbance curve during the propagation phase and baseline. The lag time of compounds to lipoprotein diene formation in serum oxidation are given in table 1.

Discussion

In vitro studies on inhibition of production of superoxide's, and hydroxyl radicals, antiradical efficiency, and serum oxidation showed that gallic acid from *Mangifera indica* was highly effective antioxidant. Gallic acid from *Mangifera indica* exerted 50% inhibition (IC₅₀) of superoxide production at a concentration of $4.35 \pm 0.18 \mu\text{g}$ whereas quercetin showed a higher value $34 \pm 1.36 \mu\text{g}$. This compound also acted as efficient radical scavenger and inhibition was found to be 50 % at a concentration of $3.83 \pm 0.167 \mu\text{g}$ for gallic acid in spite of the fairly high concentration $26.13 \pm 1.12 \mu\text{g}$ for quercetin.

This is in accordance with several other reports demonstrating the property of inhibiting autoxidation reactions and scavenging of free radicals by flavonoids (Galati *et al*, 2002). Flavonoids possess multiple properties for scavenging reactive oxygen and nitrogen species (van Acker *et al*, 1995; Rice-Evans, 1999). Flavonoids inhibit platelet activation by interfering simultaneously with several biochemical pathways, as platelets are likely to be exposed *in vivo* to stimulation by several agents acting through different mechanisms (Beretz and Cazenave, 1988). Flavonoids can react with superoxide anions (Afanas'ev *et al*, 1989), hydroxyl radicals (Husain *et al*, 1987), and lipid peroxy radicals (Torelet *et al*, 1986). These compounds may also act by chelating iron (Afanas'ev *et al*, 1989; Morel *et al*, 1998) which is thought to catalyze processes leading to the appearance of free radicals.

Kim (2001) explained the antioxidant potential of biflavones of *Ginkgo biloba* on the basis of structure-related activity and hydroxy- and methyl-substitutions on the basic structure of these flavonoids. Flavonoid rich extract from rose hip (*Rosa canina*) inhibited superoxide anions, hypochlorous acid (HOCl) and hydrogen peroxide (H₂O₂) generated by *in vitro* inflammatory conditions induced on isolated PMN (Daels-Rakotoarison *et al*, 2002). It has recently been suggested that phenolic/flavonoid antioxidants from apple extracts inhibited proliferation of tumor cells *in vitro* (Lapidot *et al*, 2002). Plant polyphenols, such as gallic acid, have been reported to have a range of biological activities including antimutagenic effects (Stupans *et al*, 2002).

Gallic acid is a naturally occurring plant phenol (found in green tea & grape seed extract). In screening anti-cancer agents, gallic acid was found to show cytotoxicity against all cancer cells that were examined. Additionally, the study found that gallic acid did not harm healthy cells, but was able to distinguish between normal cells and cancer cells (Inoue *et al*, 1995). A number of antioxidant phenols, pyridines, and gallic acid esters are believed to be effective by virtue of their antioxidant action. A direct relation between radical

Anila

inhibitory action and radiation protection has been observed (Burlakova *et al*, 1965). The protective effect of gallic acid esters are attributed to inhibition of chain oxidation processes induced by radiation (Hasan *et al*, 1981).

Activity-guided fractionation of the ethyl acetate soluble fraction from *Chrysophyllumcainito* L. (Sapotaceae), known commonly as star apple or caimito, was performed to identify the antioxidant constituents, which contained gallic acid as one of nine polyphenolic antioxidants (Luo *et al*, 2002). Bisignano *et al*, (2000) reported the antibacterial activity of gallic acid isolated from *Mitracarpusscaber*, a species used in folk medicine by West African native people and the minimum inhibitory concentration of gallic acid was found as 3.90 µg /ml for the inhibition of the growth of *Staphylococcus aureus*. A water extract of *Limoniumwrightii* showed a strong scavenging action for the 1, 1-diphenyl-2-picrylhydrazyl, or superoxide anion and moderate for hydroxyl radical. Gallic acid was identified as the active component of *Limoniumwrightii* with a strong free radical scavenging action (Aniya *et al*, 2002). However, growth retardation and toxicity symptoms were assigned to gallic acid when fed to rats at dietary levels of 2-10% (Joslyn and Glick, 1969).

In our highly industrial and technological society, the pharmaceutical industry had been disrupting the ancient relationship between man and plants. However, there is already a decided swing back to the old ways. People are beginning to take a greater interest in herbs and their uses, and grandmother's remedies are coming into their own again. Rediscovery of old truths and integration of the traditional medical system with new technology can generate wonderful drugs without any side effects.

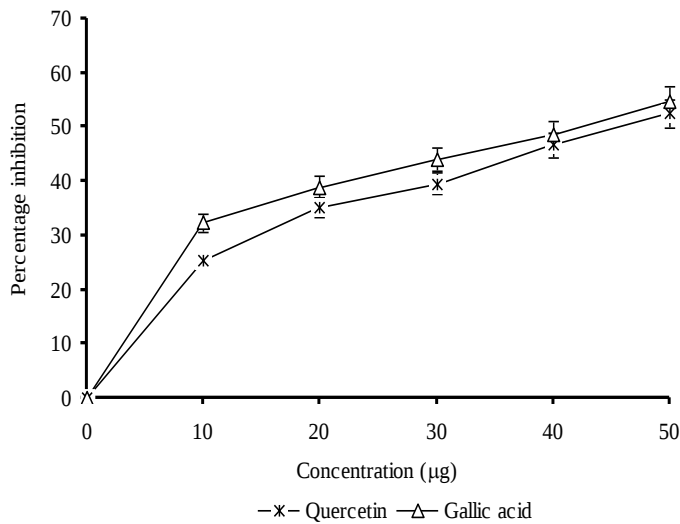


Fig 1. Effect of Gallic Acid on FeSO_4 induced Lipid Peroxidation

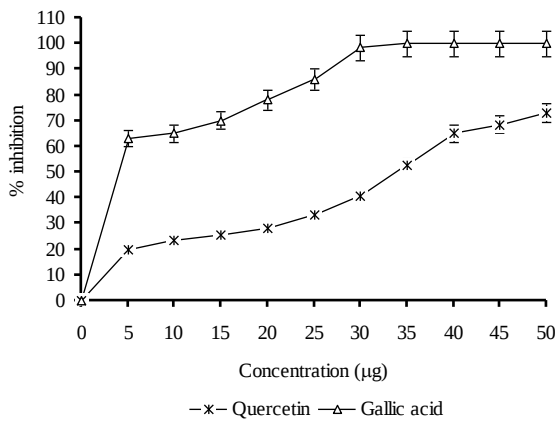


Fig 2. Percentage inhibition of Superoxide Production.

Anila

Values expressed as mean $\pm$ SEM, for n = 6.

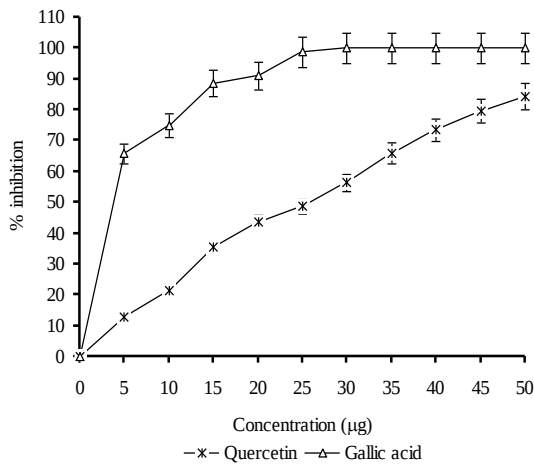


Fig 3. Antiradical Efficiency

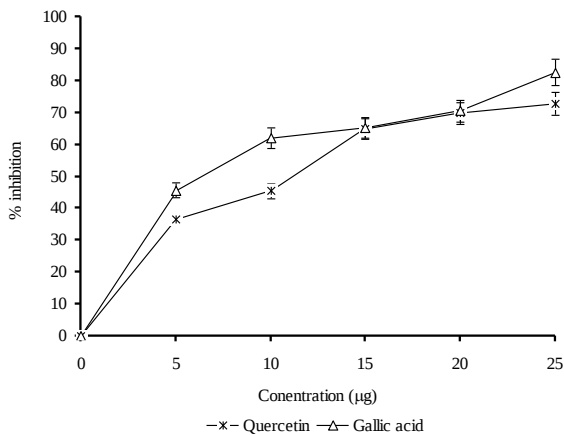


Fig 4. Effect of Gallic Acid on Hydroxyl Radical Scavenging

In Vitro Studies on Antioxidant Properties

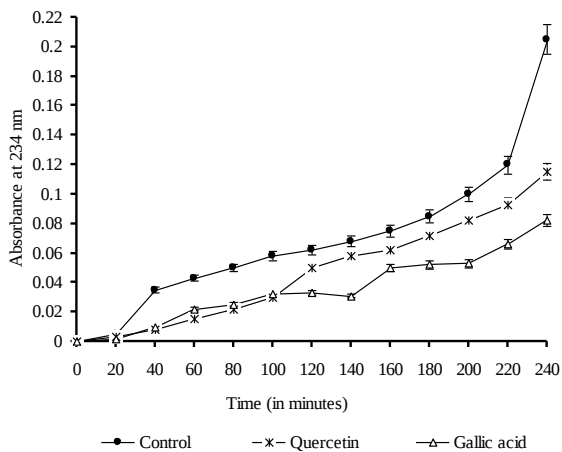


Fig 5. Effect of Gallic Acid on Serum Oxidation

Sample	Lag time (in minutes)
Control	17
Quercetin (50 µg)	71
Gallic acid (50 µg)	108

Table 1. Effect of Gallic Acid on Lag Time for Lipoprotein Diene Formation

Reference

- Catapano, A.L., 1997. "Antioxidant effect of flavonoids". *Angiology* 48, 39- 44.
- Rice-Evans, C.A., Miller, N.J., Paganga, G., 1997. "Antioxidant properties of phenolic compounds". *Trends Plant Sci.* 2, 152- 159.
- Robak, J., Gryglewski, R.J., 1996. "Bioactivity of flavonoids". *Pol. J. Pharmacol.* 48, 554- 564.

Role of Celebrity in The Effectiveness of Advertising

SINI

Guest Faculty, Mannaniya College of Arts and Science, Pangode.

NASEERA

Guest Faculty, Mannaniya College of Arts and Science, Pangode.

India is a country where people love to live in dreams. They worship celebrities. Today companies choose to utilize celebrities as endorsers; in their marketing campaign. Celebrity refers to popular fame and public attention in the media. It may be the cricket stars like Sachin or David or film star like Shahrukh Khan or John Abraham. Marketers use these celebrities to attract the consumers. This study tries to find out the positive and negative impact of celebrity advertising on consumer, to identify the drawback associated to celebrity advertisement on children, whether celebrity endorsement changes the consumer's purchase decision and to arrive at a meaningful conclusion. It is clear from the study that consumers find celebrity advertisements more attractive than non-celebrity advertisements. In the same way, celebrity advertisements are negatively influenced by children.

Keywords: Frequent, Author, Popular, Advertising and Effectiveness.

Introduction

Today, the recent prevailing growth of social media has given rise to a new form of brand endorsement in the presence of traditional formats. Due to this recent development, past marketing literature has not fully explored the effects and role that social media plays on consumer perceptions. Now a days Celebrity endorsement is one of the strategies which companies frequently

Volume 5, Issue 2, July 2017

International Journal of Perspectives in Education (IJPE)

A Multi-disciplinary Biannual Journal

ISSN 2456-3412

Role of Celebrity in the Effectiveness of Advertising

used to promote the brand thus enhance sales and ultimately increase market share.

Many celebrities are used on various marketing campaign and in most cases the use of celebrities as endorsers is seen from mainly positive aspects. This made the authors curious whether the negative aspect that also exist when using celebrities as endorser affect consumers in their purchasing decision when a celebrity get associated with negative publicity. interest in an interactive and relatively limitless way "American Express has a long and proud history of communicating the values of our brand by using heroes and personalities who hold a significant place in the hearts and spirits of people around the world. In Tiger Woods we have a representative who captures the imagination of many different types of consumers. His participation helps us communicate messages that our 'Do More' campaign supports The Popularity and growth of the blogosphere has created a platform for consumers to express their opinions and attitudes on all subjects of personal American Express has a family of products that is relevant to a wide variety of consumers."

"It's truly vital to our customer base. Not only does that celebrity bring new value, excitement, or humor but they bring an energy and memorability that you don't get sometimes with non-celebrity advertising."-Mark Rooks, Pepsi's senior marketing manager of multicultural marketing Celebrity endorsements and advertising effectiveness Millions of dollars are spent on celebrity contracts each year by assuming that the benefits of using celebrities will exceed the costs. Accordingly, many researchers have studied the impact of celebrity endorsements on advertising effectiveness. One of the theories used frequently by these researchers is the match-up hypothesis. This theory suggests that there should be a good fit between the celebrity and the product; however, it is not clear what constitutes a good fit. Some researchers suggested that attractive celebrities will be more effective if they are used to promote attractiveness-related products. Other researchers claimed that when there is congruence between the product type and the celebrity profession advertising effectiveness will be enhanced; however, these existing dimensions of the match-up hypothesis fall short of explaining some popular celebrity endorsement campaigns (e.g., Sharpie Pens and David Beckham).

Objectives of Study

- To compare the effectiveness and impact of celebrity endorsement on male and female
- To find out the positive and negative impact on celebrity endorsement

- Whether celebrity endorsement negatively affect the children

Celebrity

A celebrity can be considered as the sources of the message a company seeks to send their target audience. Celebrity refers to popular fame and public attention in the media, usually applied to a person, or group of people (celebrity couple, family etc.), or occasionally, to animals or fictional entities. Celebrity status is often associated with wealth (commonly referred to as fame and fortune) and fame can often provide opportunities to make money. Successful careers in sports and entertainment are commonly associated with celebrity status. People may also become celebrities due to media attention for their lifestyle, wealth, or actions, or for their connection to a famous person.

What is celebrity Endorsement?

The use of celebrities in order to increase the sales and/ or the recall value of a brand is called celebrity endorsement

Why Celebrity Endorsement Successful

Simply, it is down to a psychological phenomenon called transference. This is where we subconsciously transplant our feelings about a celebrity onto a product. For example, if we drink Boost ourselves, we feel much closer to Sachin and his sporting successes. When we carry around a bottle of Boost, we adopt Sachin's talent, strength and hard work mentality. In many ways, we embody everything that Sachin is and stands for when we consume his favourite drink.

For the advertising campaign to be successful, the celebrity needs to be perceived as credible and trustworthy. The endorser must be seen as somebody who possess expert knowledge and is relevant to the product being advertised. Consumers will question the credibility of an endorser on factors such as physical attractiveness, likeability, familiarity and trustworthiness. "For the advertising campaign to be successful, the celebrity needs to be perceived as credible and trustworthy."

The FRED Principle

After studying cases of successful and unsuccessful deals and interviewing 30,000 people, Amy Dyson and Douglas Turco of Illinois State University attempted to evaluate the feasibility of a celebrity and offered the

Role of Celebrity in the Effectiveness of Advertising

FRED principle. FRED stands for Familiarity, Relevance, Esteem and Differentiation.

Familiarity: The target market must be aware of the person, and perceive him or her as empathetic, credible, sincere and trustworthy.

Relevance: There should be a meaningful link between the advertised brand and the celebrity endorser, and more important, between the celebrity endorser and the defined target market.

Esteem: Consumers must have the utmost respect and confidence for the celebrity.

Differentiation: The target consumers must see the endorser as a cut above the rest.

Benefits of Using Celebrity Endorsements

There are a number of advantages to using celebrities in advertising. Celebrities often work best because they naturally generate lots of attention and are known nationally. Below are a few of the common reasons why an organization would use a celebrity to help market its products or services, according to an article by Rick Suttle published by the online Houston Chronicle:

Attract New Users

Finding and keeping new customers is hard for some organizations. Using a celebrity to endorse an organization's product or service can entice new customers.

Breathe Life into A Failing Brand

Celebrity endorsements can help revive a product or service that is losing market share. Celebrities can tout the benefits of the brand and help create new interest from consumers.

Build Awareness

Brand awareness is an indicator that measures how familiar people are with a particular product or service. Celebrities advertising can build brand awareness, according to Supermarket News, a publication covering the food distribution industry.

Influence Consumer Purchases

Celebrities who are well respected can instantly add credibility to a product or service. Consumers may have the attitude, 'If this celebrity is backing the product or service, it must be good.' Consumers might also think 'If the product is good enough for him or her, it is good enough for me.'

Position a Brand

Celebrities can be used to position a brand. Product positioning is a process of convincing the consumers that the product being advertised is the best on the market and all other products are inferior

Celebrity Endorsement and Customer Satisfaction

In terms of consumer satisfaction after buying a product that involves celebrity endorsers, the consumers are willing to pay a higher price for a premium product of a high quality simply because the celebrity endorser has a more positive image and well-respected [Balakrishnan, & Shalini Kumar, 2011;

The ability to buy is still directly dependent on the consumer's lifestyle, preferences, budget, etc. but it is indirectly influenced by the endorser to buy the particular product. Ultimately, the satisfaction boils down to two aspects: entertainment-based motivation (admiration towards a celebrity, know about the celebrity in general, would have a problem with multiple endorsements of brands) and intense attachment (think that they are connected personally with the endorser, would not mind the endorser endorsing multiple brands, experience the "feelings" of the endorser).

Role of Celebrity in the Effectiveness of Advertising

Gender as it Relates to Celebrity Endorsements

A study conducted at the University of Toledo investigated the impact of gender on celebrity endorsements. The authors examined the impact of the celebrity endorser's gender on the consumer's attitude toward the celebrity and the ad as a whole, as well as the impact of the consumer's gender on his or her attitude toward the celebrity endorser and the ad. Respondents were asked to review ads featuring female soccer player Mia Hamm and male soccer player Landon Donovan; afterwards, they were given a questionnaire that measured their reaction to the celebrity in the ad and the ad as a whole. The authors of the study maintain that they made every effort to have everything in each ad as similar as possible, including the athletes' poses and the ad background. The results of the study show that the female respondents reacted more favorably to the ad featuring Mia Hamm than the male respondents. They also reacted more favorably to Mia Hamm than the male respondents (Klaus and Bailey). The female respondents also reacted more favorably to the ad featuring Landon Donovan than the male respondents. However, the male respondents reacted more favorably to Landon Donovan than the female respondents.

Positive Impacts of Celebrity Endorsement on the Brand

The uses of a celebrity endorser have a strong and associate link between the brand and the celebrity to strengthen brand equity. Approval of a brand by a star fosters a sense of trust for that brand among the target audience. This is especially true in case of new product. Celebrities ensure attention of the target group by breaking the clutter of advertisements and making the advertisement and the brand more noticeable. A celebrity's preference for a brand gives out a persuasive message and hence, because the celebrity is benefiting from the brand, the consumer will also benefit.

There is a demographic and psychographic connection between the stars and their fans. Demographic connection establishes that different stars appeal differently to various demographic segments i.e. age, gender, class, geography etc., while psychographic connection establishes that stars are loved and adored by their fans. Some stars have a universal appeal and therefore prove to be a good bet to generate interest among the masses. Another invaluable benefit from celebrity endorsements is the public relation opportunities. After all the celebrity is widespread and persistent and the marketing managers continue to believe in that celebrity endorsement is

worthwhile component of the advertising strategy. The findings suggest that corporate credibility plays an important role in consumers' reactions to advertisements and brands, independent of the equally important role of endorser credibility

The Negative Impact of Celebrity Endorsement

Now, we will look into the negative effects of celebrity endorsements and why is it risky to companies and consumers alike. There is the “vampire effect”, which is the effect of a celebrity overshadowing the brand [Jain, 2008, Kazi, n.d.]. This can cause a breakdown in the effective communication of a product being advertised towards the consumer simply because consumers are more attracted with celebrities. There is also a risk of companies incurring a higher cost to rope in a celebrity for the advertising, and this can lead to a decrease in sales revenue and even the celebrity endorsers themselves switching to a rival brand, which is detrimental to the company. The negative publicity of the celebrities will greatly reduce the brand equity of the product, since the companies do not control the celebrities' private lives, and this can be a risky situation for brands to come out of, especially newer brands that are looking to stamp their mark. It will be met with a serious backlash and thoughts of celebrities' motives. There are many companies who use celebrities' image and likenesses without their permission, or even use impersonators of well-known celebrities as the endorsers [Erdogen, 1999].

Furthermore, when celebrities themselves are paid to endorse a product by a company, he or she might or might not have used those products before, an example would be the case of Bollywood actor Shah Rukh Khan drinking Pepsi, but might not have used Lux soaps [Jain, 2008]. Consumers will see whether these celebrities have actually tested the product before as they do not actually consider this as an important factor in buying the product. Multiple product endorsement also has a negative impact on customers' purchasing intentions. Tripp et al.¹⁹ investigated the effects of multiple product endorsement by celebrities on customers' attitudes and intentions. They found that the number of products a celebrity endorses negatively influences consumer perception of the endorser and the advertising itself. It was suggested that when as many as four products are endorsed, celebrity credibility and likeability, as well as attitude towards the ad, may attenuate. Superstar Amitabh Bachchan endorses multiple brands like Pepsi, Mirinda, ICICI, BPL, Parker pens, Nerolac, Dabur, Reid & Taylor, Maruti Versa, Hajmola, Tide, Cadbury and a few social messages

Role of Celebrity in the Effectiveness of Advertising

However, a number of brands have been built without celebrity endorsement. For some of their brands, Hindustan Lever and Procter & Gamble do not believe in celebrity endorsement because they think that consumers, especially housewives, are more likely to identify with a lay person on screen than a celebrity. Procter & Gamble launched its 'Rejoice' brand in India with testimonials from ordinary women in their TV advertising. Few more examples of this will be Lifebuoy, Wheel, Dettol, Close Up, Fevicol et

Pros and Cons of Celebrity Endorsement Strategy

Potential Advantage

Potential Disadvantage

<i>Increased attention</i>	Over shadow the brand
<i>Brand introduction</i>	Image chance and overexposure
<i>Brand repositioning</i>	Image change and loss of public recognition
<i>Underpin global campaign</i>	Expensive

SOURCE: Erdogan 1999 p.295

Impact of Children

Concerns about teen and childhood obesity have topped public health priorities in the past several years, with programs such as First Lady Michelle Obama’s “Let’s Move” campaign aiming to encourage more healthful behaviors. But recent research suggests that one of the biggest obstacles to progress might be campaigns of a more ubiquitous nature — ads featuring unhealthy food and drinks endorsements by celebrities. A study published last fall found that the vast majority of food and drink endorsements of elite professional athletes were full of sugar or calories without healthy nutrients. And it was teens who saw these ads the most. The study, published in Pediatrics in October by researchers at Yale University’s Rudd Center for Food Policy and Obesity, led to more in-depth research to learn about the effects of these ads on kids and teens.

According to the Yale study, professional athletes' endorsements of food and beverages made up about a quarter of all their endorsements in 2010, second only to sporting goods and apparel. Yet, approximately four out of every five food products endorsed by influential athletes that year were high-calorie and nutrient-poor. Further, added sugar accounted for all the calories in just over 93 percent of the drinks endorsed by the athletes. Not that these findings are surprising, according to Yoni Freedhoff, MD, an obesity specialist and assistant professor of family medicine at the University of Ottawa. "The least surprising aspect of the study's findings are that the athletes as a whole are endorsing the worst foods our food industry has to offer," Freedhoff said. "Those foods that are the least nutritious are also the food industry's biggest profit drivers. The food industry's sole responsibility is to maximize profit, and celebrities and athletes help them do so." The Yale study analyzed the endorsements in TV, radio, newspapers and magazines of the top 100 professional athletes based on their prominence and endorsement value as ranked by Bloomberg Businessweek in 2010. Together, the athletes had endorsed 122 food and drink brands that year, but 79 percent of the endorsed food products had few nutrients and high calorie counts, and nearly all the drinks had nothing but sugar calories added.

Conclusion

The main objective of this study is to examine the positive and negative impact of celebrity endorsement on consumer and children and impact on male and female. Whether Celebrity endorsement has a positive or a negative impact on the brand is a debate that is open to interpretation. Celebrities advertising create both positive and negative impact on consumer but provide only negative impact on children. The customer perception and attitude towards the celebrities also has an influence in whether the brand is truly to be followed by consumers for brand recall, or just another ploy to gain more sales. In the end, be it to restore a failing brand, increase sales, or to further boost the image, celebrity endorsement can bring more glitz towards the retail brand's marketing strategy.

Reference

- Aaker, J. (1997). Dimensions of brand personality. *Journal of Marketing Research*, Vol. 34, No. 3, 347-356
- Agrawal, J., Kamakura, W., (1995) The economic worth of celebrity endorsers: an event study analysis. *Journal of Marketing*, 59, No. 3, 56-62.

Benefits and Challenges in Integrating ICT in Education

R.M. REGITHA

*Assistant Professor in Computer Science,
Sree Devi Kumari Women's College, Kuzhithurai.*

The aim of the paper is to discuss the benefits and challenges of ICT in education. The integration of Information and Communication Technology (ICT) in teaching and learning provides more opportunities for teachers and students to work better in an information age. This can help to improve quality education by providing curricular support in different subject areas. However, there is also some barriers that may discourage teachers to integrate ICT in the classroom. A number of different ICT tools and application may be integrated in teaching and learning. Some of these tools and application may be designed specifically for educational purpose only. Insufficient technical supports at schools and little access to Internet and ICT were considered as the major barrier preventing teachers to integrate ICT into the curriculum.

Keywords: Barriers, Curriculum, Information, Communication Technologies.

Introduction

Information and communication Technologies have been used in teaching learning and assessment for many years. Today varieties of ICT such as audio, video, computer and network technologies are combined to create a multifaceted instructional delivery system. We find a shift in traditional learning led by the teacher to independent learning facilitated by resource – based learning including utilization of ICTs. It is essential to use it properly for improving learning. We need to develop a habit of self-learning and positive attitudes towards potentials of various ICT, it can help us in

Volume 5, Issue 2, July 2017

International Journal of Perspectives in Education (IJPE)

A Multi-disciplinary Biannual Journal

ISSN 2456-3412

Benefits and Challenges in Integrating ICT in Education

learning effectively and efficiently from those ICT or other source of information.

ICTs can facilitate learning of learners. Various ICTs have been used to support learning which include traditional media (such as chalkboard, Textbook, overhead projector etc.) and electronic media (such as computers, interactive audio-video, multimedia system etc.). Technology such as Online/Internet is available for 24 hours a day. With the use of Internet, a wealth of learning materials in almost every subject can be accessed from anywhere at any point of time by unlimited number of learners.

The use of technology as a tool to develop different language skill has received great attention so that English language teachers are frequently exposed to new practices. Various workshops and Short training programmes were introduced for new techniques and activities and promote new materials. The use of technology devices such as television, tape recorders and video recorders have been incorporated as a tool for teaching. There was evidence of many problems in terms of technical skills at the beginning and at about a generation for the technical skill and the technical problem to be ignored out. However, teachers are faced with some barriers that prevent them to employ Information and Communication Technology. The process of using ICT in education is very complicated. The opportunities provided by ICT to support teaching are not problem free. The insufficient technical supports at schools, little access to Internet and ICT shortage of class time were the major barrier for the teachers to integrate ICT into curriculum.

On the other hand, ICT provides teachers with new sources of information and knowledge. Teachers can easily explain complex instruction and ensure students comprehension. Through ICT teachers are able to create interactive classes and make lessons more enjoyable which would also improve student's concentration. ICT will provide greater opportunities for teacher to teacher and student to student communication and collaboration. Among the student's ICT create a greater enthusiasm and provides additional resources to assist resource-based learning.

Benefits of ICT in Education

Information and Communication Technologies have recently gained ground swell of interest. ICT have positive impact on students' performance schools with sufficient ICT resources achieved better results than that are not well equipped. Many pupils considered ICT tools very helpful in that it helps them to do assignments. ICT helps teachers to work in teams and share ideas

related to school curriculum. There are some Effectiveness of ICTs in Education.

Motivating Factors

The internet can act as a motivating factor for many students. Young people are captivated with technology. The Internet allow you to provide them with additional learning activities not readily available in the classroom.

Fast Communication

The Internet promote fast communication. Students can join collaborative projects that involve students from different states or countries. This is a unique learning experience very essential for each student as the world is becoming one big community.

Cooperative Learning

The internet facilitates cooperative learning, encourages dialogues and create a more engaging classroom.

Locating Research Materials

Apart from communication research is what take many people to the Internet. There are many more resources on the internet than the school library provides. We can encourage student to take advantages of this wealth of resources for their resources.

Here are also some of the advantages/benefits which ICT brings to education:

General Benefits

- Greater efficiency throughout the school.
- Communication channels are increased through email, discussion group and chatroom.
- Regular use of ICT across different curriculum subjects can have a beneficial motivational influence on student learning.

Benefits and Challenges in Integrating ICT in Education

Benefits for Teachers

- ICT facilitates sharing of resources, expertise and advice.
- Greater flexibility in when and where task is carried out.
- Gains in ICT literacy, skills, confidence and enthusiasm.
- Easier planning and preparation of lesson and designing materials
- Access to up to date pupil and school data anytime and anywhere.

Benefits for Students

- Higher quality lesson through greater collaboration between teachers in planning and preparing resources.
- Gain in understanding and analytical skill including improvement in reading.
- Development of writing skill (including spelling, grammar, punctuation etc.)
- Development of higher-level learning styles. Opportunities to address their work to an external audience.

Benefits to Parents

- Easier communication with teachers.
- Greater access to more accurate attendance and attainment information
- Increased knowledge of children's learning and capabilities, owing to increase in learning activity being situated in home.

Challenges in ICT

The use of Internet for education is not problem free. Therefore, one should expect the problem to be encountered in using the Internet in teaching. It is difficult for teachers to change according to the requirements. The teacher's insufficient ICT knowledge and skills the difficulty of integrating ICT in instruction and insufficient teacher time are some of the limitation in

integrating ICT in education. Lack of personal confidence and insufficient access to ICT resource were also the challenge. The most important barrier in use of ICT were lack of insufficient number of computers, free time for learning lack of classroom time for students to use computers.

Challenges related to Infrastructure

In many educational institutions there was no appropriate rooms to house the technology. In many institutions, there were old buildings poor ventilation, less safety and security. Another important necessity in the availability of electricity and telephony. There are areas still without a reliable supply of electricity and the nearest telephones are miles away. Challenges with respect to capacity building various competences must be developed throughout the educational system for ICT integration to be successful.

Teachers

Teacher's professional development should have

- Skill with particular application.
- Integration into existing curricula.
- Curricular changes related to the use of ICT.
- Changes in teacher role.

ICT are swiftly evolving technologies however and so even most ICT fluent teachers need to continuously upgrade their skills and keep update of the latest technology. Teacher anxiety over being replaced by technology or losing their authority in the classroom as teaching learning process become more learner centered.

Education Administrators

For ICT integration programs to be effective and sustainable administrators themselves must be competent in the use of the technology and they must have a deep understanding of the technical, curricular, administrative financial and social dimension of ICT use in education.

Benefits and Challenges in Integrating ICT in Education

Technical Support Specialist

Whether provided by in school staff or external service providers or bot, technical support specialist is essential. While the technical support requirement of an institution depends ultimately on what and how technology is deployed and used, general competencies that are required would be in the installation, operation and maintenance of technical equipment, network administration and network security/Without onsite technical support much time and money may be lost due to technical breakage.

Teaching aids

Teaching ICT is impossible with up-to-date equipment and supplementary materials. Vital elements include computers and accessories and appropriate software to assist in their use and application, educational database, a well-equipped computer laboratory library and internet connections. All of these should be available in quantities that allow every student to take full advantage of the opportunities IT provides.

Limitation/Disadvantages of ICT in education

- Computers limits students' imaginations.
- Computer based learning has negative physical side-effects such as vision problem.
- Over reliance on ICT limits students critical thinking and analytical skills
- Students often have only a superficial understanding of the information they download.
- Students tend to neglect learning resources other than the computer and the internet.
- Students may be easily distracted from their learning and may visit unwanted sites.
- Students may have less opportunity to use oral skills and hand writing.
- Use of ICT may be difficult for weaker students, because they may have problems with working independently and may need more support from teachers.

Conclusion

In a nutshell, not all lessons can be incorporated into the Internet. In teaching using Internet we have to convince that using the net adds something new some read value to our teaching. But also, students should be trained to use the available technology efficiently. We should collaborate with other teacher in the school and in system because cooperation and mutual understanding is important especially when the school has few Internet access. The integration of Information and Communication Technologies as a teaching aid is more complicated in that it demands more specific skills from teacher. In order to integrate ICT into curriculum teachers training institutions should provide appropriate and sufficient support for teachers. On the other hand, teachers are aware of what is happening in the classroom and what changes are occurring. Therefore, positive effective uses ICT can be applied in teaching and learning which eventually lead to the improvement of educational programs.

Reference

- “*The Role of ICT in Education Sector*” Victoria. L. Tinio, ICT in Education, July 25, 2008.
- “*The importance of ICT* “Information and Communication Technology in Primary and Secondary school 2005/2008 summary of the of steed Report, February 2009.
- Aggarwal A (2000) *Web Based Learning and Teaching Technologies Opportunities and Challenges*(2)2000.
- Walia J.S (2014) *Essentials of Education Technology*, Paul Publishers (Jalandhar) Edutracks vol II No. 1 I - September 2011.
- Information Communication Technology by Dr. Kishor Chavan *Insight Publication Nashik*, Nov 2004.
- Garcia Val Carcel A-2009.*Integrating ICT into teaching learning process. British Journal of Educational Technology.*
- <http://en.wikipedia.org/wiki/teacher>. Education.

The Sublimity of Paravidya in Education

PREM. K. KHATRY

*Formerly Prof of Culture, Tribhuvan University,
Formerly Executive Director,
Center for Nepal and Asian Studies, TU,
Kathmandu, Nepal.*

The article aims to reveal the two branches of knowledge as suggested by Vedichymns, especially Mundakopanishad - paravidya and aparavidya. In the past the rishis taught these two vidyas to their disciples and advise them to be free from the influence of aparavidya as it give sorrow, suffering and rebirth and encircle man in karma. Modern system of education gives emphasis on aparavidya and ignore paravidyaUpanishad. ople in the world can claim a tradition and scriptures as numerous or as ancient as Indians. Hindu literature is the earliest, extensive and comprehensive writings in the world. They together called - Sacred wisdom of the Hindus- includes the Vedas, Upanishads, the puranas, the Epics - Ramayana,Mahabharata and the Bhagavad Gita. Among them, Vedas constitute the oldest layer of Sanskrit literature.The Vedas are called Apaurusheyatva ("being unauthored"). It implies that the Vedasare not authored by any agency, be it human or divine. The Vedas, were originally transmitted by a phenomenal human chain of memory, and only written down centuries after their actual compilation. This oral tradition still exists in India today. Apaurusheyatva.

Keywords: Aparavidya,Paravidya,Upanishad and Parishads.

Introduction

Professor Klaus K. Klostermaier writes: "Since ancient times India has been famous for its wisdom and it's thought. The ancient Persians, Greek and Romans were eager to learn from its sages and philosophers. When, in the

Volume 5, Issue 2, July 2017

International Journal of Perspectives in Education (IJPE)

A Multi-disciplinary Biannual Journal

ISSN 2456-3412

The Sublimity of Paravidya in Education

eighteenth century, the first translations of some Upanishads and the Bhagavad Gita became available to the West, European philosophers rhapsodized about the profundity and beauty of these writings.

Here they encountered a fusion of philosophy and religion, a deep wisdom and a concern with the ultimate that had no parallel in either contemporary Western philosophy or Western religion. Indian philosophy is highly sophisticated and very technical and surpasses in both in volume and subtlety. Sir William Jones was always impressed by the vastness of Indian literature. He wrote: "Wherever we direct our attention to Hindu literature, the notion of infinity presents itself." In fact, Hinduism has always laid great stress on *Pramanas* (the means and instruments of correct knowledge).

Hindu philosophers have discussed at great lengths the Science of Noetic. The famous German scholar of the Vedas, Max Muller says: "In thus giving the Noetic the first place, the thinkers of India seem to have again superior to most of the philosophers of the West. "The system of education followed by our ancestors is collectively termed as Vedic system of education. Etymologically the term Veda is derived from the Sanskrit word वेदा: Veda, or knowledge.

In appearance the term conveys different meaning to different context namely, 'knowledge', 'wisdom', 'reality', 'truth', 'self', 'etc.

True knowledge (paravidya and aparavidya)

According to the Vedas there are two types of knowledge paravidya (transcendental knowledge) aparavidya(material knowledge).

In the Mundaka Upanishad, a student named Shaunaka goes to an enlightened sage, Angirasa, and asks a very pertinent and profound question, with great courage, thus: "What is that, O Bhagavan, through the knowledge of which everything becomes known?" Angirasa was happy to hear the meaningful question, and started his discourse by classifying the entire spectrum of things to be known into two categories: The paravidya (higher knowledge) and the aparavidya (lower knowledge).

The Upanishad says that both paravidya and the aparavidya are valuable, when it says:

Prem

(Mundaka Upanishad 1- 1-4) (“Two kinds of knowledge have to be acquired: thus the Knowers of Brahman have declared. These are (i) the lower and (ii) the higher.”)

Tatraparāṅg vedoyajur vedaḥsama vedo' tharva vedaḥśikṣakalpo
vyakaraṇam̐niruktam̐chandojyotiṣam iti, athaparayaya tad
akṣaramadhigamyate. (Mundaka UpaniṣadII-5).

(Of these the lower one consists of the Rig Veda, the Yajur Veda, the Sama Veda, the Atharva Veda, phonetics, rituals, grammar, etymology, prosody and astronomy. But the higher one is that through which the Imperishable is attained.)

The aparavidya in the Upanishads

The specific name aparavidya should not imply and demeaning of the so-called Lower Knowledge. The aparavidya encompasses the entire spectrum of 'objects', that is, anything that can be objectified by our senses or mind. Anything that can be 'seen' is an object of aparavidya. Also, the aparavidya helps us to realize the ephemerality of the objective world. It enables one to earn one's bread and helps one to understand each object of universe separately. It is the intellectual knowledge. Under this category come all our worldly knowledge, such as - science, arts, commerce, management, technical knowledge, etc. We are depending on science or arts or technology seeking pleasure, comfort and happiness in our life.

It gives humans pleasure and happiness and also stretches irrepressible emotions - happiness, anger, grief, depression, fear, gluttony, mood out, boredom, love, attraction, affection, etc. All these are related to mind, ego (ahamkaram) and intellect. It is essential for man to live in this world, but hardhearted use of aparavidya or lower knowledge creates problems or spoils our mind. The so called lower knowledge closely blends our self with body. So, emotions and problems of worldly life spoil one's intellect, mind and body. So, use of aparavidya in our daily life requires carefulness (jagrata, cheta).

Paravidya in the Upanishads

The second category of knowledge is the paravidya, or higher level and form of knowledge. It gives insight into the true nature of the world. It gives the consciousness that all the worldly things we see with our naked eyes are not eternal but perishable. Even our emotions and feelings are not permanent

The Sublimity of Paravidya in Education

and may change from place to place, time to time and person to person. Thus, reliance on the worldly possessions, emotions and feelings, and material things gives one sorrow and sufferings. It forces one to do karma and take re-birth.

One should realize that everything which can be seen is changing, thus the imperishable can never be an object of our knowledge or trust. So, the study should be about the very knower, his own self, his own essence, which can never be seen by our senses. One should know the meaninglessness of doing activities here for worldly things. It doesn't mean that all should live in this world without doing, working, exploring or investigating anything but before doing, learning the simple principle that all material objects are perishable and all emotions and desires are not permanent. It is our misconception that the real world is true.

On the other hand, the paravidya or higher knowledge destroys ignorance or that which leads to perfection or the means of attaining oneself with the true existence. Brahma-vidya is the technique or the Science enabling one to reach absolute Experience. This Knowledge is attained through great effort in the forms of viveka, vichara, vairagya and abhyasa. Such instruction was given to the pupils in ancient Vedic period. The higher vidya is the Knowledge propounded in the Upanishads.

The ancient Indian gurus (teachers, scholars) gave emphasis on the paravidya and encouraged their disciples to practice aparavidya for sustainability. For subsistence our body needs job, money, cloths, dwelling place and family and for exercising these aparavidya is essential. But at the same time, one should be vigilant of the 'attachments' branded by aparavidya. The simple way to free from the bandage of aparavidya is the awareness about the matter that 'I' am not the 'Body', I am not the 'Mind' and I am not the 'Intellect' (mano - budhi - ahamkaram). All these may decay, or change or perish.

The essence of paravidya revealed from the words of Shree Sankaracharya Naahammanushyona cha deevayakshow Na Brahmana Kshatriya vaisyasudra Na brahmacharinagrahevanasto Bhishurnachahamnijabodharoopo. (Hastamalagakitam 1-2)

(I am not man, not demigod or Yaksha, not Brahman, Kshatriya, vaisya or sudra (not belonging to any of the varnas), not brahmachari, householder, forest-dweller or sanyasi (not belonging to any of the four stages of life); but I am self-knowledge alone.) (Hastamalagakitam 1-2).

Prem

Conclusion

The conclusion of this brief discussion is that vidya, the system of Vedic knowledge balances our mind and intellect. Propounded by the highly enlightened sages of ancient times, the vidyas form the base of human personality and instruct the learners to be able to separate the essence of knowledge from less meaningful ones. Finally, they put emphasis on the very essence of the Vedic system of education as Self-awareness.

A Brief Description of the Vedic System of Education

The important aims of education in Vedic period are:

- Education for other world lines
- Character formation
- All round development for Personality
- Intellectual Development
- Spiritual Development
- Preparation for living
- Preserving and Transmitting Culture
- Education only a means and not an end in itself

Curriculum

1. Vedic Literature

- The Rig-Veda
- The Yajurveda
- The Sam Veda
- The Atharavaveda

2. Vedangas

3. Hetuvidya

4. Silpa- vidya

5. Physical Education

6. Stress on other worldliness

Methods of Instruction

The important methods of learning are:

- Listening (Sravana is listening to words texts as they uttered by the teacher

The Sublimity of Paravidya in Education

- Deliberation (Manana or Chintan is the process of deliberation or reflection of the topic taught)
- Meditation (Nidhidhyarama represents the highest stage)
- Illustration
- Project Method

Duration of Education

In the house of the teacher, the student was required to obtain education up to the age of 24, after which he was expected to enter domestic life.

Role of Teacher

The teacher or acarya in the Vedic age was responsible not only in imparting knowledge – religious as well as secular, but also in molding the character and personality of the pupils of his ashrama. The acarya of the Gurukula system was an affectionate father, an effective teacher, and a person of high moral and spiritual qualities. He maintained discipline by the influence of his personality. He was sincere and honest to his work. He taught with his heart and soul. He also performed the functions of a householder performing the five daily yajnas and observing vows. He led a disciplined life.

Role of Mother in Education

A mother should impart education to her children so as to broaden their horizon. At this stage good manners are to be taught so that the children behave properly with the elders and in assemblies.

The Student

The student in the Vedic school was called brahmacharin. He had to dedicate his life for the sake of gaining knowledge, leading an enlightened life. In his formative life he must lead an austere and disciplined life. The Upanishads clearly describe the qualities required for a brahmacharin. A student had to be calm, patient, self-restrained and self-denying. The student's prayer included his longing for the realization of a full life. Thus, the main aim of the Vedic educational system was to produce a rational individual, free from passions, full of universal affection, continuously self-educating and striving to reach the highest goal.

Prem

Gurukulas were the dwelling houses of gurus situated in natural surroundings away from noise and bustle of cities. Parents sent their wards at the age of five years to nine years according to their castes after celebrating their Upanayan Sanskar. Pupils lived under the roof of their guru called 'antevasin' under the direct supervision of their Guru. Gurukula as the name indicates was the family of the teacher and his residence where the students used to stay during the period of study. Gradually, the Gurukula were extended to include a number of buildings. However, the institution was built up around the family of teacher.

The primary duty of the student was to serve the teacher and his family. The students were like sons of the teacher and the whole institution lived like family. Parishads were bigger educational institutions where several teachers used to teach different subjects. This may be compared to a college Parishad in Upanishads, has been used for a conference of learned men, assembled for deliberations upon philosophical problems.

Later on, the 'Parishads' were set up at the places where learned men lived in good number and gradually these institutions became permanent centres of imparting knowledge. In the words of Dr. R. K. Mukherjee Parishad correspondences to University of students belonging to different colleges. Vedic age had, thus, a system of education in which "hearing, chanting and memorizing, played a great part, assimilation of idea took place through a well- planned life of service to teacher, contemplation, all under his guidance. The Vedic period favoured women education.

Reference

Klaus K. Klostermaier "Ancient Indian History and Culture" P. 236 Oxford University Press. Published where? Name the place

Sir William Jones founded the Asiatic Society of Bengal, and started a journal called 'Asiatic Researches'. Friedrich Max Müller, The Sacred Book of the East, p 214, Oxford University Press; Humphrey Milford in Oxford; London, 1896.

Shree Sankaracharya Hastamalagakitam.

Parental Involvement: A Key for Children's Academic Performance

Dr. J. SHAKILA

*Principal, KGPR-ANR College of Education, Gudivada,
Krishna District, Andhra Pradesh.*

K. LAKSHMI TULASI

*Student, Department in Psychology College Gudivada,
Krishna District, Andhra Pradesh.*

Parental involvement is important for children, parents and society. Ongoing psychological and sociological research on parental involvement examines the impact of a particular measure or measures of involvement on a vast range of child progress indicators. These indicators are usually within the broad topics of child wellbeing, health, education and behaviour. Parent involvement in a child's education is consistently found to be positively associated with a child's academic performance. Parent involvement is a crucial force in children's development, learning, and success at school and in life. "parent involvement means the participation of parents in regular, two-way, and meaningful communication involving student academic learning and other school activities including ensuring that parents play an integral role in assisting their child's learning; parents are encouraged to be actively involved in their child's education at school; and parents are full partners in their child's education and are included, as appropriate, in decision making and on advisory committees to assist in the education of their child". Communication is the key element that shapes parent involvement activities at home and at school and enhances school-family collaboration.

Keywords: Parental Involvement, Academic Performance and Influence.

Volume 5, Issue 2, July 2017

International Journal of Perspectives in Education (IJPE)

A Multi-disciplinary Biannual Journal

ISSN 2456-3412

Two-way communication between home and school helps build an on-going, productive, and trusting relationship between parents and educators, which increases parent participation in learning activities both at home and at school. There are several factors that affect the frequency and way in which parents become involved in their child's education at home and at school and collaborate with schools. This section will first provide an overview of such factors, and give parent and teacher perspectives.

Introduction

Parent involvement is one factor that has been consistently related to a child's increased academic performance. While this relation between parent involvement and a child's academic performance is well established, studies have yet to examine *how* parent involvement increases a child's academic performance. The goal of the present study was to test two variables that may mediate, or explain how, parent involvement is related to a child's academic performance. Parent involvement was defined as the teacher's perception of "the positive attitude parents have towards their child's education, teacher, and school" (Webster-Stratton, 1998). Academic performance was measured by two methods: standardized achievement test scores and teacher report of academic performance through rating scales.

Role of Parental Involvement in Education

The critical role of parental involvement in a child's education has been examined in countless studies and reports. The research overwhelmingly supports the following conclusions.

Parental Involvement Enhances Academic Performance

Academic achievement increases when parents are involved in their children's education. The more intensively involved the parents are, the greater the positive impact on academic achievement.

Parental Involvement leads to better Classroom Behaviour

Parental involvement not only enhances academic performance, but it also has a positive influence on student attitude and behaviour. A parent's interest and encouragement in a child's education can affect the child's attitude toward school, classroom conduct, self-esteem, absenteeism, and motivation.

Parental Involvement

Parents Should Stay Involved in their Children's Education from Preschool through High School.

Parental involvement can make a positive difference at all age levels. Parental involvement tends to be the greatest with young children and tends to taper off as children get older. Studies have shown, however, that involvement of parents of middle and high school students is equally important. In high school, for example, a parent's encouragement can influence whether a child stays in school or drops out. Similarly, a child may consider going to college more seriously when parents show interest in the child's academic achievements and talk with the child about the benefits of a college education.

Training Helps Parents of Disadvantaged Children get Involved

Parents of minority or low-income children are less likely to be involved in their children's education than parents of non-disadvantaged children. If they receive adequate training and encouragement, however, parents of minority or low-income children can be just as effective as other parents in contributing to their children's academic success.

Reading Together at home greatly improves Reading Skills

Reading in particular improves greatly when parents and children read together at home. Reading aloud with a child contributes significantly to the child's reading abilities.

Schools Can Encourage Parental Involvement in many ways

Significant parental involvement is most likely to develop when schools actively seek out ways to get parents involved and offer training programs to teach parents how to get involved in their children's education.

Parental Involvement lifts Teacher Morale

Schools and teachers benefit from parental involvement because involved parents develop greater appreciation for the challenges that teachers face in the classroom. Teacher morale is improved. Communication between home and school helps a teacher to know a student better, which in turn allows the teacher to teach the student more effectively. Communication also helps to dispel any mistrust or misperceptions that may exist between teachers and parents.

Parental Involvement Benefits Children and Parents

By becoming involved in their children's education, moms and dads get the satisfaction of making a contribution to their children's education and future. They have a better understanding of the school curriculum and activities and can be more comfortable with the quality of education their child is receiving. They spend more time with their children and become able to communicate better with them. Some studies show that a parent's participation in a child's education may inspire the parent to further his or her own education.

Time Constraints are the Greatest Barrier to Parental Involvement

Lack of time is the top reason parents give for not participating more in their children's education. Lack of time is also cited by school personnel as a reason for not seeking parental support more actively. Thus, effective solutions to enhanced parent involvement require freeing up time of parents and teachers or finding ways to work around their schedules.

Factors Influencing Parent Involvement

Child Characteristics and Development

Child characteristics can influence the magnitude and nature of parent involvement. Young children whose parents actively participated in early childhood programs not only display a head start in academic, social, and emotional learning, but also engage in less risky and delinquent behaviors later in life. As students enter adolescence, often both parents and school personnel misinterpret the adolescents' desire for autonomy as a developmental barrier to family involvement.

Beliefs and Expectations

Parent and teacher beliefs and expectations are crucial to shaping home-school relations. Beliefs about individuals and group characteristics drive our choices and behaviors, and are crucial in shaping relationships and partnerships. A positive, welcoming school climate, and consistent invitations to parents with ways to become involved in their children's education at home and school, positively predisposes parents about the school's efforts. Parents'

Parental Involvement

positive perception highly influences their children's perception of school, which, in turn, positively contributes to students' academic, social, and emotional learning.

Older students

It can also play an important role in school-family partnerships. For example, involving older students in parent-teacher conferences and intervention planning creates continuity between home and school, and students get the strong and very important message of valuing education. Receiving a unified message and clear expectations from both parents and teachers is a strong motivation for students to succeed.

Lack of Knowledge

An important ingredient to parent involvement is communication between parents and teachers. Parents feel that schools must inform them about their curricula as well as about ways to assist their children at home. Many parents believe that parent involvement in their children's school would increase if they had more information and understood better what their children were learning.

The School Environment

Based on recent census data, ethnic and cultural diversity is increasing in the United States, and the need for schools to prepare minority students for full participation in the American life and society has become even more pronounced. Children may experience adverse conditions in a variety of settings such as poverty and lack of resources in the family, school, or the community.

Partnership as a Priority

Schools with mission statements that highlight the importance of home-school relationships clearly communicate their commitment to including parents as collaborators in the education of children. But effective implementation of the mission statement requires the necessary resources, as well as training to support the school personnel

Conclusion

It was predicted that parent involvement would no longer be a significant predictor of a child's academic performance when the child's cognitive competence and the student-teacher relationship were accounted for in the analyses. School-family partnerships take time and effort to establish and maintained. There are concrete steps that schools can take in order to reach out to parents in a positive and ongoing way. But that is not enough. Since school-family partnerships are a two-way street, parents must build on the school's efforts, or initiate their own, and collaborate with teachers in a productive way for the success of all children. Parent and teacher expectations regarding the academic, social, and emotional development of children have been shown to be among the best predictors of school success.

Reference

- Michael D. Resnick et al., "Protecting Adolescents from Harm: Findings from the National Longitudinal Study on Adolescent Health," *Journal of the American Medical Association* 278, No. 10 (1997): 823-832.
- Marjory R. Gray and Laurence Steinberg, "Unpacking Authoritative Parenting: Reassessing a Multidimensional Construct," *Journal of Marriage and Family* 61, No. 3 (August 1999): 574-587.
- Wendy Miedel Barnard, "Parent Involvement in Elementary School and Educational Attainment," *Children and Youth Services Review* 26 (2004): 39-62.
- Marcia J. Carlson, "Family Structure, Father Involvement, and Adolescent Behavioral Outcomes," *Journal of Marriage and Family* 68, No. 1 (February 2006): 137-154.
- Gary F. Jensen, "Parents, Peers, and Delinquent Action: A Test of the Differential Association Perspective," *American Journal of Sociology* 78, No. 3 (1972): 562-575.
- Cheryl B. Aspy et al., *Journal of Adolescence* 30 (2007): 449-466.
- Bruce J. Ellis et al., "Does Father Absence Place Daughters at Special Risk for Early Sexual Activity and Teenage Pregnancy?" *Child Development* 74, No. 3 (2003): 801-821.

Sensuousness of Poetry Made Tangible: The Digitalized Approach

MANOJ CHANDRASENAN

Research Scholar, Bharathiyar University, Coimbatore, Tamil Nadu, INDIA.

Sensuousness in poetry is that quality which appeals to our five senses – sight, hearing, touch, smell and taste. It is a way of perception through the five senses. The images in poetry can be made more perceivable through the use of digital technology in classroom. So the teacher has the freedom to introduce his or her own improvised ways to ensure maximum aesthetic pleasure to students. Educators have emphasized the importance of situating students in an authentic learning environment. Such an approach helps students comprehend, feel and enjoy ideas beyond their own environmental situations and settings. Teaching poetry brings great responsibility to the teacher. This being a cyber-spaced age, teaching poetry should also be in line with the progress of this age. Teachers in the digital era should be equipped with the tech tools, opening up exciting new possibilities of combining different media – a new concept that is multifaceted. Thus, the incorporation of the technological advancements and tools in facilitating the appreciation of poetry in a classroom context may be termed as a digitalized approach. Here, the role of teachers is critical as the new generation is more digitally and technically updated than the generation of the practicing teachers. This paper is an attempt to highlight this issue and to see the effect of tangibility in the teaching and learning of poetry.

Keywords: Digital Technology, Sensuousness, Appreciation and Teaching.

Volume 5, Issue 2, July 2017

International Journal of Perspectives in Education (IJPE)

A Multi-disciplinary Biannual Journal

ISSN 2456-3412

Sensuousness of Poetry Made Tangible

Introduction

Poetry is an imaginative awareness of experience, expressed through meaning, sound and rhythmic language choices so as to evoke an emotional response. It is taught because it provides students with a kind of linguistic. It is an experience of a different kind of language-use which is creative and imaginative. Poetry enables teachers to teach their students how to write, read, and understand any text. Poetry can give students a healthy outlet for surging emotions. The digitalized approach of teaching poetry has opened new vistas and avenues in appreciating poetry. Poetry is defined as “the extraordinary perception of the ordinary.” Being a kind of art, poetry shrinks away from strict definitions. The very nature of art is to challenge thinking. Trying to define something artistic, simply opens up new ground for exploration by those hoping to challenge convention. In particular, this paper examines how by tapping students’ visual and digital literacy skills they are enabled to create video poems, podcasts, hypertexts and wikis, all of which represent new ways of using language and experiencing poetry.

Objectives of Teaching Poetry

The main objectives are:

- To understand and derive pleasure from the given poem.
- To appreciate the beauty of the language and the thought in the poem.
- To recite the poem with proper beats, stress, accent, intonation and rhythm.
- To kindle the students’ imagination and develop their aesthetic sense (sensuousness)

Digitalized Approach

The dominant model of poetry teaching, particularly for older students, has been to teach poetry through print text and to focus on finding one meaning to be dissected. In contrast, poets emphasize the importance of hearing the poem read aloud (lifting the poem from the page), engaging with it, and probing for deeper meaning through discussion with others. If we want our students to understand how literature, and poetry in particular, brings them to a deeper understanding in life, we need to find meaningful ways to engage them with poetry

The use of new media adds multiple layers of meaning and interpretation of a poem in ways that are not available with a conventional textual format. Sensuous poetry deals with concrete images instead of abstract images. So the teacher has the freedom to introduce his or her own improvised ways to ensure the maximum aesthetic pleasure to the students. Teaching poetry brings great responsibility to the teacher. As a teacher in the digital era, we should be equipped with the tech tools, opening up exciting new possibilities of combining different media – a new concept that is multifaceted. Thus, the incorporation of the technological advancements and tools in facilitating the appreciation of poetry in a classroom context is called the digitalized approach.

Digitalized approach in the teaching of poetry facilitates the exploration of meaning. It promotes blended learning combining face to face interaction and the effective utilization of ICT resources. Digitalized approach can enhance creativity and far off imagination among learners. It widens avenues for picturisation and dramatization of the poetic environment. Digital poem offers a unique opportunity for establishing access to the effective recitation and oral rendering of the poem by a competent hand. It is beneficial to both the students and the teachers.

The technologies that shape digital media are diverse, rapidly evolving and can be used to such different effects. Digital technology leaves a mark on a poem partly in the composition process and partly in how a poem looks, because it provides a diverse palette of formatting elements and language tools. Here the poet thinks through the poem.

Multimedia resources could be utilized in challenging and stimulate ways for better appreciation of the poem. The different types of images like tactile, olfactory, visual and auditory could be better explored through the use of multimedia tools, where text images and audio-video resources could be combined. The inter-meaning of the poem could be brought out through collaborative efforts using ICT platform. The beauty, richness of imagery, the poetic appeal, artistic elements that activate imagination, colourful word pictures, the mastery of manipulation of word pictures, the craft involved in the selection and presentation of appropriate expressions, level of fanciful imageries presented in realistic tones – all these elements unveil sensuousness. In the simplest terms digital poems are born from the combination of technology and poetry, with writers using all multi-media elements as critical texts. Sounds, images, movement, video, interface/interactivity and words are combined to create new poetic forms and experiences.

Poetry is meant to be lifted from the printed page and explored in multi-modal ways (visually, gesturally, aurally). The use of new digital media

Sensuousness of Poetry Made Tangible

for reading, writing, and representing poetry encourages an exploration of the relationship between text and image and how images and sound might be used to mediate meaning-making. New media have an immersive and performative potential that encourages students to get inside a poem and play with it. Giving students opportunities to create poems or respond to and annotate existing poems using new media provides them with opportunities to use the technology in meaningful ways.

A poem accompanied by visual images and annotations can be seen as a new text, a different way of performing the poem. Creating poetry using new media views performance as a vehicle for exploration and learning, rather than as a fixed product to be rehearsed and delivered as a final event. Our students are already immersed in new media and the question is no longer whether we should use digital technologies in the classroom, but rather how they are being integrated into the curricula. Although access to resources continues to be an issue, principals need to encourage and support classroom teachers in developing digital skills to improve literacy learning. In addition, teacher preparation programs need to ensure that teacher candidates are fully equipped to integrate new media in a classroom context.

Samples on Digital Approach - Taking into account the poems “The Ballad of Father Gilligan” by William Butler Yeats and “The School Boy” by William Blake: The students can be shown what a ballad form is (a traditional form, usually sung, with regular, short stanzas that tell a story). The poem is stanzaic in structure with twelve stanzas of four lines each - a quatrain. In each stanza, the first and the third lines do not rhyme but the second line rhymes with the fourth. Picture of Father Gilligan, flock, green sods, moth-hour etc. can be emphasised by ICT software which is audio-visual combined.

‘The School Boy’, is a poem about a boy who is forced to go to school when nature, in all its splendor, calls him. The very first stanza depicts the graphic description of summer season in all its glory and richness. ‘Nature’, ‘chirping of birds’, ‘huntsman winds his horn’, ‘skylark sings’ etc. are all combination of audio visual imagery (combination of image, sound and words). These facilitate teaching the poetry with graphic visuals. Students can utilize digital technology to create a presentation of a poem. They can create photos, videos, slides thereby improving their skills in creativity. Along with audio presentation of the poem the performance of the students can be initiated and at the same time video-taped. This is very effective in children with learning disabilities.

Manoj Chandrasenan

- 1) Videos related to the above poems may be played for creating diorama (a miniature representing a scene with three dimensional figures) to capture the images and sounds of the poem.
- 2) CD of instrumental music related to the poem may be played for producing background music to feel the melody of the poem
- 3) . Standard recitation by a native speaker.
- 4) Voice recording to improve their pronunciation.
- 5) PPT of the nature scene related to the poem to be taught.
- 6) Students can be asked to share their reading experience of the poem through a blog.

This kinesthetic type of learning draws the teachers' attention to the importance of visual element in motivating students become involved in the study of poetry. This is a task that the teachers have to face in order to keep up with the times and provide motivation and necessary skills for students.

Conclusion

A total shift towards digitalization is visible among the techno-savvy teachers nowadays. However, a judicious blend of both the traditional method and the right mix of technical modalities will serve the purpose.

Reference

- Albers, P. (2006) "Imagining the possibilities in multimodal curriculum design". *English Education* 38, 75-101.
- Gioia ,D.(2000) "Disappearing Ink: Poetry At the End of Print Culture". *Minnesota :Gray Wolf press*.
- Horine, Clara. "Teaching poetry in High School" *English Journal* 15.1 Web .19 May 2014

The Upper Total x -Edge Steiner Number of a Graph

A. SIVA JOTHI

*Assistant Professor, Department of Mathematics,
Marthandam College of Engineering and Technology, Kuttakuzhi*

S. ROBINSON CHELLATHURAI

*Associate Professor, Department of Mathematics,
Scott Christian College, Nagercoil.*

Let x be a vertex of a connected graph G and $W \subseteq V(G)$. Then W is called a total x -edge Steiner set of G if W is an x -edge Steiner set of G and $\langle W \rangle$ has no isolated vertices. The minimum cardinality of a total x -edge Steiner set of G is defined as total x -edge Steiner number of G and denoted by $s_{t1x}(G)$. Any total x -edge Steiner set of cardinality $s_{t1x}(G)$ is called a s_{t1x} -set of G . A total x -edge Steiner set W in a connected graph G is called a minimal total x -edge Steiner set if no proper subset of W is a total x -edge Steiner set of G . The upper total x -edge Steiner number $s_{t1x}^+(G)$ of G is the maximum cardinality of a minimal total x -edge Steiner set of G . The upper total x -edge Steiner number of certain classes of graph are determined. Some general properties satisfied by this concept are studied. For any positive integers a and b with $4 \leq a \leq b$, there exists a connected graph G such that $s_{t1x}(G) = a$ and $s_{t1x}^+(G) = b$.

Keywords: Edge Steiner Number, x -edge Steiner Number and Upper Total x -edge number.

Volume 5, Issue 2, July 2017

International Journal of Perspectives in Education (IJPE)

A Multi-disciplinary Biannual Journal

ISSN 2456-3412

The Upper Total x -Edge Steiner Number of a Graph

Introduction

By a graph $G = (V, E)$, we mean a finite undirected connected graph without loops or multiple edges. The order and size of G are denoted by p and q respectively. The distance $d(u, v)$ between two vertices u and v in a connected graph G is the length of a shortest $u-v$ path in G . An $u-v$ path of length $d(u, v)$ is called an $u-v$ geodesic. For basic graph theoretic terminology, we refer to Harary [1].

For a nonempty set W of vertices in a connected graph G , the Steiner distance $d(W)$ of W is the minimum size of a connected subgraph of G containing W . Necessarily, each such subgraph is a tree and is called a Steiner tree with respect to W or a Steiner W -tree. It is to be noted that $d(W) = d(u, v)$, when $W = \{u, v\}$. The set of all vertices of G that lie on some Steiner W -tree is denoted by $S(W)$. If $S(W) = V$, then W is called a Steiner set for G . A Steiner set of minimum cardinalities is a minimum Steiner set or simply a s -set of G and this cardinality is the Steiner number $is(G)$ of G . The Steiner number of a graph was introduced and studied in [2] and further studied in [3,4,5,6]. Let x be a vertex of a connected graph G and $W \subset V(G)$. Then W is called a total x -edge Steiner set of G if W is an x -edge Steiner set of G and $\langle W \rangle$ has no isolated vertices. The minimum cardinality of a total x -edge Steiner set of G is defined as total x -edge Steiner number of G and denoted by $s_{t1x}(G)$. Any total x -edge Steiner set of cardinalities $s_{t1x}(G)$ is called a s_{t1x} -set of G . This concept was studied in [10].

Theorem 1.1. [10] Every extreme vertex of G other than the vertex x (whether x is extreme or not) belongs to every total x -edge Steiner set for any vertex x in G .

Theorem 1.2. [10] For the complete graph $G = K_p$ ($p > 2$), $s_{t1x}(K_p) = p - 1$ for every vertex x .

The Upper Total x -Edge Steiner Number of a Graph

Definition 2.1. A total x -edge Steiner set W in a connected graph G is called a minimal total x -edge Steiner set if no proper subset of W is a total x -edge Steiner set of G . The upper total x -edge Steiner number $s_{t1x}^+(G)$ of G is the maximum cardinality of a minimal total x -edge Steiner set of G .

Example 2.2. For the graph G in Figure 2.1, the minimum total x -edge Steiner sets and the minimal total x -edge Steiner numbers are given in the following table.

Table 2.1

vertex	$s_{\text{tlx}}\text{-sets}$	minimal total x -edge Steiner set
v_1	$\{v_4, v_5\}$	$\{v_3, v_4, v_5, v_6\}$
v_2	$\{v_1, v_2, v_4, v_5\}$	$\{v_1, v_2, v_4, v_5\}$
v_3	$\{v_1, v_2, v_4, v_5, v_6\}$	$\{v_1, v_2, v_4, v_5, v_6\}$
v_4	$\{v_1, v_2, v_4, v_5\}$	$\{v_1, v_2, v_4, v_5\}$
v_5	$\{v_1, v_2, v_4, v_5\}$	$\{v_1, v_2, v_4, v_5\}$
v_6	$\{v_1, v_2, v_3, v_4, v_5\}$	$\{v_1, v_2, v_3, v_4, v_5\}$

Theorem 2.3. Each extreme vertex of a graph G belongs to minimal total x -edge Steiner set of G . In particular, each end-vertex of G belongs to every minimal total x -edge Steiner set of G .

Proof. Since every minimal total x -edge Steiner set of G is a x -edge Steiner set of G . Hence follows from Theorem 1.1.

Theorem 2.4. For a connected graph G , $2 \leq s_{\text{tlx}}(G) \leq s_{\text{tlx}}^+(G) \leq p$.

Proof. Since any total x -edge Steiner set needs at least two vertices, $s_{\text{tlx}}(G) > 2$. Let W be a minimum total x -edge Steiner set of G so that $s_{\text{tlx}}(G) = |W|$. Since W is also minimal total x -edge Steiner set of G , it is clear that $s_{\text{tlx}}(G) \leq s_{\text{tlx}}^+(G) = |W|$. Hence $s_{\text{tlx}}(G) \leq s_{\text{tlx}}^+(G)$. Since the vertex set $V(G)$ is a total x -edge Steiner set, $s_{\text{tlx}}^+(G) \leq p$. Thus $2 \leq s_{\text{tlx}}(G) \leq s_{\text{tlx}}^+(G) \leq p$.

Remark 2.5. The bound in Theorem 2.4 is sharp. For the graph G in Figure 2.2. Let $x = v_4$ is a total x -edge Steiner set of G so that $s_{\text{tlx}}(G) = 2$.

The Upper Total x-Edge Steiner Number of a Graph

For the non-trivial tree T , is not a star, $s_{tlx}(G) = \llbracket s \rrbracket_{-tlx^+}(G)$ for any internal vertex T . For the star, $K_{(1, p-1)}$, $s_{tlx^+}(G) = p$ for the internal vertex x .

Theorem 2.6. For a connected graph G , $s_{tlx}(G) = p$ if and only if $s_{tlx^+}(G) = p$ for some vertex x in G .

Proof. Let $s_{tlx}(G) = p$. Then $S = V(G)$ is the unique minimal total x -edge Steiner set of G . Since no proper subset of S is a total x -edge Steiner set, it is clear that S is the unique minimum total x -edge Steiner set of G and so $s_{tlx}(G) = p$. The converse follows from Theorem 2.4.

Theorem 2.7. For the complete graph K_p ($p > 2$), $s_{tlx^+}(K_p) = p-1$ for every vertex x in G .

Proof. Since every vertex of the complete graph K_p ($p \geq 2$) is an extreme vertex, the vertex set of K_p is the unique total x -edge Steiner set of K_p . Thus $s_{tlx}(K_p) = p-1$. Hence by Theorem 1.2 $s_{tlx^+}(K_p) = p-1$.

Theorem 2.8. If G is a connected graph of order p with $s_{tlx}(G) = p-1$, then $s_{tlx^+}(G) = p-1$ for every vertex x in G .

Proof. Since $s_{tlx}(G) = p-1$, it follows from Theorem 2.4 that $s_{tlx}(G) = p$ or $p-1$. If $s_{tlx}(G) = p$, then by Theorem 2.6, $s_{tlx}(G) = p$, which is a contradiction. Hence $s_{tlx^+}(G) = p-1$.

Corollary 2.9. For a star, $G = K_{(1, p-1)}$, $\llbracket s_{tlx}(G) = s \rrbracket_{-tlx^+}(T) = \{p\}$ if for every internal vertex x in G $\oplus p-1$ if every end vertex of G $\}$

Theorem 2.10. For a tree T , $s_{tlx}(T) = s_{tlx^+}(T) = k+l$, where k is the number of end vertices and l is the number of support vertices.

Proof. By Theorems 2.3, $s_{tlx}(T) = s_{tlx^+}(T) = k+l$ for all x in T . Let Z be the set of all end vertices of T and S be the set of all support vertices of T . Then $W = SUZ$ is the unique minimal total x -edge Steiner set of T and that $s_{tlx}(T) = s_{tlx^+}(T) = k+l$.

Theorem 2.11. For a complete bipartite graph $G = K_{m,n}$, ($2 \leq m \leq n$), $s_{tlx^+}(G) = m+n-1$ for some vertex x in G .

Jothi and Robinson

Proof. Let $U = \{u_1, u_2, \dots, u_m\}$, and $V = \{v_1, v_2, \dots, v_n\}$ be the bipartition of G . Let $x \in G$. Then $S = G - \{x\}$ is the unique minimal total x -edge Steiner set of G so that $s_{tlx}^+(G) = |W| = m+n-1$.

Theorem 2.12. For every positive integer a and b with $4 \leq a \leq b$, there exists a connected graph G such that $s_{tlx}(G) = a$ and $s_{tlx}^+(G) = b$.

Proof. If $a = b$, take $G = K_{(1, a-1)}$. Then by Theorem 2.10, $s_{tlx}(G) = s_{tlx}^+(G) = a$ for the internal vertex x . So, let $a < b$. Let G be the graph by obtained in Figure 2.3 from the path on five vertices $P: v_1, v_2, v_3, v_4, v_5$ by adding the new vertices $w_1, w_2, \dots, w_{(b-a+1)}$ and $z_1, z_2, \dots, z_{(a-4)}$ and joining each w_i ($1 \leq i \leq b - a + 1$) with v_1 and v_4 and also joining each z_i ($1 \leq i \leq a \leq 4$) with v_4 . Let $x = v_2$. Let $W = \{z_1, z_2, \dots, z_{(a-4)}, v_2, v_4, v_5\}$ be the set of end vertices and cut vertices of G . Let S be any total x -edge Steiner set of G . Then by Theorems 2.3, $W \subseteq S$. Then W is not a total x -edge Steiner set of G and so $s_{tlx}(G) \geq a$. However, $W \cup \{v_1\}$ is a total x -edge Steiner set of G so that $s_{tlx}(G) = a$.

Now, $T = W \cup \{w_1, w_2, \dots, w_{(b-a+1)}\}$ is a total x -edge Steiner set of G . We show that T is a minimal total x -edge Steiner set of G . Let W be any proper subset of T . Then there exist at least are vertex say $u \in T$ such that $u \notin W$. By Theorem 1.1, $u \neq z_i$ ($1 \leq i \leq a - 4$). Also, by Theorem 1.1 $u \neq v_2, v_4$. Now, assume that $u = v_j$ for some j ($1 \leq j \leq b - a + 1$). Then the vertex v_j ($1 \leq j \leq b-a+1$) does not lie on any Steiner W -tree of G . Now, assume that $u = v_1$. Then the vertex v_1 does not lie on any Steiner W -tree of G . Now assume that $u = v_3$. Then the vertex v_3 does not lie on any Steiner W -tree of G and so W is not a total x -edge Steiner set of G . Hence T is a minimal total x -edge Steiner set of G so that $s_{tlx}^+(G) = b$. Now, we show that there are no minimal total x -edge Steiner set X of G with $|X| \geq b + 1$. Since $|V(G)| = b + 2$, there is no total x -edge Steiner set with $|X| = b+1$. Thus $s_{tlx}^+(G) = b$.

Reference

Buckley, F. Harary, Distance in Graphs, Addition- Wesley, Redwood City, CA,1990.

F. Harary, Graph Theory, Addition-Wesley (1969).

The Upper Total x-Edge Steiner Number of a Graph

G. Chartrand, Oellermann, Ortred, Tian Song, Song Ling, Zou and Hung Kin, Steiner distance in graphs, Caspopsis pro pestovani Matematiky (114) (1989) 399-410.

G. Chartrand and P. Zhang, The Steiner number of a graph, Discrete Mathematics 242 (2002) 41-54.

K.M. Kathiresan, S. Arockiaraj, R. Gurusamy and K. Amutha, On the Steiner radial number of graphs, LNCS 7643, 2012, 65-72.

Raines, M., Zhang, P. The Steiner distance dimension of graphs. Australasian J. Combin. 20, 133-143 (1999).

S.Robinson Chellathurai and A. Siva Jothi The x-Edge Steiner Number of a Graphm (submitted)

A. P. Santhakumaran and J. John, The edge Steiner number of a graph, Journal of Discrete Mathematical Science and Cryptography Vol. 10,No.5,(2007) 677-696.

A. P. Santhakumaran and J. John, The Upper Steiner Number of a Graph, Graph Theory Notes of New York LIX, (2010) 9-14.

S. Robinson Chellathurai and A.Siva Jothi, The Total x-Edge Steiner Number of a Graph (accepted) IJMA.