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CAPACITY BUILDING OF RURAL WOMEN FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

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Abstract

The purpose of this survey research was to explore approaches for building the capacity of rural women to equip them with the necessary skills to survive in their environment. A structured and validated questionnaire and Focus Group Discussion method were employed to collect data from 900 rural women aged 25 years and above, in the South-East Geo-political zone of Nigeria. This zone is inhabited mainly by Igbos, very enterprising people, who are also interested in agriculture, education and commerce. The people share common characteristics such as language, culture, religion, values and attitude to life. Four (4) research questions guided the study. The data collected were analysed through frequencies and percentages. The findings show that the activities of the rural women include crop/vegetable farming, selling farm products, food processing, retailing goods and thrift saving. They indicated that they needed to acquire literacy, food processing, marketing, communication, health promotion and ICT skills and that their challenges included communication, transportation, marketing of farm produce, access roads, access to credit facilities, poor revenue from farm produce, access to agricultural inputs, storage facilities, potable water, health facilities, environmental degradation and disease control. The approaches to build the capacity of the rural women include training in literacy skills, food processing, ICT, access to credit facilities, collaboration and cooperation with agencies and governments, and health promotion. Based on the findings the following recommendations were made: the Governors of the South-East geo-political zone of Nigeria should focus their development programmes on the rural areas. Women development and entrepreneurial centres should be built in the rural areas to train the women in different skills according to their needs.

Key words: Capacity building, Rural Development, Sustainable development, etc

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Introduction

The essence of education is to equip the citizens of a society with the knowledge, skills, values and attitudes to survive in their environment. It is the most powerful weapon with which to empower individuals to live a functional and sustainable life. This is why the Millennium Development Goal 2 focuses on education. Without education no nation can dream of any development. Many nations are fighting poverty, but more than one million people continue to live in abject poverty. In Nigeria there are very many people that live in extreme poverty who cannot meet the United Nations minimum poverty level of 1.5 Dollars per day, showing their poverty level. The post 2015 development agenda of the United Nations focus mainly on poverty alleviation. Eradicating poverty is not feasible unless the citizens are empowered through capacity building.

Capacity building deals with equipping individuals with the knowledge, skills, values and attitudes required to access information and function effectively in their society. According to Hammati & Whitfield (2004), capacity building is the ability of individuals, organizations or systems to perform appropriate functions effectively, efficiently and in a sustainable way. Mannion (2006) refers to capacity building as the process of strengthening the knowledge, skills, and attitudes of people so that they can establish and sustain their own development. For Wing (2004), capacity building takes a large area including purchasing of equipment, consulting assistance in everything from fund raising to strategic planning, coaching, mentoring, training, providing resources and

financial support and more. This implies that capacity building creates opportunities for people to be trained to enable them function effectively and develop their society.

Development is a collective responsibility of both men and women. It is a process of unfolding the potentials in an individual and increasing in him/her the capabilities to solve his/her problems. A developed society provides basic amenities and facilities for the citizens to live a sustainable life, thereby contributing to the economic, political and social well-being of the society. Development, according to Adewole (2011) “is no longer just concerned with measuring national incomes, it is also concerned with management of resources, humanitarian progress and functioning and capability of the individual” p.13.

Sustainable development is a process of providing and managing resources to promote the well-being of the citizens of the community. It depicts socio-cultural well-being, good governance, economic growth and environmental protection which will all contribute positively to reducing the risk of a disaster and promote a harmonious environment. According to Adewoye (2011),

“Sustainable development is a useful approach in confronting the multifarious problems of development. It can help to generate economic growth, by promoting trade and investment. It is a useful device in confronting the phenomenon of globalization. The approach of sustainable development is also people-oriented, forcing political leaders to

take into account in their planning the requirements of meaningful and purposeful living for the citizenry in a decent environment which must be preserved even for generations to come.P.27.”

Sustainable development focuses on tackling environmental problems through integrative approach to development. The development is so inclusive as to accommodate every member of the society, irrespective of gender, ethnic group, religious and political affiliations. Popoola, Olanrewaju and Olawale (2011), explained sustainable development as ‘development that meets the needs of the present generation without compromising the ability of future generation to meet their own needs’ p.38. It has three main purposes, namely: to meet basic human needs, to reduce poverty, and hunger and to maintain the life support system of the mother earth and our planet. Therefore sustainable development requires a platform for action so as to facilitate the adoption of appropriate strategies and policies relating to the environment, environmental resource management and human resource development for capacity building.

The Earth Institute Report (2008) sees sustainable development as increasing the material well-being of the poor while narrowing the proportionate gap with the rich, and sustaining the scope for improved material well-being of the rich; and seeing that the functioning of the earth’s ecosystems is sustainable. Sustainable development is attained by embarking on development that reflects economic, social, political, physical, environmental and cultural conditions

experienced by human beings and in which they function.

Sustainable development is expected to be inclusive and integrative, involving all, man and woman, irrespective of location, religion, ethnicity and social status. In Nigeria, it has been observed that people who live in the rural location are marginalized. Most of the municipal services such as potable water, electricity, good roads, health care facilities and other social amenities are lacking in the rural communities. This is attributed to lack of good governance. Anele (2012), lamented the abysmal condition in the rural areas in Imo State by writing:

“This point can be generalised: till date virtually all federal government initiatives targeted at improving the lives of rural dwellers have failed due to poor planning, corruption and avarice by government officials and their collaborators. Therefore, it is not surprising that the countryside nationwide has remained rustic and undeveloped all these years inspite of rural development programmes launched with fanfare by different administrations in the country. p.1”

Generally, the level of government presence in rural areas is abysmally low, creating the erroneous impression that rural dwellers are second class citizens who do not deserve modern amenities that make life more comfortable.No nation can develop effectively when a portion of its populace is neglected. This is why some African countries may not be able to attain the Millennium Development Goal (MGD), which focuses on reduction of hunger and

poverty by 50% by 2015. The challenge is lack of capacity to implement the workable policies on sustainable development at the country level.

Building capacity of women is key to sustainable development of a nation. Women play significant role in the society. Education of women is a means of building their capacity. It is a kind of investment in human resource which will yield enormous benefit for the individual, the family, and the society at large. It is an effective protection against poverty, disease, ignorance, backwardness, illiteracy and domination (Suara, 1996). There is an adage which says that when a man is trained, an individual is trained; but when a woman is trained, a nation is trained. This shows the importance of women in national development. Any nation that neglects a portion of its populace in its development agenda may not attain its goal. But in Nigeria, majority of the population live in the rural areas, mostly women. Most of these women are illiterate and live below the poverty level of 1.5 Dollars a day. Their major challenges are scarcity of income and unemployment.

They engage in subsistence agriculture, petit trading and some engage in unskilled jobs. Through these activities they produce little marketable surplus. The increased burden of agricultural work could have some adverse consequences for their health and ability to provide adequate care for their families (Anyakoha and Mbanefoh, 2002). Therefore they need sufficient skills and assets to become successful commercial farmers. Building their capacity is a means of raising their output, productivity, income and thus alleviating their poverty. Imonikebe (2010)

in her research identified the constraints of rural women farmers' involvement in food production as poverty, illiteracy, lack of storage facilities, poor health status and poor yield. Some of the solutions identified were to provide adult education for the rural women farmers; teach them effective methods of food processing, preservation and storage, and the use of modern farm tools. It was recommended among others that the government should encourage more rural women to engage in food production.

That life in the rural areas is hard, rustic and sometimes inhuman cannot be overemphasised. Many rural dwellers are traumatised by poverty, starvation and diseases. The major problem is that political office holders are alienated from the grassroots, from the people they are supposed to serve. As a result, they do not really understand the enormity of the sufferings experienced by rural dwellers on a daily basis. The post 2015 development agenda of the United Nations focuses mainly on poverty alleviation. Poverty alleviation in Nigeria will be feasible if the rural women are empowered.

The purpose of this research is therefore to explore the required skills and innovative approaches to build the capacity of rural women to effectively equip them to survive in their environment. Specifically this study sought answers to the following questions:

1. What type of economic activities do rural women engage in?
2. What are the skills required by rural women for sustainable livelihood?
3. What challenges do rural women encounter?

4. What are the innovative approaches for capacity building of rural women?

Research Method

The study adopted a descriptive survey research design. Survey research is the plan, structure and strategy that the investigator wants to adopt in order to obtain solution to research problems using questionnaire in collecting, analysing and interpreting the data, (Olaitan, Ali, Eyo and Sowande, 2000). It acts as a suitable method of eliciting information from the respondents. The study was carried out in the South-East Geo-political Zone of Nigeria. This zone is made up of five states: Abia, Anambra, Ebonyi, Enugu and Imo. This zone is inhabited mainly by Igbos, very enterprising people, who are also interested in agriculture, education and commerce. There are also civil servants and many entrepreneurs in the zone. The people share common characteristics such as language, culture, religion, values and attitude to life. Only the state capitals and some few towns are urban areas; most of the zone is rural.

A simple random sampling was adopted in sampling 900 rural women, 180 from each state. The sample is made up of rural women aged 25 years and above, whose family heads are mainly men (68%) with the average family size of 5-10 children (62%). They are mainly Christians (97%) and the majority has First School Leaving Certificate (primary school level) (67%). The others have secondary education (21%), tertiary education (2%) and no education at all (10%). Their common

means of communication or dissemination of information is through the town crier (62%), who beats a gong to attract their attention to whatever information he/she has for the community. Other means of communication are church announcements (17%), mobile phones (19%) and Newspaper/radio/television (2%). In these rural communities there are schools (nursery to Tertiary) mainly owned by the church, (42%); the government, community and individuals (37%, 13% and 8%), respectively. The device for saving their money is through the thrift saving (Isusu), whereby little surplus money is collected and given to any one that needs it for a purpose or shared to members on rotatory basis. A period is set when the borrower returns the money either with interest and each person gets a refund of her contribution. The interest is shared pro-rata. The women indicated that the thrift system is organized mostly by women groups (65%), Community (23%) and the church (12%).

The instrument is a questionnaire made up of six sections. Section 1 - 6 contains items on the bio-data of the respondents, their skills/economic activities in trading and agriculture; challenges and innovative approaches for sustainable livelihood respectively. The instrument was face validated by three professional educators in Home Economics, Agriculture and Language Education and their corrections which include deletion, addition of some items and restructuring were implemented in the final copy of the instrument. The instrument was directly administered to the women and collected on the spot to avoid instrument

mortality. Focus Group Discussion (FGD) was also used to elicit information from the women. Ten women leaders from each state, making them fifty (50) were involved in the discussion. The essence was to collect detailed information not covered in the questionnaire. They were guided to discuss their economic and agricultural activities, health issues, sources of water supply and challenges they experienced in

their communities. The data collected were analysed through frequency counts and percentages, and qualitatively. Any item with 40% response is regarded as positive and below that is negative.

Results

Research Question One: What type of economic activities do rural women engage in?

Table 1

Frequencies and Percentages of Rural Women's Response on their Economic Activities

S/N	Activities	Yes	%	No	%
	Crop /Vegetable Farming	619	68.8	281	31.2
	Medicinal Plants' Cultivation	34	3.8	866	96.2
	Food Processing	413	45.9	487	54.1
	Livestock	132	14.7	768	85.3
	Fish Farming	5	0.6	895	99.4
	Selling Farm Produce	838	93.1	62	6.9
	Retailing Goods	773	85.9	127	14.1
	Thrift System	695	77.2	205	22.8

Research Question Two: What are the skills required by rural women for sustainable livelihood?

Table 2

Frequencies and Percentages of Rural Women's Response on their Required Skills for Livelihood

S/N	Required Skills	Frequencies	Percentages
1	Literacy	804	89.3
2	Food Processing	636	70.7
3	Marketing	685	76.1
4	Communication	758	84.2
5	Health Promotion	668	74.2
6	Information Communication Technology (ICT)	777	86.3

Research Question Three: What challenges do rural women encounter in their environment?

Table 3

Frequencies and Challenges Encountered by Rural Women in their Environment

S/N	Challenges	Frequencies	Percentages
1	Communication	550	62
2	Transportation of goods	487	54.1
3	Marketing of farm produce	424	47.1
4	Access roads	529	58.8
5	Access to credit facilities	652	72.4
6	Poor revenue from sales	538	59.8
7	Access to agricultural inputs (agro-chemicals, improved crop varieties, seedlings)	529	58.8
8	Storage facilities	487	54.1
9	Potable water supply	528	58.7
10	Health status	793	88.1
11	Environmental degradation	456	50.7
12	Disease control	680	75.6

Research Question Four: What are the innovative approaches for capacity building of rural women?

Table 4

Frequencies and Percentages of Rural Women's Response to Innovative Approaches for their Capacity Building

S/N	Innovative Approaches	Frequencies	Percentages
1	Training in literacy skills	804	89.3
2	Food processing	636	70.7
3	Skills in ICT	777	86.3
4	Access to credit facilities	685	76.1
5	Collaboration and cooperation with agencies and governments.	758	84.2
6	Health promotion	668	74.2

Discussion

The analysis of the data collected shows the activities of the rural women as indicated in Table 1, which include crop and vegetable farming, selling farm products, food processing, retailing goods and thrift

saving. It is evident that the majority of the women engage in selling farm produce (93.1%), retailing goods (85.9%), and thrift saving (77.2%). Others farm crops and vegetables (68.8%) and process foods (45.9%). Almost all the rural women

are engaged in selling farm produce and petit trading which is due to their level of education and the environmental conditions. Their merchandise is farm produce which are most of the time perishables. They do not have the facilities for preservation as there is little or no electricity to preserve them, as reported by Anele (2012), who lamented the abysmal conditions of the rural areas. This is also evidenced in the percentage of women engaged in food processing, which is very minimal. The women buy and retail what they bought as confirmed from the FGD. They revealed also that they engaged in retail trade and thrift savings which they believed were convenient for them and as a means of saving the little money they make for the rainy days.

The women confessed in the FGD that they could not embark on medicinal crop farming, fish and livestock farming because they are capital intensive and they could not benefit from micro credit facilities. They were not empowered to access such funds that would assist them in building their businesses and improving on their livelihood as written by Adewoye (2011).

Table 2 contains the required skills as indicated by the rural women. The skills are literacy, food processing, marketing, communication, health promotion and ICT. The bio-data of the respondents shows that the majority of the women hold only the Primary School Leaving Certificate, which means that they are not very literate. This may explain why most of the (89.3%) would want to be trained in literacy skills. Actually, in this 21st century, and with the MDGs illiteracy is being fought by governments globally through capacity

building programmes. These women may have lost the opportunity to go further in their education pursuit, when they were younger. There are still other opportunities such as adult education, entrepreneurial centres, skill acquisition centres where they can enrol to upgrade their literacy.

The other required skills demand literacy in order to benefit maximally from the programmes. The women are interested in ICT (86.3%), communication (84.2%) marketing (76.7%), health promotion (74.2%), food processing (70.7%). These skills are crucial for sustainable livelihood and should be included in any programme on capacity building of rural women. In the FGD, the women revealed that their farm produce are most of the time wasted as they lacked food processing techniques that would have helped them to preserve their harvests. Most rural women possess mobile phones and can operate them to an extent. Some cannot send SMS messages and they require such skills to be able to communicate with their clients and business associates. Effective communication is an asset in marketing.

It is believed that literacy influences health status and promotion of individuals. These women enumerated in the FGD some of their health challenges, which could have been minimized if they were not ignorant of certain health principles and life styles. Such illnesses include arthritis, typhoid fever, high blood pressure, diabetes, diarrhoea and so on. To worsen the situation, they patronize chemist shops instead of going to the hospitals. Their activities such as waste disposal/management, source of potable water, degraded environment

and poor food habits are responsible for their health conditions as depicted by Imonikebe (2010), who identified poverty, poor health conditions, illiteracy and so on as constraints of rural women in food production (agriculture). If they are exposed to the right skills and attitudes, they will be empowered to live a sustainable life.

The respondents identified twelve (12) areas they experience challenges for sustainable livelihood. These are listed in Table 3. They include: communication, transportation, marketing of farm produce, access roads, access to credit facilities, poor revenue from farm produce, access to agricultural inputs, storage facilities, potable water, health facilities, environmental degradation and disease control. These are serious challenges experienced by the rural women, which should be handled by governments at different levels. In the rural areas as presented by the women in the FGD, they still collect their drinking water from the streams, most of which are polluted. The few bore holes sunk in the villages are commercialised and these women are so poor that they would prefer to collect water from the stream instead of spending their meagre resources on potable water.

It is not that the governments do not make provisions for some of these facilities; some of their representatives would always convert the free amenities to their commercial gains. That was why Anene (2012), lamented the corruption and The innovative approaches include training in literacy skills, food processing, ICT, access to credit facilities, collaboration and cooperation with agencies and governments, and health promotion avarice of government officials and their

collaborators as limitations to sustainable rural development. Most of the programme initiatives for capacity building of rural populace are stifled by some unpatriotic Nigerians in charge of such programmes. There must be adequate supervision and monitoring of such initiatives to ensure that they are equitably and efficaciously delivered to the targeted rural population.

There are six (6) key areas identified by the rural women as their training needs which should be focused in the programmes for sustainable development. These areas enhance sustainable livelihood and so the women need to be empowered. They are interested in acquisition of some skills that would uplift their life in their communities. That is why literacy skill ranked highest among the women. They want to be literate so as to transfer their knowledge, skills and attitudes to solving their other problems of food processing, accessing credit facilities, collaborating and cooperating with agencies and governments and improving their health. These are some of the areas of emphasis by the United Nations Sustainable Development Solutions Network (SDSN) being coordinated by Professor Jeffrey Sachs of the Earth Institute, University of Columbia. The empowerment will improve their standard of living by increasing their income, enhancing awareness, self-confidence, and increased social interaction as opined by the Earth Institute Report (2008). The bottom line is that the world (Nigeria inclusive) urgently needs to address the simultaneous challenges of ending poverty, increasing social inclusion, and sustaining the planet, with a basis of good governance, including peace and security. When women are well trained, they are better

equipped to contribute their quota in national development.

Conclusion

We have presented the challenges encountered by rural women in Nigeria and the required skills and approaches to offset these setbacks to sustainable development. Rural women in Nigeria live in abysmal conditions and most of the programmes mapped out by the governments to build the capacity of the women and empower them to live a sustainable life most of the time do not reach the targeted population. Rural women are interested to improve themselves through training in literacy, food processing, accessing credit facilities, collaborating and cooperating with agencies and governments, health promotion and ICT skills. It requires good governance responsible government to create opportunities for capacity building of the rural women. This will fast-track development of the rural areas in Nigeria and promote sustainable development.

Recommendations

Based on the findings of this research, the following recommendations are made:

1. The Governors of the South-East geopolitical zone of Nigeria should focus their development programmes on the rural areas. The inhabitants are their subjects, especially women, and they should therefore benefit from the development programmes.
2. Women development and entrepreneurial centres should be built in the rural areas and the rural women encouraged to enrol in the programmes of their choice and interest. That will boost their capacity which will lift them from poverty and

enhance their livelihood. Then they will be able to contribute to development in their communities.

3. The training programmes should focus on their needs to equip the rural women very effectively for sustainable development.
4. The training programme will be disseminated to the relevant Ministries for inclusion in their poverty alleviation programmes to empower the women to live functional life within planetary boundaries.
5. The post 2015 development agenda of the United Nations focuses mainly on poverty alleviation. Poverty alleviation in Nigeria will be feasible if the rural women are empowered.

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EFFECTIVE COMMUNICATION PRACTICE AND EMPLOYEES' PERFORMANCE IN A DEVELOPING ECONOMY: A STUDY OF ABUJA DISTRIBUTION COMPANY (AEDC) IN NASARAWA STATE

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Abstract

Effective communication practice is essential in every working environment to ensure that organizations move in the same directions with the employees to gain their optimum performance thereby, actualizing the ultimate goal of the organization. Over the years, Electricity Distribution Companies in Nigeria have performed below expectation ranging from poor power supply, power failure, poor maintenance of electric facilities, poor response to customer complain and unjustifiable billing. This study investigated the effect of effective communication practice on the employees' performance in a developing economy to see how maximum performance can be actualized through effective communication. The study used descriptive survey design to study effective communication practice on employees' performance in Abuja Electricity Distribution Company (AEDC) branches in Nasarawa State. The population of AEDC staffs in the state as at 2018 was 298 but Yamane formula was used to determine the minimum sample size. Structured questionnaire was administered to a sample of 190 AEDC employees for data collection and only 185 questionnaires were rightfully filled, returned and used for the analysis. The data was analysed using both descriptive and inferential statistics. The inferential statistics used was ordinary Least Square (OLS) multiple regression technique. The study revealed that performance of employees in electricity Distribution Company, in a developing economy is not much concerned on the organizations' channel of communication rather the employees' involvements in decision making and open communication practices. The study thus, recommends that organizations in developing economy should continue to adopt open communication and also involve the employees at all level on the decisions making for them to be equipped with direction/decisions of the organization.

Keywords: *Effective Communication, Employees' Performance, Electricity Distribution Company*

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Introduction

Organizations irrespective of its formation depends communication to reach their audience and advertise their mission and vision to the target audience of the enterprise. Performance of employees at the work place are often build-ups with effective communication. When openness and accuracy of info about procedures and policies of organization are at its optimum within an establishment, the business environment will be accommodating to the workforce. Neves and Eisenberger, (2012) poised that information can be adequate, factual when it has a good feedback. The result of communication in comperism with the expected result determines its effectiveness. Communication is very easy to do by anybody but its effectiveness determines the expected result.

The social structures and networks tool, that formulates various kinds of teams to ensure that workforces are satisfied with their jobs and give out their commitment is organizational communication. It familiarizes the employees with expected job, through relevant, timely and accurate information dissemination (Abugre 2011).

Performance within an organisation could be improved significantly by way of sharing information through involving the staffs in policy making (Puth 2002). However, involving employees in police making will highly reduce the default in policy implementation and obedience. Employees at times sense not trustworthy, respected or valued in their field of work if the managers develop a gap in communication to them. Employees remains

the most valuable resources of an enterprise, therefore, managers are to encourage flow of information among them to optimize organization's performance as well as productivity in the establishment.

In a developing economy like Nigeria, some constraining factors like noise, lack of trust among employees, fears, concrete distractions, bad environment, worry, discrimination in terms of religion, culture, race, tribe, poor motivation, vague areas of responsibility, corruption, and general behaviour towards humans etc. have been used to criticise effectiveness of business communication. However, managers should not be detracted from the implementation of effective business communication that will carry all stake holders along especially the employees who are the most valuable assets of the organization because of these constraints.

Statement of Problem

Ineffective communication strategies have led to many organizational conflict. Employees' performance may be limited by constant delay in accessing information in the organization and could generate mismanagement in coordinating business activities. Therefore, effectiveness of communication techniques in the organization can be evaluated through the performance of employees in relation to their responsibility.

It has been observed that cumbersome reporting lines, adopted by many organizations has made activities tough for the organizational workforce to abide. Such conflicting line of authorities, and cumbersome obligations make some subordinates to be answerable to more

than one boss in an organization. Working environments differs from any other environment because it is a combination of workforce from different culture, economic background, religion, ethnic group, languages and social environments. Managers are expected to inculcate them into one organizational culture through effective communication to actualize the ultimate goal of the organization.

Over the years, poor power supply has been the major problem facing Nigeria and Nigeria economy. In an effort to ensure constant power supply in Nigeria, Nigeria government privatized the distribution unit of the sector yet the distribution capacity is still a mirage and customers are often complaining of poor service. Abuja Electricity Distribution Company (AEDC) have performed below expectation in terms low productivity, ranging from power failure, poor maintenance of electric facilities, poor response to customer complain and unjustifiable billing. In consideration of the aforementioned problems, the study examined the effect of effective communication practices on the employees' performance to see how maximum performance can be actualized through effective communication practices in the sector.

In order to gain the effect of effective communication practices on employees' performance in a developing economy, the study, raised research questions as followings:

- i. What is the effect of communication channels on employees' performance in AEDC?
- ii. What is the effect of employees' involvement in decision making on

employees' performance in AEDC?

- iii. What is the effect of open communication on employees' performance in AEDC?

The study formulated the following null hypotheses to investigate the effect of communication practices on electricity industry employees' performance in a developing economy.

- i. H01: Communication channels has no significant effect on performance of employees in AEDC.
- ii. H02: Employees' involvement in decision making has no significant effect on performance of employees in AEDC.
- iii. H03: Open communication has no significant effect on performance of employees in AEDC.

Methodology

Research Design

Descriptive survey design was used to carry out this study. According to Kotler and Gary (2008), descriptive survey is the use of questionnaire to obtain information about people's attitudes, knowledge, preferences, satisfaction, behaviour. The descriptive survey is the most appropriate for this study to unveil the effect of effective communication practices on employees' performance in electricity distribution company.

Study Population

The entire permanent employees of Abuja Electricity Distribution Company (AEDC) is the study's population. According to Nasarawa State Internal Revenue Board (NSIRB) the population of AEDC permanent staffs in the five Area offices in Nasarawa State as at 2018 was 298 staffs. The population is displayed in the table one below.

Table 1
Population of AEDC Staffs in Nasarawa State

S/N	Area Office	Population	Percentage
1.	Akwanga	53	17.8 %
2.	Keffi	69	23.2%
3.	Lafia	74	24.8%
4	Mararaba	58	19.4%
5	Nasarawa	44	14.8%
	Total	298	100%

Source: Field Survey, 2019

Sample Size Determination and Sampling Technique

Sample size of this study was determined using Yamane (1967) formula below.

$$n = \frac{298}{1+298(0.05)^2} n = \frac{298}{1+298(0.0025)} n = \frac{298}{1+0.745} n = \frac{298}{1.745} n = 171$$

The study's minimum sample size was 171 permanent employees of Abuja Electricity Distribution Company (AEDC) in Nasarawa State but the researcher increased it to 190 staff to reduce the uncertainty that normally associate with questionnaire administration such as default in returning and filling.

The adopted sampling technique for selecting the respondents of the study is stratified sampling technique. It was used to come up with the required sample since the population was heterogeneous. The goal of stratified sampling is to gain desired representation from the various subgroup in the population (Mugenda & Mugenda, 2003). Samples were selected in a way that the existing subgroups are not more or less represented.

$$n = \frac{N}{1+Ne^2}$$

Where;

n = The sample size

N = The population size

1 = Constant

e = The margin error

The study used a 95% confidence level, thus a margin error is = 0.05.

Substituting the above population values to determine the sample size.

Furthermore, Burnley's proportional allocation formula was used to allocate the sample to the various Area Offices in the state based, on proportion of their population. (See Table 2)

Burnley's proportional allocation formula.

$$n = (n(n))/N$$

Where:

n = Sample frame element. i.e. number allocated to each area office

n = The universe (Sample or proportion) used for the study (total sample size)

N = The study population.

$$n = (n(n))/N$$

Table 2

Sample of the Population of AEDC Staffs in Nasarawa State

S/N	Area Office	population	Sample Allocation using Burnley's formula
1.	Akwanga	53	$(53 \times 190)/298 = 10070/298 = 34$
2.	Keffi	69	$(69 \times 190)/298 = 13110/298 = 44$
3.	Lafia	74	$(74 \times 190)/298 = 14060/298 = 47$
4	Mararaba	58	$(58 \times 190)/298 = 11020/298 = 37$
5	Nasarawa	44	$(44 \times 190)/298 = 8360/298 = 28$
Total		190	190

*Source: Field Survey, 2019***Sources of Data/Data Collection Method.**

Questionnaire is the primary data used for the study. The questionnaire was structured in five points Likert-scale ranging from strongly agree (5) to strongly disagree (1) to gain an in-depth information representing the independent and dependent variables (effective communication and employee performance). The questionnaire was administered to the employees of Abuja distribution company (AEDC) in Nasarawa State – Nigeria.

The data was collected from the respondents by the researcher himself and an employed research assistant through random sampling technique.

Validity and Reliability of Research Instrument

In order to determine the instruments' validity, a lecturer in the measurement and evaluation department in Nigeria University validated the instrument. The expert rated the

Table 3
Reliability Index

Variables	Cronbach's Alpha	No. of Items
Communication Channels	0.836	4
Employees Involvement on Decision Making	0.788	4
Open Communications	0.815	4
Employees Performance	0.822	4

Source: Computed result using SPSS, by author 2019

instrument 86% valid (a validation index of 0.86) thus, implies that the instrument can excellently conduct the study.

The validated instrument was used to conduct pilot study to standardize the measuring instrument and determine the reliability of the instrument used for the study. The pilot study was carried out before the main study in order to checkmate the leading words and possible confusion that may jeopardize intent of the study. A total of twenty questionnaires were administered to twenty employees of Yola Distribution Company in Wukari Area office. Employees of Yola Distribution Company were not part of the sampled employees for the main study but share similar characteristics in all aspects.

The collected data from the pilot study were statistically analysed to determine reliability coefficient. Cronbach alpha reliability method was used to determine their reliability coefficient of the instrument.

The following result were obtained:

Result of the reliability on the table three above showed that the research instrument of the study is reliable to conduct the study as all the instruments measured showed Alpha value above 0.70 as recommended Cronbach, (1951). It implies that the questionnaire properly represented the dependent variable (Employees Performance) and the independent variable (effective communication).

Analytical Technique

Data obtained from the questionnaires administered to the respondents was analysed using both descriptive and inferential statistics. The descriptive statistics is the mean, media and standard deviation while inferential statistics used was ordinary Least Square (OLS) multiple regression technique through the help of SPSS (Statistical Package for Social Sciences) v23. The choice of regression technique is because it has ability to explain the effect and relationship between two variables of interest.

Ordinary Least Square (OLS) or classical linear regression model was adopted in this study. Simple computational procedure compared to other techniques was the key reason for the adoption of the ordinary least square (OLS) estimation method. It is a linear unbiased estimator that has smaller variance than any other. Gujarati, (2004) posited that they are linear and normally distributed, they are efficient, consistent and unbiased symmetrically thus, known as “Best Linear Unbiased Estimator (BLUE)”.

Model Specification

From the theories and empirical findings of the theoretical exposition, making employee performance central to the

equation, a model was developed to evaluate the effective communication practices effects on employees’ performance in Abuja Electricity Distribution Company (AEDC) in Nasarawa State.

The study regression model is as follows:

$$EP = \beta_0 + \beta_1 CC + \beta_2 EIDM + \beta_3 OC + \varepsilon$$

Where;

EP = Employees’ Performance

CC = Communication Channels

EIDM = Employees’ Involvement in Decision Making

OC = Open Communication

β_0 = The autonomous parameter estimate (intercept)

β_1 = the independent variables’ slope of the coefficients

ε = Error term

Results and Analysis

The formulated null hypotheses for the study were tested in this section, thus, satisfying the objective of the study. The study adopted 5% level of significance and conclusion was made based on the probability values (PV). If the P-value is less than 5% (0.05) that is (i.e. $PV < 0.05$), it implies that the variable in question is statistically significant at 5% level of significance; otherwise, it is not significant at that level.

Data Analysis and Results of the Study

Data was analysed in line with the earlier stated analytical technique of the

study. Out of 190 questionnaire administered to the respondents, only 185 were rightfully

filled, returned and used for analysis.

Table 4

Descriptive Statistics

	Mean	Std. Deviation	N
Employee Performance	3.5892	1.34079	185
Communication Channel	3.2541	1.31269	185
Employee Involvement in Decision Making	3.6486	1.14721	185
Open Communication	3.5081	1.31512	185

Source: SPSS V 23

The mean result for the variables presented in table four above shows that employees' performance has a mean value of ($M = 3.5892$; $SD = 1.34079$). This indicates that employees' performance as an indicator of the dependent variable has a moderate response rate, which implies that the participants had a good opinion expressed on employees' performance in electricity Distribution Company, in a developing economy.

Communication channels as an indicator of the independent variable has a mean value of ($M = 3.2541$; $SD = 1.31269$). This indicates that communication channels have a moderate response rate, which implies that the participants had a good opinion expressed on communication channels' effect on performance of employees in electricity Distribution Company, in a developing economy.

The second indicator of independent variable (employee involvement in decision) has a mean value of ($M = 3.6486$; $SD = 1.14721$). This indicates that employee involvement in decision has a high response rate, which implies that the participants had a strong opinion expressed on employees' involvement in decisionmaking and performance of employees in electricity Distribution Company, in a developing economy.

Open communication has a mean value of ($M = 3.5081$; $SD = 1.31512$). This indicates that open communication as an indicator of the independent variable has a good response rate, which implies that the participants had a moderate opinion expressed on open communication outcome on performance of employees in electricity Distribution Company, in a developing economy.

Table 5

Correlations Result of Dependent and Independent Variables

	Employee Performance	Communication Channel	Employee Involvement in Decision Making	Open Communication
Employee Performance	1.000			
Communication Channels	-0.070	1.000		
Employee Involvement in Decision Making	0.291	-0.063	1.000	
Open Communication	0.578	-0.041	0.151	1.000

Source: SPSS V 23

The table five above shows the correlation analysis between the variables (independent and dependent variables). It shows that there is 0.070 (7%) negative significant relationship between communication channel and employees' performance in electricity Distribution Company in a developing economy. This indicates that communication channels negatively explains 7% of employees' performance in electricity Distribution Company in a developing economy.

It was also discovered that there is 0.291 (29.1%) positive significant relationship between employee involvement in decision

making and employees' performance in electricity Distribution Company in a developing economy. This indicates that employee involvement in decision making highly explains 29.1% of employees' performance in electricity Distribution Company in a developing economy.

The study further revealed that there is 0.578 (57.8%) positive significant relationship between open communication and employees' performance in electricity Distribution Company in a developing economy. This indicates that open communication averagely explains 57.8% of employees' performance in electricity Distribution Company in a developing economy.

Table 6

Model Summary of Effective Communication and Performance of Employees in Developing Economy

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.615a	0.378	0.368	1.06627	1.593

a. Predictors: (Constant), Open Communication, Communication Channel, Employee Involvement in Decision Making

b. Dependent Variable: Employee Performance

Source; SPSSv.23

The multiple regression result on the overall model was evaluated in terms of its ability to predict employee performance. Table six showed that $R = 0.615$, $R^2 = 0.378$, adjusted $R^2 = 0.368$, $SD = 1.06627$. The multiple correlation coefficient between the predictors and the criterion variable was 0.615; the predictors accounted for 0.378

of the variance in employee performance in electricity Distribution Company in a developing economy. The variance is explained by the model (Communication Channel, Employee Involvement in Decision Making and Open Communication). This means that the model explains 37.8% of the variance in employee performance in electricity Distribution Company in a developing economy. This value indicates that the model is a good prediction of the dependent variable. Adjusted R square shows a better estimate of the true population to be 0.368.

Table 7

ANOVA on Effective Communication and Employees' Performance in Developing Economy

Model	Sum of Squares	Df	Mean Square	F	P-value.
Regression	124.994	3	41.665	36.647	0.000b
Residual	205.785	181	1.137		
Total	330.778	184			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), Open Communication, Communication Channel, Employee Involvement in Decision Making

Source; SPSS V.23

In the Table seven above, the significant F-test shows that the relationship (36.647), P-value of 0.000 was found to be less than 0.05 ($P < 0.05$) indicates the overall prediction of independent variable to the dependent variable is statistically significant.

This implies that the model has a good fit and there is a significant relationship between the independent variable (effective communication) and the dependent variable (employees' performance).

Table 8

Regression Result on Effective Communication and Performance of Employees in a Developing Economy

Model	Coefficients	T	P-Value.	Collinearity Statistics	
	B			Tolerance	VIF
(Constant)	0.432	1.209	0.228		
Communication Channel	-.036	-.595	0.553	0.995	1.005
Employee Involvement in Decision Making	0.241	3.467	0.001	0.974	1.027
Open Communication	0.556	9.196	0.000	0.976	1.024

Dependent Variable: Employee Performance
Source; SPSS V.23

The relative contribution of each independent variable in explaining the dependent variable as illustrated in table eight above.

The regression line:

$$EP = 0.432 + 0.036CC + 0.241EIDM + 0.556OC$$

Communication channel coefficient value of 0.036 indicates that a 1% increase in communication channel will, on the average improve employee performance by 3.6%.

Coefficient of employee involvement in decision making ($\beta=0.241$) shows that a 1% increase in employee involvement in decision making will, on the average lead to the improvement of employee performance by 24.1%.

The coefficient of open communication ($\beta=0.556$) indicates that any 1% increase in open communication will, on the average increase employee performance by 55.6%.

Robustness Analysis

The data of the study were checked for normality, linearity, multi-collinearity and homoscedasticity to satisfy the basic and underlying assumptions of ordinary least square (OLS) in line with the suggestion of Hair et al., (2010) and Pallant, (2001). The result indicated that none of the assumptions were violated. The Durbin Watson result indicates the auto correlation assumption was not violated since it is not greater than 2 (see Table 6) as suggested by Pallant, (2001).

The normality was assessed using the histogram plot and the residuals were found to be close to the curve as suggested by Pallant, (2001) and Tabanachnich and Fidell (2007). The linearity assumption was confirmed using the scatter plot as the scatter were not so far from the centre (0) as suggested by Tabanachnich and Fidell (2007). The correlation matrix not above .70 and the VIF not exceeding 10 and tolerance value not lower than 0.10 as suggested by Hair et al., (2010) ensured that the assumption of multi-collinearity was not violated. Checking for homoscedasticity, the inspection of the

scatter plot of the regression residual showed that the assumption was not violated.

Statistical Test of Hypotheses

As earlier stated, in testing the null hypotheses, the study adopted 5% level of significance and conclusion was made

based on the probability values (PV). If the P-value is less than 5% or 0.05 (that is $PV < 0.05$), it implies that the variable in question is statistically significant at 5% level of significance and the null hypothesis would be rejected; otherwise, it is not significant at that level and null hypothesis should be accepted.

Table 9

Summary of Regression Result

Hypothesis	Variables	Beta	t-value	P-Value	Decisions
H01	Communication Channel	0-.036	-.595	0.553	Accepted
H02	Employee Involvement in Decision Making	0.241	3.467	0.001	Rejected
H03	Open Communication	0.556	9.196	0.000	Rejected

Source: SPSS V.23

As shown in the table nine above, the t-value for communication channels is -0.595 while the associated P-value is 0.553. Since the p-value is greater than 0.05 ($0.553 > 0.05$), there is sufficient evidence to conclude that communication channels has no significant effect on employees' performance in electricity Distribution Company in a developing economy. Hence, null hypothesis (H_{01}) is accepted.

The t-value for employee involvement in decision making is 0.241, while the associated P-value is 0.001. Since the p-value is less than 0.05 ($0.001 < 0.05$), there is sufficient evidence to conclude that employee involvement in decision making has a significant effect on employees' performance in electricity Distribution Company in a developing economy. Hence, null hypothesis (H_{02}) is rejected.

Finally, open communication revealed a t-value of 9.196 while the associated P-value is 0.000. Since the P-value is less than 0.05

($0.000 < 0.05$), there is sufficient evidence to conclude that open communication has a significant effect on employees' performance in electricity Distribution Company, in a developing economy. therefore, we reject the null hypothesis (H_{03}).

Discussion of Findings

Findings of the study showed that communication channels have no significant effect on employees' performance in electricity Distribution Company, in a developing economy. This finding is in contrary with the study of Nebo, (2015) who found that communication channel influences performance of employees and, serves as a tool of effective and efficient management of organization.

More so, employee involvement in decision making has a significant effect on employees' performance in electricity Distribution Company, in a developing economy. This finding is in line with the findings of Udegbe, Ogundipe, Akintola

and Kareem (2012) which revealed that business communication in terms of employee involvements in organizations' decision making, positively affects the overall performance of organization.

Finally, it was discovered that open communication has a significant effect on employees' performance in electricity Distribution Company in a developing economy. This is in agreement with the study of Kibe (2014) who studied communication strategies and organizational performance in Kenya and discovered that strategic communication play a central role in high performance while open communication is the most suitable at theoretical and practical level of the organization.

Conclusion and Recommendations

The results of this study demonstrated that the performance of employees in electricity Distribution Company in a developing economy, don't depend on the channel of communications organizations used rather the involvements of employees in decision making and practices of open communication influences employees' performance. Thus, implies that adopting open communication and involving employees in the organizational decisions increases their sense of belonging and productivity of electricity Distribution Company in a developing economy.

Based on the findings of the study, the following was recommended:

- i. Management of electricity Distribution Companies in a developing economy should ensure that information reaches the employees safely and timely, irrespective of the channels of communication.

- ii. Organizations in developing economy should continue to involve the employees at all level on the decision and direction of the organization to ensure unity of purpose and direction. Thereby, enabling employees at all level to move the same direction.
- iii. The study also recommended the adoption and sustenance of open communication in electricity Distribution Companies in a developing economy. The managements should unfold the activities of their organizations and their decision without discrimination to the employees hence they also form parts of the stakeholders of the organizations.

Limitation and Suggestion for Further Studies

This study was only conducted on electricity Distribution Company in a developing economy. The study only selected a sample from the population of employees of Abuja electricity Distribution Company in Nasarawa State as the respondents with the believe that the outcome can be generalized to mean the perception of the whole employees of electricity Distribution Companies in a developing economy.

Suggestions for Further Studies

The study thus, suggest for further studies as follows:

- i. Other researchers should evaluate the effect of effective communication on employee performance in other industries such as small and medium enterprises (SMEs), manufacturing sector, governmental organizations etc.
- ii. The study also suggested the use of other indicants or proxies to measure

effective communication and employee performance in the same sector or other sectors.

- iii. Researchers can also carry out this same study in different environment e. g Lagos, other states or regions in Nigeria or even outside Nigeria to see if the outcome will be same or otherwise.
- iv. Researchers can equally carry out the same study in the same area but with higher number of sample to cover the area this study could not cover.
- v. The researcher also suggests that a similar study should be carried out in a developed economy hence this study was carried out in a developing economy.

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NATION STATES IN BOUNDARY DISPUTE: THE NIGERIA CAMEROUN EXAMPLE

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Abstract

This study explores historical consolidation and ethno-cultural attachment as motives for most border conflicts in Africa. The work examine the process of partition and found out that the European powers selfishly divided African territories among themselves without the least consideration of ethnic, social and cultural affinities of the native peoples. In many instances, the same ethnic nationality found itself divided into two or more territories under different colonial authorities as a result of imperial demarcations. The biggest problems faced by Post-Colonial African States, therefore, have been how to solve the boundary issues and contestations that were aftermath of European colonialism. The Nigeria-Cameroon boundary dispute provides an opportunity to analyze not only the effects of the balkanization of African territories and nationalities between different European powers but diplomatic problems posed to African countries. The article investigates European race and competition for treaties with African chiefs during the Nineteenth century, the Anglo-German treaties and Anglo-Franco agreements and argues that the ill-defined colonial boundaries have often resulted in conflicts and wars between African states. A recent example is the Nigeria-Cameroon crises over the Bakassi Peninsula.

Key words: Nation states, boundary dispute, Diplomatic problems, Nationalities, etc.

Introduction

Nigerian and Cameroun are located on the West coast of the continent of Africa. Both countries share common political and economic institutions as part of British West Africa. Nigeria with the population of 199 million covers a land area of 923,766km¹ extending from the Gulf of Guinea in the South to Niger and Chad Republics in

the North. It shares common border with the Republic of Benin on the West and the Republic of Cameroun on the East. Officially, the republic of Cameroun is a country in central Africa. The population is established at 25.31 million, occupying an area of 475,442km. it shares border with the Chad republic on the North, central

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African Republic on the East, Equatorial Guinea, Gabon and the Republic of Congo on the South and Nigeria on the West.² Cameroun's coastline lies on the Bright of Biafra, part of the Gulf of Guinea and the Atlantic ocean. Although Cameroon is not an ECOWAS member state, it geographically and historically is in West Africa with the Southern Cameroons which now form her Northwest and Southwest Regions having a strong West Africa history. The country is sometimes indentified as West African and other times as central Africa due to its strategic position at the crossroads between West and Central Africa.³

Linguistically, the Nigeria-Cameroon boundary zone falls into two categories, the Bantu and the Semi Bantu.⁴ The zone is considered to be the borderland between the Bantu and the Semi-Bantu speaking peoples. The Bantu speaking peoples include the Abaw, the Bakundu, the Balundu and the Balung found around the Western area of the Cameroon mountains. The Semi-Bantu have been categorized to include Efik, the Ibibio, the Ekoi, the Boki and many heterogeneous elements living along the cross River. Others such as the Iyala, the Yatch and small intrusive groups from the Benue valley located around the North of the Cross River Bend also belong to the Semi-Bantu.⁵

Prior to colonialism, the Nigeria-Cameroon relationships at the onset flourished due to shared geographical boundary, commercial contacts and social relations among the people and their local chiefs. It was on record that the Chiefs of Calabar in Nigeria had diplomatic relations with their neighbours in Western Cameroon.⁶ By extension the Fulani ethnic

group in Adamawa area interrelated with their Kith and kin at Garoua in Northern Cameroon while pagan Hausa communities in Abong and Bayelsa in Taraba State of Nigeria established *communal* relation with their friends and relatives at Abonshe in Cameroon. This correlates with James Kellas definition of a nation as a group of people who feel themselves to be a community bound together by ties of history, culture and common ancestry.⁷

With the coming of the Europeans Africa was partitioned without any recourse to existing political and ethnic structures. This is why one finds people of the same language, culture, ethnicity and ancestral affinities separated into different countries. For example, ethnic groups such as the Egun, Yoruba, Ewe, Mende, Ibariba, Hausa, Fulani etcetera are found in different sides of international boundaries.⁸ Hence, the origin of the international boundary dispute in Africa in general, and that of Nigeria-Cameroon in particular, could be traced to the forceful alignment of ethnic nationalities of different cultures, tradition and languages. Ironically, the colonial officers who never knew most part of Africa resorted to drawing lines on maps, giving away lands, mountains, rivers and lakes to one another without the consent of the indigenous people. Lord Robert Salisbury, British Prime Minister at the time of the partitioning of Africa and well known for his successes in expanding British influence in Africa, described the partitioning process quite aptly in the following words:

"We (the colonial powers) have engaged in drawing lines upon maps where no white man's feet have ever trod, we have been giving

away mountains and rivers and lakes to each other, but we have only been hindered by the small impediment that we never knew exactly where those mountains and rivers and lakes were".⁹

As it were, the European powers involved were merely interested in protecting their own interests rather than the benefits of those they claimed they were civilizing. Not only were they potential imperialist, they also held moral, religious and political ideas, the partial application of which in the future was to undermine the indigenous Millieux they were constrained to respect during the early period of intrusion. Indeed, the fact of the partition was not really made manifest to African peoples and their states and governments until the European power began the process of conquering African territories that had been assigned to the respective European nations.

Origin of Nigeria and Cameroon Boundary Dispute

With a compromised historical heritage, it is not amazing that Cameroon and Nigeria were marred by a number of border disputes, but the territorial claim surrounding the Bakassi Peninsula stands out clearly as the most serious in the post-colonial era and this emanated in the last quarter of the 19th century when European race and competition for treaties with African chiefs strikingly intensified. In 1884, an agreement was signed between the kings and chiefs of Old Calabar and the British government. In this accord, the British agreed to protect all the territories controlled by the Obong (King) of Calabar. The Obong literally ceded his kingdom

to Britain as a protectorate.¹⁰ it should be emphasized that British encroachments on the Nigeria territory did not go unresisted by the local population. The Delta middlemen in particular demonstrated their resentment of the increasing power of the Royal Niger Company. This opposition was epitomized by the actions of Jaja, King of Opobo when he suspiciously asked for a definition of the word protectorate. Hewett who as consul had negotiated the treaty, defined it thus:

...the Queen does not want to take your country or your markets, but at the same time she is anxious that no other nation should take them she undertakes to extend her gracious power and protection, which will leave your country still under your government. She has no wish to disturb your rule.¹¹ This concession was probably made because the French and Germans were also attempting to gain a foothold on territories already under British protection.

In the same year, Nana, the son and successor of Olumu, King of Itsekiri signed treaties with Consul Hewett bringing the Benin river, Warri and certain parts of Western Ijo under British protection, and thus enabling paramountcy of British trade in the area¹².

The Foreign office also gave Consul Hewett grudging permission to make treaties in the oil Rivers. Sometimes, Consulate and company competed for the same treaties. More serious, was international competition. Apparently in the second half of 1884, Germany hoisted her flag in Douala and Bimbia which belonged to Cameroon a few days before Hewett arrived to declare a British protectorate¹³. Bitterly disappointed,

British consul, Hewett who was instructed to create a “floating consulate” with authority over the coast from Nigeria to Cameroon and to sign treaties with Chiefs that would prevent them from ceding territory to another power without the consent of her majesty’s government was already too late. Hewett had not dreamt that Germany had the vaguest colonial ambitions. Of course, “Too-late” Hewett cannot be blamed; perhaps the blame should be taken by British trading firms who refused to provide small financial support necessary for the administrative control he wished to set up in West Africa primarily for the benefit of their colonial interests. At all events by the time Hewett arrived in Douala on July 18, the German Consul General, Dr. Nachtigal had already reached by a German gunboat Mowe on July 14, and the German flag had been hoisted in the territory.¹⁴

Although Germany has had contacts with Cameroon people by 1800, one could say that Cameroon as a political entity came into existence by virtue of the treaty mentioned above and evidently became a German colony known as Kamerun in 1884. Thus the identification of Cameroon as a political unit in this area brought to the fore the question of demarcation of spheres of influence between Britain and Germany and the establishment of boundaries.¹⁵ The growing atmosphere of “scramble for Africa” brought the European powers to the conference table at Berlin to agree on their respective spheres of influence¹⁶. This development marked the beginning of rivalry and conflict between Britain and Germany over their colonial possessions and which was eventually inherited by the two West Africa countries after independence. The

British authorities made series of attempts to keep the Germans away from the West Coast of Africa, but to no avail, the Germans too had made it difficult for Britain to enjoy a free maritime passage from Lagos to Victoria (now known as Limbe). It was only after the Berlin West African Conference in 1884-85, where Britain accepted to pay compensation to the Germans, did Germany allow Britain to have uninterrupted passage from Lagos to the Niger Delta,¹⁷ particularly Calabar which at that times was an important commercial post and today the main seaport in Eastern Nigeria. While the rivalry was between Britain and Germany in the Southern part of Nigeria, the struggle in the north was complicated by France. This was more pronounced in Muri and Yola region of Northern Nigeria. In an attempt to put an end to French activities in this part of Africa, the British and the Germans decided to put aside their differences and cooperated to fight a common enemy-France.¹⁸

The Anglo-German Agreement

The line which emerged as the first section of the Eastern international boundary of Nigeria was the RIO-del-Rey-Yola line described in the Anglo-German agreements of 1885 & 1886. This is known as the Eastern Nigeria-Western Cameroon International boundary. JC Anene observes that within a year of the provisional agreement designating Rio-del-Rey Cross River Line, there was an imminent conflict between the two European countries; the Germans pressed for an extension of the boundary line further into the hinterland as they were substantially convinced that the region north of “the Cross river rapids towards the neighborhood of the Benue was a *res-nullis* (no-man’s land) and

was therefore open to German acquisition¹⁹. On the other side of the coin, agents of the British Royal Niger Company (RNC) who were equally busy on the Benue and its main tributaries were “particularly anxious to reach Yola and establish political relations with Lamido, the ruler of the strategically located town²⁰

The RNC’s interpretation of the principle of freedom of navigation of the Niger and Benue as formally stipulated by the British West African Conference, appeared to have meant the company’s exclusive control of the navigable portion of the two rivers. Thus as soon as the company acquired” Yola, the British government on the same degree accepted German suggestion for an extension of the Rio-del-Rey-Cross River Boundary. Between 27th June & 2nd August 1886, supplementary arrangement was negotiated whereby Britain and Germany agreed to:

An extended line of demarcation, which starting from the point on the left bank of the old Calabar or Cross River, where the original line terminated, shall be continued diagonally to such a point on the right bank of the River Bank to the east of, and close to, Yola As may be found on examination to be practically suited for the demarcation of a boundary²¹.

Following the Berlin convention of November 1893 between Britain and Germany, an agreement was signed that defines the Nigeria Cameroon boundary from Yola to Lake Chad²², thirty five minutes east of the meridian of the centre of the town of Kuka. The boundary line gave no consideration for physical features or the

ethnic boundaries. The Borno Kingdom was split into two, similarly Adamawa and Marghi were each divided between Germany and Great Britain²³.

A supplementary agreement defining boundaries was reached on March 19, 1906 to cover British and German territories stretching from Yola to Lake Chad²⁴. Result of these territorial arrangements saw the creation of Northern and southern Nigeria as British Colonies and Kamerun for Germany-with the Bakassi Peninsula subsuming under the territorial confines colonized by Germany.

On October 10, 1910, another agreement was signed between Britain and Germany on the demarcation of Yola sea boundary, which according to Anene proved to be the most difficult and intractable boundary to be drawn in the cross River-Akpayafe estuary area²⁵. Having established territorial boundaries the powers saw the need to define clear-cut regulations to cover navigations from Yola to the area between Nigeria and the Cameroons.

In 1913, Britain and Germany reached agreement on their borders from Yola to the sea. This was made complete after the signing of two treaties. The first was signed in London on March 11, 1913 and the second signed at Obokun on April 12, 1913. The former titled “the settlement of the frontier between Nigeria and the Cameroons, from Yola to the sea,”²⁶ put Bakassi proper under the jurisdiction of the Germans, and the later, “The regulation of navigation on the Cross River”, ceded the “navigable portion” of the off shore border of the peninsula to Britain²⁷.

The Anglo-German Treaty of March 11, 1913 described the relevant portion of

the border as following the *Thalweg*²⁸ of the Akpokurum (Akwayafe) River dividing the mangrove island near Ikang and gives as the straight line to join Bakassi point and King point²⁹. This portrays that in the course of the three rivers (Akwayafe Calabar and Cross) emptying into an estuary, the question of dominant flows enter into consideration. The flow channel of the dominant rivers (Calabar and Cross) shifts that of the small River (Akwayafe) away. Thus, the true *Thalweg* of the Akwayafe is very close to the bank of the Bakassi Peninsula.

Furthermore, the agreement equally allows both the German and the British ship to make use of the most navigable course between the open sea and the Akwayafe River. It was further agreed that marking or dredging of the navigable waterways of the Akwayafe River from three miles limit “landward” could be carried out either by the German or British Government, or both, based on agreement between the two powers. It was also stated in the agreement that the fishing rights of the native population of the Bakassi Peninsula in the estuary of the cross River shall remain as they were before the demarcation.³⁰ Considering that the Germans already had Douala and its environs as a port option, they gave away the “navigable portion” of the border to Britain. On her part, Britain conceded the Bakassi Peninsula to Germany. It is thus pertinent to emphasize that with the recognition of the fishing rights of the indigenous population of the Bakassi Peninsula inter-group relations was adequately maintained while cross border trade and migration were uncontrollably heightened.

Anglo-Franco Treaties

The advent of the first world war marked a turning point in the history of German Colonialism as her territory was partitioned between Britain and France at the treaty of Versailles like mandated territories under the league of Nations on February 1919³¹. Britain and France signed a formal agreement on a new boundary line, and on July 10, 1919, a Franco-British declaration between viscount Milner of Britain and Henry Simon of France defined boundaries of the mandated territories³². By this agreement, the Bakassi Peninsula and the rest of the “British Cameroon” were placed under British mandate while France took over the rest of former Kamerun (Kameron). The territory was then administered under the British system of indirect rule as part of Nigeria respecting the borders laid down by the agreements of 1913, but were not merged as part of Nigeria³³. Moreover, following the splitting of Cameroon between Britain and France under the League of Nations Mandate, the international boundary became virtually a regional boundary between then eastern Nigeria and southern Cameroon. The same situation was applicable to the northern portions of both countries.

After the Second World War (1939-45), the British and French League of Nations Mandates over southern and northern Cameroons were replaced by trusteeship Agreement under the new United Nations organization³⁴ on August 2, 1946 in an order in Council. The UN agreements as approved by the UN General Assembly re-ratified the prior borders as codified by the previous Anglo-German and Anglo-French agreements. France, thus, administered part

of former Cameroon as a single body while Britain divided her own domains into two, namely “Northern Cameroon” and Southern Cameroons”³⁵ both countries also continued to run the territory at the behest of the united Nations.

As the agitations for independence mounted, the UN requested for a clarification of the wishes of those living in the trusteeship territories of southern and northern Cameroons from Britain. In reaction to this, the people of Northern Cameroon decided to gain independence by joining an independent federation of Nigeria in 1959 plebiscite while the wishes of those living in southern Cameroons was postponed as a result of insecurity that was justified by guerilla warfare between the forces fighting for independence and the colonial administration. As Cameroon gained independence on January 1, 1960, political instruments between France and Cameroon that brought about the new country renewed all colonial boundaries as defined by previous agreements under colonial rule. With the reduced tension of insecurity, it was possible to conduct a plebiscite in the southern Cameroons on February 11 1961, during which the people living in southern Cameroons opted for independence by joining the independent Republic of “Cameroon” though many preferred self determination.

Conclusion

It would not be irrelevant to argue that what became Nigeria and European emanated from the imperial map designed by the European powers with automatic recognition of the borders of the new states not mindful of ethnic and ancestral affinities, tradition,

religion and languages of their relatives across the border. This ill defined colonial boundary in Africa had produced a territorial division which bore little or no relation to the character and distribution of the populations of former colonies and protectorates. Many of these boundaries cut across ethnic groups and override the dictates of geography and economics. In many instances, the same ethnic nationality found itself divided into two or more colonial territories and ruled by different colonial masters. These have often resulted in boundary disputes and wars between African states after getting their independence from colonial rule. A recent example was the war between Ethiopia and Eritrea in which thousands of people were killed³⁷. In the case of Bakassi, for instance, Cameroon has anchored its ownership of the peninsula on the Anglo-German Treaty of March 11, 1913, when both Nigeria and Cameroon were under colonial rule, a treaty which the international court of Justice (ICJ) has upheld by its recent judgment.

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LEARNING TO TEACH: REFLECTIONS ON EXPERIENCES OF NOVICE TEACHERS

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Abstract

Learning to teach is as important as teaching to learn. For teachers, inception years are full of zeal and alacrity but not without anxiety about their profession. Novice teachers enter teaching profession with varied experiences and expectations. They come from different background and their hopes and aspirations differ a lot. Novice teachers are expected to perform the same duties as those of other teachers in the classroom. From classroom management to participation in all activities in the school, the novice teachers face multiple challenges. The diversity of roles novice teachers are expected to play often comes as a challenge to beginners. Competing demands require teachers to make decisions about how their professional and personal time should be managed. The present article attempts to understand and analyze the reflections of novice teachers during initial years of teaching from conceptual point of view. Based on case studies and own experiences of the author, the reflections of novice teachers are narrated in this article. At the end Danielson's framework of teaching is suggested as a model for novice teachers to practice for their professional growth.

Key words: Novice teachers; Concerns of novice teachers; Pre-active teaching; interactive teaching; Danielson's framework for teaching, etc

Introduction

The experiences of novice teachers during initial years of teaching are different from what they have gained during pre-service training. Novice teachers enter teaching profession with varied experiences and expectations. They come from different background

and their hopes and aspirations differ a lot. From classroom management to participation in all activities in the school, the novice teachers face multiple challenges. The diversity of roles novice teachers are expected to play often comes as a challenge to them. Though, in reality,

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teaching expectations of learners is the central obligation of teachers, they also discharge many other responsibilities. Expectations of each role are enormous. Competing demands require teachers to make decisions about how their professional and personal time should be managed. Novice teachers do face various and numerous problems. Not only in classrooms, but also they are supposed to discharge multifarious responsibilities outside the class.

Literature Review

Literature reveals that novice teachers found initial period of teaching as difficult in their career. Initial years of experience in the profession are inevitable to acquire essential skills for teaching. (Ryan, 1970; Kyriacou, 1993). The first year of teaching may be challenging and treated as testing time for novice teachers. (e.g. Veenman, 1984; Huntly, 2008; Sanford, 1988; cited in Loughran et al., 2001; Akyeampong & Lewin, 2002; Gustafson, Guilbert and MacDonald, 2002; Belay, Ghebreab, Ghebremichael, Ghebreselassie, Holmes & White, 2007; Fantilli & McDougall, 2009). The initial difficulties are described in terms such as ‘reality shock’ (Veenman, 1984); ‘transition shock’ (Corcoran, 1981), or a ‘painful beginning’ (Huberman, 1989). These words reveal anxiety and fear of novice teachers while understanding that the ‘real’ world of teaching is different from their perceived world of teaching. Classroom discipline, classroom

management issues and dealing with individual differences of students are other issues that novice teachers face in their classrooms (Carre, 1993).

Veenman (1984) in his study on ‘Perceived problems of beginning teachers in their first years of teaching’ examined several international articles and came out with a list of eight problems. They are classroom discipline, lack of motivation, handling students’ problems, assessing students’ work, relationships with parents, implementation in classroom activities, inadequate teaching materials, and behavioural problems of students.

The brief literature so far reveals that concerns of novice teachers are associated with several aspects such as self, their beliefs about teaching, feelings of uncertainty, and so on. These concerns emphasize the importance of the encounters individual teachers face and later on, they act as their personal experiences for further learning.

Purpose

The purpose of this article is to understand and analyze the reflections of novice teachers during initial years of teaching from conceptual point of view. Their beliefs, struggles in the real context and impact of their teaching upon students are also reflected in this article. The reflections of novice teachers will be delineated through literature review, case studies and from the personal experiences of the author. Case studies are related

with novice teachers' perception on self, teaching and classroom management. At the end, Danielson's framework of teaching is suggested as a model for novice teachers to practice professional growth.

CONCERNS OF NOVICE TEACHERS

Read the following text in the box:

Saritha is a beginning teacher in a rural school. Coming from an urban background, she feels difficult to adjust with the rural environment of the school. Due to low performance of the school, re-structuring is taking place. The teachers in various teams are given the responsibility to select the instructional materials for various levels, frame class activities for various levels and inform parents about the progress of students. Saritha feels that school is not an easy place to work.

The above reflection of Saritha reveals the alacrity and anxiety about teaching profession during the formative years of teaching. Novice teachers are expected to perform the same duties as those of other teachers in the classroom. They have to play a variety of roles such as that of a guide, a counsellor, a coach, an educator and a manager. They have to organize both scholastic and co-scholastic activities. Though during pre-service teacher education programme, teachers do get mastery of contents

and teaching-learning theories, they get opportunity to practice teaching in the real school environment only when they enter into profession. Novice teachers find difficulty in finding link between the theory and real practice of teaching.

Generally three types of concerns are related with novice teachers. These are concerns about self, tasks and impact of teaching on learning. The first type of concern is related with self. In their concerns about self, novice teachers address the following questions:

Do my students like me?

What do I believe about teaching?

What do I believe about myself and my abilities as a teacher?

Shall I be able to become an inspirational teacher?

Shall I be able to guide students in their difficulties?

Am I able to cope with the workload?

After dealing with concerns about self, initial teachers address their own task related issues. They encompass issues of curriculum, classroom management, effective mentoring, teaching-learning strategies, assessment, and school culture. An essential component of effective teaching is teacher's attitude towards teaching profession. An attitude is a predisposition to act in a positive or negative way toward persons, ideas, or events. Teaching behaviour is influenced

by three major categories of attitudes. They are:

- i. attitude of teachers toward themselves
- ii. attitude of teachers toward students.
- iii. attitude of teachers toward the subject-matter.

First of all, attitude of teachers towards themselves should be positive and healthy. This determines their attitudes towards others. Those teachers who cannot cope with their own emotions are likely to be incapable of respecting and adjusting with the feelings of others. If teachers are able to understand and empathize with their students' feelings, they are able to understand their own emotions. Secondly, teacher's attitude toward students is a crucial factor in deciding teaching effectiveness. Strong likes towards or dislikes against certain students, bias toward a particular community, and low-level expectation for marginalized students- all of these could reduce teaching effectiveness. Teacher's attitude toward the subject matter is the third factor that determines effective teaching. Command of the subject matter to be taught is essential for any teacher. An initial teacher needs Pedagogical Content Knowledge (PCK). Pedagogical Content Knowledge means the blending of content and pedagogy in order to transact topics, problems or issues in an organized as well as according to the diverse needs of the learners. Along with Pedagogical Content Knowledge, teacher needs to have technological knowledge in

order to deliver effective teaching. They have to address the following concerns related with task:

Am I able to prepare a lesson plan based on constructivism?

How confident am I in my ability to control students of the class?

In which instructional strategy do I have the most confidence?

With which instructional strategy I am not comfortable?

Am I able to implement active learning in my classroom?

Am I able to use latest ICT in my teaching?

How could I adopt Universal Design for learning approach in my classroom?

Lastly, the beginning teachers shift their concerns about self and task and concentrate on the impact their teaching has on students. Impact concerns deal with the social, emotional and academic needs of students. Here, the beginning teachers shall address the questions given below:

Am I able to bring about intended learning outcomes in my students?

What do I need to be a successful teacher?

Can I scaffold my students to reach their maximum potential of learning?

Am I able to provide differentiated instruction in my classroom?

What are some of my ideas for motivating students in my class?

Read the voices of novice teachers in the following cases:

Case 1: About self.....

I was very impulsive, used to get confused at certain times of teaching and to be very strict in the class. I was doubtful about students' understanding that arises from my teaching. Now I learn to handle my students without losing my temperament.

- Own experience

In my novice years, it was difficult to face students and I was very sensitive. Due to lack of self-control, I shouted at my students. My knowledge of subject was very low and I was unable to answer students' queries according to their expectations. Now I learn to control my anger and also learn to control students in an effective way.

- 7th Grade teacher

Case 2: About teaching.....

From childhood my dream is to become a teacher. So when I got the appointment letter, I was very happy as if my dream comes true. But after my classroom teaching, I came to know that teaching is not an easy job. I feel difficulty in engaging students in an active manner in the class.

- 6th Grade teacher

When I was a school student, I thought that teaching was an easy task. Teachers have just to talk and it was the duty of students to study and reproduce the learned facts in the answer script. Later on, during my teaching practice, I realized that there is a repertoire of skills that a teacher has to attain in her profession. Standing in front of a class without much preparation is difficult.

- 7th Grade Teacher

Case 3: About classroom management.....

I went to my class with great expectations. But when I entered the classroom, the scene was horrible. There were not enough benches for the students to sit and desks to carry on their work. There was no good roofing and water drizzled inside the room during the rainy season. As there was not enough seating arrangement, students were moving around the room during class hours. I felt difficulty in managing the class.

- Own experience

I was a little nervous because I had to teach computer science in 8th class. The students were very smart and as I entered the class, they looked at each other and started whispering among themselves. I felt bad. When I asked their names, they spelt out very smartly as if they were old students and the teacher was new. I was not able to maintain discipline in the class.

But now I am able to understand my students personally and to handle them in an effective manner.

- 8th Grade Teacher

The above cases of novice teachers reflect the disparity between their expectations and real teaching-learning contexts. Let us reflect on each case.

Reflections on Cases about Self

The cases describing about self reflect the personal-development view of teaching of a novice teacher regarding teaching profession. According to the personal-development view, a teacher should need a thorough understanding about themselves so that they may learn to use their skills more effectively.

Novice teachers vary greatly in terms of their understanding schooling, beliefs about students and how they learn. These aspects influence their teaching to a large extent. Teachers who have poor academic knowledge in content may ask lower level questions such as recall and memory type questions. It is always better on the part of novice teachers to ask self-diagnostic questions such as:

How important do I think this content is?

How well am I prepared to teach this content?

When teachers hold high expectations for students and convey the same, students will often act in ways to come up to the teacher's expectations. Contrarily, when teachers hold low expectations and communicate these to students, they may conform to the teacher's low expectations.

Reflections on Cases about Teaching

The most apparent role of a teacher is the role of classroom teacher. The two basic aspects of this role are pre-active teaching and interactive teaching. In the subsequent paragraph, the difference between pre-active teaching and interactive teaching is demarcated.

Pre-active Teaching: - The planning done by a teacher before actual teaching in the classroom is known as pre-active teaching. Before teaching a lesson, teachers need to know the specific objectives of a particular lesson, the delivery method and strategies, why they want to teach and how to assess the learning achievement of students. Each aspect is important as it contributes to

the quality of teaching. New teachers often discover that experienced teachers already teaching in schools do not use written lesson plans. The beginning teacher has difficulty in finding a standard format of lesson plan as approved by the school. More than that, preparing lesson plans for three to four subjects in a day consumes more time on the part of a novice teacher. Though planning is time consuming, it leads to quality teaching for the students and augments confidence in the mind of the teacher.

Interactive Teaching: - When teaching takes place in a real classroom context between teachers and students, it is known as interactive teaching. Though novice teachers are familiar with knowledge of innovative strategies of teaching, mostly they find it difficult to implement these strategies in classrooms. During this phase, a beginner teacher may feel that even the best made lesson plan becomes futile because of students' indiscipline and other interventions. The diversity of students in classroom and the differences in their interests and abilities make organizing learning activities difficult. The uncertain events that arise in classrooms are due to the fact that students are not passive recipients of commands given by teachers. The extent to which the teacher can predict, control events in classrooms puts a limit to the possibility of effective planning of the lesson and rationally moulding events according to formal guidelines. At all points in the processes of planning and teaching, novice teachers should remember that it is essential to keep the responses of students on the centre of their minds.

Reflections on Cases about Classroom Management

No other aspect of teaching is treated as a major concern by beginning as well as experienced teachers as classroom management. Classroom management is a complex set of behaviours the teacher uses to control student behaviours that will enable them learn successfully. Teachers' competence in classroom management is largely a function of their understanding of the dynamics of a classroom. Though novice teachers have theoretical knowledge about classroom dynamics, they take more time to learn how to manage classroom dynamics. Classroom dynamics is the combination of both internal and external contexts of an institution. Internal context consists of the uniqueness of its members and external context consists of the cultural settings of the institution and the society where it is located.

Mostly novice teachers find difficulty in managing the class effectively. The social environment of the classroom may vary from authoritarian, where the teacher is the provider of information, opinions, and instruction to laissez-faire, in which students have a major role in providing information, opinions and instruction. While managing a classroom, novice teachers will have to address the following questions:

- How to maintain with-it-ness in the classroom?
- How to develop rules for the workplace that create group norms that students respect and follow?
- How to maintain a workplace that fosters feelings of belonging and group solidarity?

While addressing the first question, a novice teacher has to know about the degree to which with-it-ness could be exhibited in a classroom. The word with-it-ness as used by Kounin (1970)⁽¹⁴⁾ refers to a teacher's ability to keep track of many different signs of engagement at the same time. In a classroom, there are different ways that can be adopted to improve with-it-ness. The first point is to increase eye-contact with the students in order to make them aware about your physical presence. In the beginning years, novice teachers tend to do the following:

- Focusing on the students sitting on the front rows
- Focusing on the students sitting on one side of the class
- Talking while writing on the chalkboard
- Talking with their backs to the students while explaining points displayed in the chart hung on the wall.

In each of the above instances, the teacher does loose eye contact with all students. Maintaining eye-contact with all is one of the most important elements to bring the sense of with-it-ness.

The second important point in increasing with-it-ness is learning to monitor several activities in a classroom. For example, a teacher while maintaining eye contact has to check what students are doing especially those seated at the last row. A teacher should switch back and forth from behaviour-related observation to activity-related observation. Another difficulty is when the teacher is pre-occupied with one student; others in the class may create problems. For example, after giving activity in the classroom, the teacher might be rounding the class in order to clarify

doubts of students. While discussing with the students in the last rows, the students sitting in the front row may be talking and engaging in different tasks other than the given activity. In this situation, the teacher should act as an effective classroom manager who expressed the sense of with-it-ness. Such effective managers were aware of what was happening in all parts of the classroom and were able to see different things happening in different parts of the room at the same time. Moreover, such classroom managers were able to communicate this awareness to their students.

While going through various literature reviews, it indicates that most of the authors have concentrated on issues related with self, classroom management, beliefs about teaching and so on. There are three sources which influence development of concerns:

- i. Exposure to teaching-learning theories during teacher training programme,
- ii. Experiences of student teachers during internships and
- iii. The real context of school environment.

Though several studies have been done by various authors, none has suggested a comprehensive framework for teaching. It was Charlotte Danielson who provided a comprehensive frame work of teaching. In this article, Danielson's framework of teaching is suggested as a model for novice teachers to practice for their professional growth.

Danielson's Framework for Teaching

Charlotte Danielson (1996), an economist and an educationist, has prepared a framework for professional teachers where expertise is needed in various areas

of teaching activity. This framework is based on the constructivist view of teaching and learning. He divided teaching activity into twenty two components grouped into four domains (see figure 1.1) of teaching responsibility.

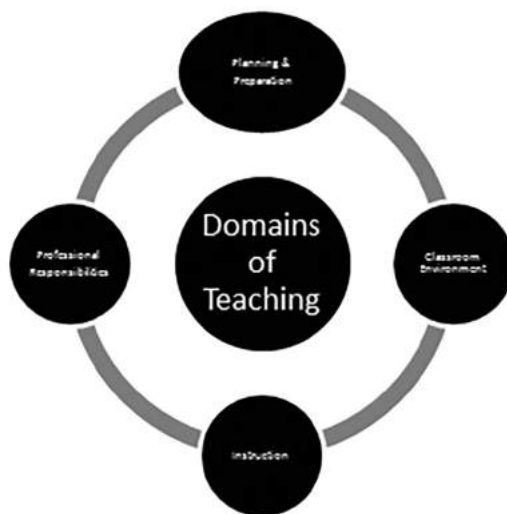


Fig. 1.1

Danielson's framework for teaching

Each domain is discussed in detail in subsequent paragraphs.

Domain 1: Planning and Preparation

Planning is an inevitable component in teaching-learning process. This domain consists of sub components such as knowledge about content and pedagogy, knowledge about students, knowledge of resources, selecting appropriate teaching goals, framing coherent instruction and executing effective assessment techniques. It is better to start from our own ideas while thinking about any new topic. Many of the teachers consider planning as an essential skill and the teacher who plans better may

teach better. Normally, teachers plan their teaching in three ways: on yearly, weekly and daily basis. All these are important for effective teaching. While all teachers plan, they do not plan in the same way. A wide difference could be seen between the planning of experienced and that of novice teachers. Some may jot down important points in their daily plan book. Others may prepare a unit plan. Studies have revealed that novice teachers plan in detail in comparison to experienced teachers. Experienced teachers may prepare a detailed lesson plan while handling the new content or curriculum materials. For novice teachers, planning of lessons in a comprehensive manner is an essential activity in their initial stage of professional development. Novice teachers are in the process of developing routines, experimenting to see what procedures will work for them. Lesson plans do really ensure that directions are structured in exactly the right way when an activity is begun.

In planning and preparation stage, time and resources for teachers are needed. Novice teachers do not feel confident to plan and deliver effective lessons to students. It takes time for them to learn how to plan teaching effectively. During beginning years of teaching, it is difficult for teachers to gain a year-long view of the content they are expected to teach. Some novice teachers have difficulty in maintaining classroom discipline as they have had less opportunity to practise teaching during internship time. Over time, novice teachers gain experience, they develop acquaintance with several teaching strategies that are suited to the content, students and the context of the school and community.

Domain 2: Classroom Environment

Managing and controlling classroom is an essential component in creating a favourable classroom environment. Classroom management refers to the ways a teacher organizes the classroom activities and manages time, material and space for effective class functioning. The main components in this domain comprise a culture of respect; effective interaction between teachers and students as well as students and students; organizing the physical space; managing classroom procedures; and students' behaviours. Effective teachers are able to create a classroom climate where everyone is welcome. As stated in the case related with classroom management, novice teachers mostly fail in managing discipline in classrooms. Not only the physical environment but also the attitudes of teachers that reflect in the classroom decide the nature of classroom environment. Sound management and discipline measures aid students to learn how to exercise self control.

A culture of **respect for all** is the foremost among the central values that ought to permeate the classroom. This means teachers should respect the identity and dignity of each student irrespective of caste, creed, race, socio-economic background, gender and perceived academic abilities. Novice teachers should be able to set the tone in the classroom where respect is not a slogan but is reflected by actions. Actions can be taken by allowing students to have their voices in classrooms and making them to participate in classroom decision-making process. If all feel that they are respected, they can achieve success. Through achievement, the self-concept of students improves. A

positive classroom environment means that teachers are able to respond according to the individual needs of learners.

Domain 3: Instruction

The instruction consists of teacher-student communication, using questioning and discussion techniques, engaging students in learning, using assessment in instruction and demonstrating flexibility and responsiveness. Mastery of subject content alone is not enough to become a good teacher. Unless a teacher is able to communicate his/her ideas properly in the classroom, a good teaching will never happen. A novice teacher should 'know how to teach.'

Teacher-student communication

What type of communications take place in a classroom? A teacher communicates the following aspects:

- a) Expectations for learning
- b) Directions for activities
- c) Explanation of content
- d) Use of oral and written language

Expectations for learning: Learning is facilitated when teachers explain learning objectives to students and when they teach each lesson according to the target objectives. Different learning objectives require different instructional approaches. Each class is a social system that reflects various cultures of ideas, practices, norms and accepted procedures. In the classroom, a novice teacher should learn how to communicate to a whole group instead of a single student. Communication occurs within the social-system of the classroom. Teachers in the twenty-first century are teaching students having different social backgrounds.

It is important that they should ensure that the instructional approaches do not place the students in situations where they feel a conflict with their culture.

Directions for activities: Productive learning in schools depends on active engagement of students in classroom activities. Mostly novice teachers find difficulty in conducting activities without losing classroom discipline. While assigning activities; teachers should not forget to provide the guidelines for conducting each activity. Novice teachers should prepare learning activities that seem to make sense in light of the special characteristics of their students, the content they plan to teach, and variables associated with the instructional context.

Explanation of content: Today's classrooms are more diverse than they have ever been. Teachers need to present content that meet the diverse needs of students. Teaching contents with appropriate examples increase the understanding level of students. At various points during the lesson, the teacher needs to monitor student comprehension.

Use of oral and written language: Both oral and written language can be used in classroom for clarification of content. Clarity includes a clear and precise use of language and a presentation style that moves smoothly from point to point. Skilled teachers seize on opportunities to use precise and creative language in classroom.

Using questioning and discussion techniques

In Danielson's framework, questioning and discussion techniques are given

importance to elicit student response. Effective teachers value the responses of students and elaborate content from the ideas of students. They use questions that produce both convergent and divergent answers.

Novice teachers face challenge in designing learning experiences that take advantage of students' interests in interacting with others. Discussion is the best technique to promote cooperation among students. This technique enhances learning of all students. Each member realizes that his or her contributions are vital to achieve success in their group. Students learn the skill of reasoning and justifying their points of view.

Engaging students in learning

Engaging students in the learning process is the prime concern of teaching. For this, teachers should know how much prior knowledge about a content student has. How s/he has organized learned fact and how to elicit this prior knowledge. Afterwards, teachers could execute various techniques such as cooperative learning, inquiry based learning, brainstorming, etc. in the classroom where active involvement of students are needed. In active engagement learning, students' thinking and problem-solving capacities increase and they are motivated to learn meaningfully.

Using assessment in instruction

Providing feedback on the performance of students enables both the teacher and students gauge the level of understanding of the student on a topic and its presentation by him/her. Novice teachers find difficult to carry out assessment in the midst of learning activities. Formative and summative assessments are important in any teaching-

learning process. Teachers' feedback provides learning curve of each student and the place where he/she needs improvement. Students will come to know where they are and what they need to improve.

Demonstrating flexibility and responsiveness

'Flexibility and responsiveness' are the skill needed for a teacher to make adjustments in a lesson according to the needs of students as well as learning context. Effective teaching should reach and accommodate all in the learning process. In such context, a teacher needs to respond to the changing needs. She incorporates students' interests and daily events in her lessons. When students encounter difficulty in understanding a particular concept, a committed teacher finds alternative strategies to engage them in learning.

Domain 4: Professional Responsibilities

The components in this domain, as such, do not have direct connection to classrooms. This domain which is outside of classroom context consists of reflecting on teaching, maintaining accurate records, communicating with families, contributing to the school, growing and developing professionally, participating in the activities of a professional community, and demonstrating professionalism. Reflection on teaching may take place through journal writing, informal talk with colleagues, discussions in teachers' meeting, academic seminars, interaction with students, and teaching portfolios.

Teaching portfolio is a good tool to evaluate a teacher. It includes a variety of information about a teacher's performance. Evidence in a portfolio mainly exhibits a

detailed picture of a teacher's behavior and characteristics. Teaching portfolio often includes i) material prepared by the teacher, ii) material gathered from others and iii) examples of student's work.

Journal writing provides teachers opportunities to reflect on their own beliefs, characteristics and behaviours. Novice teachers reflect their first year experiences on teaching and later on, they can assess their view points on teaching after completion of a few years. Reflective teaching seeks to engage teachers in a continuous examination of their teaching, the general goals of the school and the values that are implicit in what they teach.

Conclusion

Novice teachers really face different kinds of challenges during initial period of teaching. Even though they may have enthusiasm, due to mental agony, and confusion, they need to adjust with the new work culture. When they start teaching, there are several things that help them to make their professional life more manageable. First, they need to develop realistic expectations. Development of excellence in teaching really takes time. Danielson's framework provides a road map for novice teachers to attain excellence in their pathway of teaching. It displays the way for attaining professional development among teachers. Out of the four domains, domains 1 and 4 stand out of the classroom context and domains 2 and 3 are closely linked to the context. Novice teachers, who enter this profession, keeping the idea that performance excellence is the motto through adopting necessary changes, will find a highly satisfying career in teaching.

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UNIVERSITY ENTRANTS' PERCEPTION OF CERTAIN SKILL ORIENTED CHARACTERISTICS OF THEIR PHYSICS TEACHER AND THEIR PROCESS OUTCOMES IN PHYSICS

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Abstract

Teaching is a planned, purposeful activity proceeding in a social environment. The main constituents of this social environment are the teacher and the students. In such an environment interactions and intercommunication between the teacher and the students are inevitable. During this reciprocal interaction the characteristics of the teacher influence the students. A recent trend in science education is to reconceptualize the achievement in science in terms of higher level cognitive abilities contrary to the traditional mode of assessing the achievement in terms of lower level cognitive entities. The process outcomes in physics belong to the category of higher level cognitive abilities. Thus process outcomes derive special emphasis in science education due to the fact that science is made up of a series of processes. Hence the desired outcome in science should include among other things, mastery of important processes that are used in generating new knowledge in science (Good et.al; 1985). In this context, to make the communication of the content in science class room effective, the teacher has to undertake skilled activities like observation, experimentation, verification etc. Physics being a science subject having many practical applications demands more skill oriented activities from the part of the Physics teacher. Among the different levels of education first year degree level is the most important one as it lays the foundation for higher education. Hence imparting instruction at this stage requires much care from the part of the teacher. Moreover adolescent students show a tendency to perceive the characteristics of their teachers. The major objective of the study is to find out the nature of relationship existing between the university entrants Perception of certain characteristics of their Physics Teacher and their Process Outcomes in Physics. The study adopted survey method. The finding of the study revealed that there is high correlation between the scores on Students' Perception on Teacher Characteristics and scores on Test of Process Outcomes in Physics among University Entrants. This study brought to light the necessity of adequate productive skills and personality factors of the teachers.

Key words: Perception, Process Outcomes, University Entrants, etc.

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Introduction

The National policy on Education (1986) envisages a vital role for science education in developing well defined abilities in the cognitive, affective and psychomotor domains in children. Science as intellectual endeavor is often thought of consisting two parts- process and product. Science processes are intellectual skills used in collecting and analyzing data to solve problems. Students can use process skills to formulate response to questions, to justify points of view, to explain events as procedures and to interpret or describe data (Tobin and Capie, 1980). Process outcome represent a characteristic way of thinking that could be transferred to other problem situations. Process objectives may be utilized regardless of which generalizations, concepts and facts are emphasized in any science unit of study, Thus process outcomes cut across any subject matter emphasized in numerous units in science (Ediger, 1987). Education aims at the harmonious development of cognitive, affective and psychomotor domains of the learner. Science teaching expects the competent teacher as one with proficient Process Skills. Among the different branches of science Physics is more practical oriented and hence demands the acquisition of skills. In the present study the investigator presumes that there may be varied abilities in science Process Skills among Physics teachers.

University Entrants

Those who have completed the twelfth year of schooling and have qualified for the first year degree course in universities.

Perception

Perception is an active process involving the whole organism. Perception is the true beginning of knowledge. Sensations give us only the raw material of knowledge and perception is the first step by which the material is elaborated into definite knowledge of the external world, the attributes and relations of objects outside us.

Perception is sensation plus meaning. The activity of the organism in converting a sense impression into the awareness of an object or meaningful situation is called the process of perception. Perception is the process of becoming aware of objects, qualities, or relations by way of sense organs. It involves much more than sensation or even a combination of sensations as was clearly brought out and experimentally verified.

Determinants of Perception

i. Subjective factors

The structure and functions of sense organs determine to some extent our perception.

ii. Brain and Nervous System

Various relationships which we perceive as characteristics of the environment are deduced because of the native functions of the brain. Deduction of relations is an innate characteristic of the perceptual process. Brain not only records different categories of stimuli but also makes fine differentiation in intensity within each category.

iii. Past experience

Perception depends upon one's past experience. Past experience may also influence perception by creating various kinds

of prejudices and assumptions regarding the object perceived. The experiences of other people, their judgments and the cultural environment influence our perception of size and value.

iv. Set or attitude

One's mental set or attitude at a given moment influences his perception. An angry person perceives the mistakes of people around him more easily than when he is in a happy mood. When one is afraid, any slight disturbance is perceived as a danger.

Educational significance of Perception

Development of perception thus depends upon the objective and subjective factors. Most of the attitudes and motives affect our perception. The teacher has to take care that truly objective perceptions are developed among students by making them more factual and realistic in understanding things. Non-facts or prejudice has to be discussed and checked in children.

Characteristics of Physics teacher

Teaching is always a dynamic activity which unfolds a wide world of knowledge, information, experience, skill and erudition. Teacher effectiveness greatly relies on teacher characteristics. Whatever may be the programs of teaching and learning, a little awareness to the development of aesthetic values like Truth, Goodness and Beauty and personal values like simplicity, frankness, patience, honesty and a liberal but cautious approach to teaching can create a really conducive atmosphere of advancement to teaching and learning.

In Physics teaching it is particularly important to foster curiosity and to encourage

persistence and creativity. The characteristics of Physics teacher play a crucial role in this. He/she should:

1. Provide opportunity for children to interact with things in a way that encourages questioning and investigation. This means that there should be plenty of materials available that are of interest to children at their particular age.
2. Give the children some choice in their activity, even if this has to be limited choice, so that they acquire some ownership over it.
3. Involve the children in assessing their progress and solving the problems they encounter.
4. Set up group work so that genuine collaboration is required to carry out the work.
5. Set high expectations and show confidence that all children can succeed
6. Give reasons for activities that have to be undertaken when children would rather be doing something else.
7. Twenty first century is the era of Liberalization, Privatization and Globalization of our society (LPG). We have remarkable progress in the field of science and technology. Definitely this change has been brought about by the changes in our curriculum and methods of teaching.
8. Today we have numerous information resources. These are books, coaching centers, audio-visual aids such as projectors, videos, microfilms, internet services and different media which provide a flux of information to those who need it. But we cannot marginalize

the role of the teacher as a reservoir of information. This is because of the fact that only the teacher can influence the affective aspects of the students.

9. In the case of Physics education the teacher's role is very significant. This is because only a skilled teacher can impart process skills in his students.
10. The students in the class rooms are the leaders of tomorrow. The future of a nation depends upon their knowledge, skill, character and values. Young people of today face many identity crises and value conflicts. So teachers must be role models to the students.

Process Outcome

Process Outcome represents a characteristic way of thinking that could be transferred to other problem situations. Processes emphasize a doing dimension. Pupils are involved in identifying and solving problems. Diverse processes are needed in identifying problems, gathering data or information, developing hypotheses as well as in testing and revising hypotheses. Varied learning activities also are to be implemented.

Process learning has become an important component of science curricula at all levels. Popularized by the federally funded science curricula of the sixties in the united states, process learning is now prominent in mathematics, social science and language arts program as well. Knowledge that has been memorized will be of little value to a student unless he can apply this knowledge to new situation. Process objectives may be utilized regardless of which generalizations, concepts and facts

are emphasized in any science unit of study. Thus process outcomes cut across any subject matter emphasized in numerous units in Science.

Objectives of the Study

- i) To find out the nature of relationship existing between the university entrants, Perception of certain characteristics of their Physics Teacher and their Process Outcomes in Physics.
- ii) To find out if there is any significant difference between (a) Boys and Girls (b) students studying in private and government colleges and (c) Rural and Urban colleges in respect of their perception of certain characteristics of Physics Teacher.
- iii) To find out if there is any significant difference between (a) Boys and Girls (b) students studying in private and government colleges and (c) Rural and Urban colleges in respect of their process outcomes in Physics.

Hypotheses

There is significant relationship between the university entrants' perception of certain characteristics of their physics teacher and their process outcomes in Physics.

There will be significant difference between Boys and Girls in respect of (a) their perception of certain characteristics of their physics teacher and (b) their process outcomes in Physics.

There will be significant difference between students of private and government colleges in respect of (a) their perception of certain characteristics of their physics teacher and (b) their process outcomes in Physics.

There will be significant difference between students of rural and urban colleges in respect of (a) their perception of certain characteristics of their physics teacher and (b) their process outcomes in Physics.

Methods and Procedures

Methodology

Considering the objectives, hypothesis and nature of data to be collected, survey method was used for the present study.

Sample

The sample selected for the study consisted of Two Hundred and Eighty eight (288) first year degree students in colleges in Thiruvananthapuram District.

Tools

For the purpose of measuring the variables of the study, the following tools were used by the investigators.

Student Perception scale on certain characteristics of their Physics Teacher

In order to measure the perception of university entrants on certain characteristics of Physics Teacher a questionnaire with fifty six statements was developed by the investigator based on the following aspects. They are:

- Enthusiastic / Dynamic skills of the Physics Teacher
- Knowledge of the Physics Teacher
- Stimulation of thinking from the Physics Teacher
- Personality of the Physics Teacher
- Warmth and concern for students
- Teacher- student interaction and
- Instructional settings

The response to the perception scale was scored based on three alternatives: Always-3 points, Sometimes-2 points and Never-3 points.

Test of Process outcomes in Physics

The process outcomes for the study were measured using a comprehensive test developed by P.J. Poullose and Dr. A. Sukumaran Nair (1987). This test consists of 30 items based on the following science processes:

Initiation

Hypothesizing

Manipulation and

Open-endedness

Among the 30 items the investigator selected only 20 items and a score of 1 is given to each correct response.

Statistical Techniques used

1. Karl Pearson's Product Moment Correlation (r) (to find the intercorrelation of the variables)
2. Test of significance of difference between means (to compare the contrasted groups)

Results

1. Relationship between the university entrants' perception of certain characteristics of their physics teacher and their process outcomes in Physics.

To find the relationship between the university entrants' perception of certain characteristics of their physics teacher and their process outcomes in Physics, the scores on Student Perception scale on certain characteristics of their Physics Teacher and scores on test on process outcomes in Physics were analyzed using Karl Pearson's Product moment correlation. The results are presented in Table 1.

Table 1

Relationship between the select variables for the whole sample and relevant subsamples

Sl. No	Variables Correlated	Whole Sample	Boys	Girls	Rural	Urban	Govt.	Pvt.
	Student perception on teacher characteristics & Process outcomes in Physics	0.9186*	0.9314*	0.9337*	0.9601*	0.9393*	0.9529*	0.9589*

*Significant at 0.01 level

The r-values between student perception on teacher characteristics and Process outcomes in Physics for the whole sample, Boys, Girls, Students in Urban and Rural Colleges and Students in Government and Private colleges are 0.9186, 0.9314, 0.9337, 0.9601, 0.9393, 0.9529 and 0.9589 respectively. This indicates that there exists high correlation between Student perception on teacher characteristics and Process Outcomes in Physics among university entrants.

There is no significant difference between Boys and Girls in respect of (a) their perception of certain characteristics of their physics teacher and (b) their process outcomes in Physics.

To find the difference between, Boys and Girls in respect of (a) their perception of certain characteristics of their physics teacher and (b) their process outcomes in Physics the scores on Student Perception scale on certain characteristics of their Physics teacher was analyzed using Test of significance of difference between means. The results are presented in Table 2.

Table 2

Statistical indices and the results of the t-tests for Boys and Girls

Variables	Boys		Girls		Critical Ratio
	Mean	S.D	Mean	S.D	
Student Perception	126.55	10.888	127.65	11.026	0.7867
Sample Size	N1==88		N2=200		
Process outcomes in Physics	Mean	S.D	Mean	S.D	
	7.8864	2.6174	8.44	2.7850	1.6211
Sample Size	N1==88		N2=200		

From Table 2 it is clear that there is no significant difference Boys and Girls in respect of (a) their perception of certain characteristics of their physics teacher (C.R=0.7867) and (b) their process outcomes in Physics (C.R=1.6211).

There is significant difference between students of Private and Government Colleges in respect of (a) their perception of certain characteristics of their physics teacher and (b) their process outcomes in Physics.

Table 3

Statistical indices and the results of the t-tests for students in Private and Government Colleges

Variables	Private		Government		Critical Ratio
	Mean	S.D	Mean	S.D	
Student Perception	126.455	11.7536	130.1061	10.8152	2.3592*
Sample Size	N1=222		N2=66		
Process outcomes in Physics	Mean	S.D	Mean	S.D	2.543*
	8.0405	2.6688	9.0455	2.8614	
Sample Size	N1=222		N2=66		

*Significant at 0.05 level

From Table 3 it is clear that there is significant difference between students in Private and Government colleges in respect of (a) their perception of certain characteristics of their physics teacher (C.R=2.3592) and (b) their process outcomes in Physics (C.R=2.543).

There is no significant difference between students of Urban and Rural colleges in respect of (a) their perception

To find the difference between, students of Private and Government. Colleges in respect of (a) their perception of certain characteristics of their physics teacher and (b) their process outcomes in Physics the scores on Student Perception scale on certain characteristics of their Physics teacher was analyzed using Test of significance of difference between means. The results are presented in Table 3.

of certain characteristics of their Physics teacher and (b) their process outcomes in Physics.

To find the difference between, students of Urban and Rural colleges in respect of (a) their perception of certain characteristics of their physics teacher and (b) their process outcomes in Physics the scores on Student Perception scale on certain characteristics of their Physics teacher was analyzed using Test of significance of difference between means. The results are presented in Table 4.

Table 4

Statistical indices and the results of the t-tests for students of Urban and Rural colleges

Variables	Urban		Rural		Critical Ratio
	Mean	S.D	Mean	S.D	
Student Perception	126.3235	12.4064	128.158	10.4481	1.3473
Sample Size	N1=152		N2=136		
Process outcomes in Physics	Mean	S.D	Mean	S.D	
	8.5132	2.6704	8	2.8049	
Sample Size	N1=152		N2=136		1.5859

From Table 4 it is clear that there is no significant difference between students of Urban and Rural colleges in respect of (a) their perception of certain characteristics of their physics teacher (C.R=1.3473) and (b) their process outcomes in Physics (C.R=1.5859).

Findings of the study

1. There is high correlation between university entrants' perception on certain characteristics of their Physics teacher and their Process Outcomes in Physics.
2. There is no significant difference between Boys and Girls in respect of (a) their perception of certain characteristics of their physics teacher and (b) their process outcomes in Physics.
3. There is significant difference between students of Private and Government Colleges in respect of (a) their perception of certain characteristics of their physics teacher and (b) their process outcomes in Physics.

4. There is no significant difference between students of Urban and Rural colleges in respect of (a) their perception of certain characteristics of their physics teacher and (b) their process outcomes in Physics.

Conclusion

The study was to find out University Entrants' Perception on certain characteristics of their Physics Teacher and their Process Outcomes in Physics. The result showed marked relationship between the student perception on teacher characteristics and Process outcomes in Physics among university entrants which indicate the special importance of teacher characteristics. Hence due importance should be given to the productive skills and personality factors of the teachers. The significant difference between the students in Private and Government colleges in terms of their perception of certain characteristics of their Physics teacher and their process outcomes in Physics indicates the necessity of changing the mode of instruction in these institutions.

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WORK MOTIVATION AND SATISFACTION AMONG TEACHER'S IN COIMBATORE CITY

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ABSTRACT

Education is an essential human virtue. A teacher is an acknowledged guide or helper in the processes of learning. A teacher's role may vary between cultures. Teacher motivation naturally has to do with teachers' attitude towards work. The teacher is the one that translates educational philosophy and objective into knowledge and skill and transfers them to students in the classroom. Classroom climate is important in teacher motivation. In the short term, the provision of good quality housing with running water and electricity for teachers is probably the most cost-effective way of attracting and retaining teachers at hard-to-staff rural schools. In most countries, rural allowances would have to be at least half of basic pay in order to staff schools with qualified and able teachers. Hence, the teacher motivation is a must and based on this subject, an analysis has been conducted to find out the major reasons that contribute to the need and scope the study. Aim is to study the Work Motivation and Satisfaction among Teacher's in Coimbatore City. The research design used in the study is descriptive in nature. In this type the individual are chosen in such a way that each has an equal chance of being selected and each choice is independent of any other choice. Total population was approximately 1200. Out of the total population the researcher selected 200 samples from the universe which consists of all subject categories of teaching staff members who are male and female. Study reveals that there is either less or no co-ordination among the group they belong to and in different departments. Therefore, a meeting could be organised every fortnight to bridge the gap between the departments. Since a majority of the teachers feel that the salary is not sufficient, the institutions may consider revising the salary to increase the Job motivation among the teachers which in turn will increase the job interest among the teachers. The provision of welfare measures to the teachers must be enhanced since most of the teachers felt that it was not up to the mark. The best teacher may be chosen and rewarded every year in front of the staff and student to boost their motivation.

Key words: School, Teacher, Work, Motivation, Satisfaction, etc.

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Introduction

Education is an essential human virtue. Without it man is a splendid slave, a reasoning savage. Education is an essential base of good life. In short, education enables a man to realize higher value of life which are essential for him to become roof and crown of all creations. The heart of matter of education is once again man making. Education is the development of individual talents. It is a general belief that every individual is born with certain talents. We have to develop those capacities. Education is development of man from within. Swami Vivekananda, the great practical saint of modern India views education as the manifestation of divine perfection already existing in man.

In education, a teacher is the one who helps students or pupils, in school, as well as in family, religious or community setting. A teacher is an acknowledged guide or helper in the processes of learning. A teacher's role may vary between cultures. Academic subjects are emphasized in many societies, but a teacher's duties include instruction in craftsmanship, vocational training, spirituality, civics, community roles and life skills. In modern schools and most contemporary occidental societies, where scientific pedagogy is practiced, the teacher is defined as a specialized profession on the same level as many other professions.

Teacher Motivation

Teacher motivation naturally has to do with teachers' attitude towards work. It has to do with the teachers' desire to participate in the pedagogical process within the school environment. It has to do with the teachers'

interest in student discipline and control, particularly in the classroom. Therefore it underlies their involvement in academic and non-academic activities, which operate in schools. The teacher is the one that translates educational philosophy and objective into knowledge and skill and transfers them to students in the classroom. Classroom climate is important in teacher motivation. If a teacher experiences the classroom as a safe, healthy, happy place with supportive resources and facilities for teaching for optimal learning, he/she tends to participate more than expected in the process of management, administration, and the overall improvement of the school.

Teachers have both intrinsic and extrinsic needs. A teacher who is intrinsically motivated may be observed to undertake a task for its own sake, for the satisfaction it provides or for the feeling of accomplishment and self-actualization. Therefore, the aim of the institution should be to build on and enhance the intrinsic motivation for teachers to teach effectively and at the same time, to supply some extrinsic motivation along the way for school improvement.

Handling a challenging situation inside the class and outside the class makes teachers exhausted, which may hinder their success. Being intrinsically and extrinsically motivated increases job satisfaction. So, motivation has an important role in the job of teaching.

Need and Scope of the Study

It is found that major improvement in the incentives for teachers in rural schools is identified as the top priority in nearly every country. Unless this is done, the

large majority of children who live in rural areas will continue to receive poor quality education. In the short term, the provision of good quality housing with running water and electricity for teachers is probably the most cost-effective way of attracting and retaining teachers at hard-to-staff rural schools. In most countries, rural allowances would have to be at least half of basic pay in order to staff schools with qualified and able teachers. Hence, the teacher motivation is a must and based on this subject, an analysis has been conducted to find out the major reasons that contribute to the need and scope the study.

Objective of the Study

This report synthesises the main findings and recommendations of a research work on teacher motivation of teachers in Government and Government Aided Schools in Coimbatore District.

1. To study the Work Motivation and Satisfaction among Teacher's in Coimbatore City

Literature Review

In *Punishment by Rewards* **Kohn (1993)** argues that reward systems are often successful at increasing the probability that students will do something but that as soon as the reward system is taken away their motivation decreases. Also, the more students are rewarded for doing something, the more they tend to lose interest in whatever they had to do to get the reward. Kohn (1995) suggests that in order to promote intrinsic motivation in the classroom, "teachers should provide an engaging curriculum and a caring atmosphere so kids can act on their natural desire to find out."

Also, **Dembo and Eaton (2000)** found that middle school students need to experience greater autonomy in their schoolwork. Research indicates that when adolescents participate in selecting assignments they are more motivated to learn because their interests in the content increase (Dembo & Eaton, 2000). Students are motivated when they are given more autonomy because opportunities to make some of their own decisions increase the likelihood they can align their goals with those of their teachers (Gehlbach & Roeser, 2002).

Murdock and Miller (2003) examined the relation between eighth-grade students' achievement motivation and their perceptions of teacher caring. Their study included 206 students who were followed from grade seven to grade eight. The school was located in a mid Motivation Methods 14 size semi-urban school district in the Midwestern United States. The researchers assessed students' self-efficacy, intrinsic valuing of schooling, and teacher-related efforts as motivational indicators using variable-centered (regression) and person-centered (cluster analytic) techniques. Results indicated that students' perceived teacher caring accounted for their motivation in academic achievement. Findings indicated that every year when students perceived that their teacher cared about them there was a five percent increase in motivation resulting in a long-term gain year after year

Methodology Adopted

Research methodology prepares the investigator to adopt techniques and tools to neutralize the description, explanation and justification of various methods of

continuing research. The most important part of the scientific research is the research design. It offers a firm basis for drawing conclusion from data collected. The research design used in the study is descriptive in nature. In this type the individual are chosen in such a way that each has an equal chance of being selected and each choice is independent of any other choice. Total population was approximately 1200. Out of the total population the researcher selected 200 samples from the universe which consists of all subject categories of teaching staff members who are male and female.

Analysis and Results

Table 1

Distribution of the Respondents by their Age

Age	Count	%
Less than 30	36	18%
30 to 40	74	37%
40 to 50	54	27%
Above 50	36	18%
Total	200	100%

It is understood that 37% of the respondents belong the age from 30 to 40 years, 27% of the respondents belong to the age from 40 to 50 years, 18% of the respondents belong to the age less than 30 years and above 50 years respectively.

Table 2

Distribution of the Respondents by their Gender

Gender	Count	%
Male	110	55%
Female	90	45%
Total	200	100%

It is clear that more than half (55%) of the respondents are male and 45% of the respondents are female.

Table 3

Distribution of the Respondents by their Qualification

Qualification	Count	%
DTED	21	11%
B.Ed.	66	34%
M.Ed.,	30	15%
M.A., B.Ed.,	22	11%
M.A. M.Ed.	24	12%
M.A. M.Ed.,	37	19%
M.Phil.		
Total	200	100%

It is understood that as high as 34% of the respondents have completed Bachelor of Education, whereas 19% of the respondents have completed M.A., M.Ed., M.Phil., 15% of the respondents completed only M.Ed., 12% of the respondents are possessing M.A., M.Ed., and the remaining 11% each of the respondents have completed M.A.B.Ed., and D.T.Ed. respectively.

Table 4

Distribution of the Respondents by their Experience

Experience	Count	%
Less than 4 Years	58	29%
4 to 7 years	72	36%
Above 7 years	70	35%
Total	200	100%

It is evident that maximum (36%) of the respondents have 4 to 7 years experience, whereas 35% of the respondents possess

above 7 years experience and the remaining 29% of the respondents are having less than 4 years experience.

Table 5

Distribution of the Respondents by their Type of School

Experience	Count	%
Private	78	39%
Aided	80	40%
Government	42	21%
Total	200	100%

Majority (40%) of the respondents are working in Government Aided School, whereas 38% of the respondents are working in Private Schools and the remaining 21% of the respondents are working in Government school.

Table 6

Distribution of the about their level of teaching

Level of teaching	Count	%
Primary	56	28%
High School	91	45%
Higher Secondary	53	27%
Total	200	100%

It is clear that less than half (45%) of the respondents are handling High school students, 28% of the respondents are handling primary school and the remaining 27% of the respondents are handling higher secondary school.

Table 7

Distribution of the Respondents by their Subject Handled

Subject Handled	Count	%
Biology	11	6%
Chemistry	12	6%
Commerce	8	4%
Computer Science	8	4%
Economics	8	4%
English	21	11%
English, Social Studies	5	3%
History & Geography	9	5%
Maths	46	23%
Physics	12	6%
Science	22	11%
Social studies	10	5%
Tamil	22	11%
All subjects	6	3%
Total	200	100%

The subjects handled by the teachers is self explanatory.

Table 8

Distribution of the Respondents by their Special Interest

Age	Count	%
Geographical Research	10	5%
Literature	63	32%
Management	24	12%
Mathematics	47	24%
Science	56	28%
Total	200	100%

It is understood that 32% of the respondents had special interest towards literature, 28% of the respondents indicated that their special interest is towards science, whereas 24% of the respondents opined their

special interest is towards mathematics, 12% towards management and the remaining 5% of the respondents opined that they have special interest in geographical research.

Table 9

Relationship between experience of the respondents and their opinion about the benefits from the institution when compared others realize from other institutions.

Experience	Neither Satisfied Nor Dissatisfied	Very Satisfied	Total
Less than 4 Years	3	55	58
	2.3	55.7	58.0
4 to 7 years	5	67	72
	2.9	69.1	72.0
Above 7 years	0	70	70
	2.8	67.2	70.0
Total	8	192	200
	8.0	192.0	200.0

Chi-Square Value : 4.750

Degree of Freedom: 2

Table Value: 5.991

Result : Not Significant

The result of the chi-square test reveals that the calculated chi-square value (4.750) is less than the table chi-square value (5.991) at 5% level of significance and therefore,

the relationship between experience of the respondents and their opinion about the benefits from the institution when compared others realize from other institutions is not significant. Thus the hypothesis is that the relationship between the two factors does not hold good. Hence the null hypothesis is accepted.

Table 10

Relationship between experience of the respondents and their opinion about the people in their work group towards improving their performance

Experience	Opinion					Total
	Not at all	To a considerable extent	To a very great extent	To a very little extent	To some extent	
Less than 4 Years	7	19	8	11	13	58
	4.1	11.9	11.3	15.4	15.4	58.0
4 to 7 years	4	7	17	26	18	72
	5.0	14.8	14.0	19.1	19.1	72.0

Above 7 years	3	15	14	16	22	70
	4.9	14.4	13.7	18.5	18.5	70.0
Total	14	41	39	53	53	200
	14.0	41.0	39.0	53.0	53.0	200.0

Chi-Square Value : 18.214

Degree of Freedom: 8

Table Value : 15.507

Result : Significant

The result of the chi-square test reveals that the calculated chi-square value (18.214) is more than the table chi-square Table 11

Analysis of variance between Gender of the Respondents and their opinion towards the overall satisfaction about their job

Gender	Opinion				Total
	Fairly Satisfied	Neither Satisfied Nor Dissatisfied	Somewhat Dissatisfied	Very Satisfied	
Male	57	18	4	31	110
Female	47	18	4	21	90
Total	104	36	8	52	200

Source of Variation	SS	d.f.	Mean Square	F-ratio	5% F-limit
Between Columns	2440	(4-1) = 3	813.33	48.80	F(3,3)=9.28
Between Rows	50	(2-1) = 1	50.00	3.00	F(1,3)=10.13
Residual of error	50	3 x 1 = 3	16.67		
Total	2540	(4 x 2)-1 = 7			

The table value at 5% level of significance and the calculated F Ratio is 48.80 between columns and 3.00 between rows. The calculated value is more than the table value between columns and the calculated value which is less than the table value between rows. Hence there is significant variance between Gender of the Respondents and their opinion towards the overall satisfaction about their job.

value (15.507) at 5% level of significance and therefore, the relationship between experience of the respondents and their opinion about the people in their work group towards improving their performance is significant. Thus the hypothesis is that the relationship between the two factors holds good. Hence the null hypothesis is rejected.

Therefore it is clear that there is significant variance between Gender of the Respondents and their opinion towards the overall satisfaction about their job.

Summary of Results

Findings

- 37% of the respondents belong the age from 30 to 40 years
- More than half (55%) of the respondents are male

- As high as 34% of the respondents have completed Bachelor of Education
- Maximum (36%) of the respondents have 4 to 7 years experience
- Majority (40%) of the respondents are working in Government Aided School
- Less than half (45%) of the respondents are handling High school students
- 32% of the respondents had special interest towards literature

Hypotheses Results (Chi-Square and Anova)

- Chi-square test reveals the relationship between experience of the respondents and their opinion about the benefits from the institution when compared others realize from other institutions is not significant to accept null hypothesis.
- Chi-square test reveals the relationship between experience of the respondents and their opinion about the people in their work group towards improving their performance is significant to reject null hypothesis.
- Analysis of variance reveals the calculated value is more than the table value between columns and the calculated value which is less than the table value between rows. Therefore it is clear that there is significant variance between Gender of the Respondents and their opinion towards the overall satisfaction about their job.

Suggestions

- Since a majority of the teachers feel that the salary is not sufficient, the institutions may consider revising the salary to increase the Job motivation among the

teachers which in turn will increase the job interest among the teachers.

- The teachers may be rewarded through non-financial incentives such as higher status, greater responsibility, participation in decision-making, token rewards like mementos etc. to enrich the motivation.
- There is either less or no co-ordination among the group they belong to and in different departments. Therefore, a meeting could be organised every fortnight to bridge the gap between the departments.
- Training programmes may further be increased in the organisation to enhance their motivation and enrich their efficiency.
- The best teacher may be chosen and rewarded every year in front of the staff and student to boost their motivation.

Conclusion

Study reveals that there is either less or no co-ordination among the group they belong to and in different departments. Therefore, a meeting could be organised every fortnight to bridge the gap between the departments. Since a majority of the teachers feel that the salary is not sufficient, the institutions may consider revising the salary to increase the Job motivation among the teachers which in turn will increase the job interest among the teachers. The provision of welfare measures to the teachers must be enhanced since most of the teachers felt that it was not up to the mark. The best teacher may be chosen and rewarded every year in front of the staff and student to boost their motivation.

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MENTAL HEALTH AMONG HIGHER SECONDARY STUDENTS WITH SPECIAL REFERENCE TO MGEMHS SCHOOL, VAKATHANAM

Shylaja Menon*

ABSTRACT

Mental health is normal state of well being and a condition which is characteristic of an average person who meets the demands of life on the basis of his capacities and limitation. Mental health is not mere absence of mental illness. Good mental health is the ability to respond to the many varied experiences of life with flexibility and sense of purpose. 'Education' in its true sense is a divine journey aiming at the completeness of an individual. As per the Indian context, "Guru" is the concept which leads one from darkness to light. The Indian traditional education was unique among other civilizations of the world with its base in values. A sound mind in a sound body has been recognized as a social ideal for many centuries. Health is multi dimensional and it is defined as a state of complete physical mental and social well being and not merely the absence of disease or infirmity. An attempt is made in this study to collect the socio demographic factors. The research design used in the study was descriptive and diagnostic in nature. The study aims in describing the mental health among higher secondary students. The total population from the higher secondary is 170 students. From which the researcher selected 35 students from 11th standard and 35 students from 12th standard were considered as the population. 70 respondents were taken for the study. Tools used are simple percentage method and chi-square test. It is reported that functional psychosis occur ubiquitously and serious mental disorders with an organic basis occur more frequently as elsewhere in the world. Non-psychiatric mental illness forms a significant part of the case load in all curative health services. The mental health and general health are related to each other. When the general health is low and vice versa. Here by the researcher suggests that both mental health and general health of the students should be taken care.

Key Words: School, Students, Education, Mental Health, Higher Secondary, etc.

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Introduction

Mental health is normal state of well being and in the words of John's Suttan and Webster; "It is a positive but selective quality of life". It is a condition which is characteristic of an average person who meets the demands of life on the basis of his capacities and limitation. Mental health is not mere absence of mental illness. On the other hand it is positive, active quality of the individuals daily living. This quality of living is manifested in the behaviour of an individual, his body and mind are working together in the same direction his thoughts, feeling and actions, function harmoniously towards the common end. It means the ability to balance feeling, desire and ambition and ideals in one's daily living. It means ability to face and accept realities in life.

Good mental health is the ability to respond to the many varied experiences of life with flexibility and sense of purpose. More recently, "Mental Health" has been defined as a "state of balance between individual and the surround world, a state of harmony between oneself and others, a co-existence between realities of the self and that of the other people, and that of environment".

'Education' in its true sense is a divine journey aiming at the completeness of an individual. As per the Indian context, "Guru" is the concept which leads one from darkness to light. The Indian traditional education was unique among other civilizations of the world with its base in values.

Mental Health

A sound mind in a sound body has been recognized as a social ideal for many

centuries. Health is multi dimensional and it is defined as a state of complete physical mental and social well being and not merely the absence of disease or infirmity.

Jahoda (1958) found that most definitions of 'mental health' refer to recurring themes about self, reality and environment like

1. Attitude to self
2. Degree of growth, development, and self actualization
3. Autonomy
4. Master of environment

Mental Health of School Children

Mental health of the school children has received much attention over the last few decades with the onset of mental hygiene movements. Mental health of school children depends on the adequate satisfaction of their basic needs. The organic as well as psychological needs are our basic needs.

Factors Influencing Learning Aspirations

The learning aspirations of a child will be influenced by the home atmosphere, peer group nature and influences, relationships in school, his/her culture, religion, hereditary, various social issues and situations and even the geographic features of his residence.

The Indian View of Mental Health

Before reviewing the development of the modern concepts, it would be appropriate to consider the Indian concept of mental health. Indian Psychiatrists have described now mental health has been an important part of Indian Philosophy and social thought.

Mental Health Services in India

The field of mental health in India as a distinct entire has been hardly Forty years old mental health from times immemorial in the country was not the purview of a single type of faith healers. It was, in fact, as in any other part of the world, considered superstore, which warranty segregation of the affricated, and is looked upon by society with a prismatic or negative attitude.

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Review of Literature

Ng, P.; Chan, K.F, (2002), in their article of “Attitudes towards people with mental illness. Effects of a training program for secondary school students”. The aim of the study is to investigate the influence of a training program on attitude change towards people with mental illness. Methodology of the study is one hundred and seventeen students from 13 schools formed school-based mental health clubs, which composed the treatment group. They were given a mental health training program at different schools. The comparison group consisted of 102 secondary school students who had received no intervention. Students of both groups were assessed before the commencement, at the last session, and seven months after completion of the program with

an OMICC (Opinion about Mental Illness in Chinese Community) scale developed by the authors. The results are the study revealed significant positive changes, which could last a longer period of time, in specific attitudes on separatism and stigmatisation of people with mental illness among students after the training program.

Deyhle and Swisher, (1997) provided for the American Educational Research Association the most recent comprehensive review. They looked at “60 years of educational research on AI/AN education” and pointed out the poor quality of much of the research. They found that research before the 1960s tended to measure AI/AN students using yardsticks, especially intelligence and achievement tests, largely designed for “white” mainstream Euro-Americans. The result was that Indian students were reported to be suffering from cultural and intellectual deficits, in other words they were considered less “civilized” and less intelligent than white Americans were. However, in the National Study of Indian Education, the Goodenough Draw-A-Man [IQ] Test was given to 867 Indian and Eskimo children ages 6 to 8.5 from 25 schools. Their scores were “well above the national average for Caucasians” (Fuchs & Havighurst, 1972, p. 120).

Robert W. Rhodes (1994) in “Nurturing Learning in Native American Students” looked at research on holistic and community-centered approaches to learning and concluded that Native students are most successful when they can be active learners and teachers act as facilitators and coaches. He urges educators to take a “bottom up” approach to education that begins with them studying their students and the homes

and community from which they come. He begins with a very brief history of Indian education and then reviews research on how, why, what, and from whom American Indian students learn, including research on brain dominance, learning styles, whole language, testing, motivation, and discipline.

Methodology

Research methodology is an important phase in any piece of research study. Methodology is defined as the study of methods by which we gain attempts to make a study on mental health among higher secondary students. An attempt is made in this study to collect the socio demographic factors. The research design used in the study was descriptive and diagnostic in nature. The study aims in describing the mental health among higher secondary students. The universe of the study is MGEM Higher Secondary School at Vakathanam, Kottayam District. The total population from the higher secondary is 170 students. From which the researcher selected 35 students from 11th standard and 35 students from 12th standard were considered as the population. 70 respondents were taken for the study. Tools used are simple percentage method and chi-square test.

Analysis and Results

Analysis using simple percentage method and chi-square test to find the relationship between the two factors predicting significant relationship are presented hereunder:

Table 1
Distribution of Respondents by Age

Sl. No.	Age (Years)	Frequency	Percentage
1.	16	31	44.28
2.	17	38	54.28
3.	18	1	1.44
	Total	70	100.00

Table No.1 shows that more than half (54.28 percent) of the respondents are in the age group of 17 years whereas 44.28 percent of the respondents are 16 years of age and the remaining 1.44 percent of the respondents are in the age group of 18 years of age.

Table 2
Distribution of Respondents by Gender

Sl. No.	Gender	Frequency	Percentage
1.	Male	60	85.71
2.	Female	10	14.29
	Total	70	100.00

Table No.2 shows that majority (85.71 percent) of the respondents are male and the rest 14.29 percent of the respondents are female.

Table 3
Distribution of Respondents by their Class Studying

Sl. No.	Class Studying	Frequency	Percentage
1.	11th Standard	35	50
2.	12th Standard	35	50
	Total	70	100.00

Table No.3 shows that half (50 percent) of the respondents are in the 12th Standard and the remaining 50 percent of the respondents are from 11th Standard.

Table 4

Relationship between Gender and General Health among the Respondents

Sl. No.	Gender	General Health				Total	
		Low (1 to 8)		High (9 to 16)			
		F	%	F	%	F	%
1.	Male	34	94	26	76	60	86
2.	Female	2	6	8	24	10	14
	Total	36	100	34	100	70	100

Chi-Square Result : 4.6

Degree of Freedom : 1

Table Value : 3.841

The table shows that out of 36 respondents who's general health was low,

94.4 percent of them were male. It is clear that the table value (3.841) is lesser than the Chi-Square Value (4.6). It is concluded that there is significant relationship between the gender and general health among higher secondary students.

Table 5

Relationship between Class and General Health among the Respondents

Sl. No.	Class	General Health				Total	
		Low (1 to 8)		High (9 to 16)			
		F	%	F	%	F	%
1.	Plus one	19	51	16	48	35	50
2.	Plus Two	18	49	17	52	35	50
	Total	37	100	33	100	70	100

Chi-Square Result : 0.04

Degree of Freedom : 1

Table Value : 3.841

The table shows that out of 37 respondents who's general health was low,

51 percent of them were plus one students. It is clear that the table value (3.841) is more than the Chi-Square Value (0.04). It is concluded that there is no significant relationship between the class and general health among higher secondary students.

Table 6

Relationship between Gender and Mental Health among the Respondents

Sl. No.	Gender	Mental Health		High (9 to 16)		Total	
		Low (1 to 8)					
		F	%	F	%	F	%
1.	Male	29	91	31	82	60	86
2.	Female	3	9	7	18	10	14
	Total	32	100	38	100	70	100

Chi-Square Result : 1.14

Degree of Freedom : 1

Table Value : 3.841

The table shows that out of 38 respondents who's mental health was found high, from

Table 7

Relationship between Class and Mental Health among the Respondents

Sl. No.	Class	Mental Health		High (9 to 16)		Total	
		Low (1 to 8)					
		F	%	F	%	F	%
1.	Plus one	17	53	18	47	35	50
2.	Plus Two	15	47	20	53	35	50
	Total	32	100	38	100	70	100

Chi-Square Result : 0.22

Degree of Freedom : 1

Table Value : 3.841

The table shows that out of 38 respondents who's mental health was high in which 53 percent of the respondents were

Table 8

Relationship between Mental Health and General Health Among The Respondents

Sl. No.	General Health	Mental Health		High (25 to 39)		Total	
		Low (10 to 24)					
		F	%	F	%	F	%
1.	Low (1 to 8)	23	72	14	37	37	53
2.	High (9 to 16)	9	28	24	63	33	47
	Total	32	100	38	100	70	100

which 82 percent of the respondents were male. It is clear that the table value (3.841) is more than the Chi-Square Value (1.14). It is concluded that there is no significant relationship between the gender and mental health among higher secondary students.

plus two students. It is clear that the table value (3.841) is more than the Chi-Square Value (0.22). It is concluded that there is no significant relationship between the class and mental health among higher secondary students.

Chi-Square Result : 8.55

Degree of Freedom : 1

Table Value : 3.841

The table shows that out of 38 respondents 63 percent of the respondents mental health and general health were high. It is clear that the table value (3.841) is less than the Chi-Square Value (8.55). It is concluded that there is significant relationship between the mental health and general health among higher secondary students.

Findings, Suggestions and Conclusion

Findings

- More than half (54.28 percent) of the respondents are in the age of 17 years.
- Majority (85.71 percent) of the respondents were male.
- Half (50 percent) of the respondents were studying in 12th student.
- More than half (59 percent) of the respondents were in the age of 17 years, who's general health was low. The coefficient of correlation is 0.95. It is concluded that there is a significant relation between the age and mental health among the respondents.
- It was found that 94.4 percent of them were male were having low general health. It is clear that the table value (3.841) is lesser than the Chi-Square Value (4.6). It is concluded that there is significant relationship between the gender and general health among higher secondary students.
- It was found that 51 percent of them were plus one students who's general health was low. It is clear that the table value (3.841) is more than the Chi-Square Value (0.04). It is concluded that there

is no significant relationship between the class and general health among higher secondary students.

- It was clear that 82 percent of the respondents were male, who's mental health was found high. It is clear that the table value (3.841) is more than the Chi-Square Value (1.14). It is concluded that there is no significant relationship between the gender and mental health among higher secondary students.
- It is evident that 53 percent of the respondents were plus two students who's mental health was high. It is clear that the table value (3.841) is more than the Chi-Square Value (0.22). It is concluded that there is no significant relationship between the class and mental health among higher secondary students.
- It is clear that 63 percent of the respondents who's mental health and general health were high. It is clear that the table value (3.841) is less than the Chi-Square Value (8.55). It is concluded that there is significant relationship between the mental health and general health among higher secondary students.

Suggestions

- Seminars and awareness programme should be conducted in the schools and other areas about the importance of mental health.
- Parents and family members should give proper guidance to their children regarding the importance of mental health.
- Government can encourage health education programme in the schools.
- Mental health programme should be

included in the school health programme.

- Peer group education programmes helps students to keep a good mental health.
- School counselors can organize the parents of school children and provide valuable information about mental health and of in-house treatment towards the students.
- School authority can select some volunteers among the peer group to observe the problematic students and to give information to the authority.

Conclusion

Mental health of school children has received much attention over the last few decades with the onset of mental hygiene movements. Mental health of school children depends on the adequate satisfaction of their basic needs. The family is a powerful determination of a child's emotional development because of the love, warmth, security, attention, acceptance, happiness and discipline it provides which are the basic requirements for the health growth of the child. As elsewhere in the world, mental disorders, constitutes a very serious problems in the country. It is reported that functional psychosis occur ubiquitously and serious mental disorders with an organic basis occur more frequently as elsewhere in the world. Non-psychiatric mental illness forms a significant part of the case load in all curative health services. The mental health and general health are related to each other. When the general health is low and vice versa. Here by the researcher suggests that both mental health and general health of the students should be taken care.

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EQUITABLE EDUCATION FOR THE UNDERREPRESENTED GROUPS - A REVIEW OF NATIONAL POLICY ON EDUCATION, 2019

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Abstract

Education is the systematic and deliberate process that equips the learner with knowledge, attainment of skills, values, and attitudes which enable them to participate effectively in all spheres of life. The constitution of India guarantees free and compulsory education to children of every section. It guarantees every child the right to education of a comparable quality. The major objective of the draft national policy on Education 2019 is to achieve an inclusive and equitable education system so that all children have equal opportunity to learn and thrive, and so that participation and learning outcomes are equalized across all genders and social categories by 2030. Education is the largest tool for achieving social justice and equality for all. The NPE mainly focused on the removal of disparities in the field of education. The three most important principles of this convention are the right to participation, the right to information and the right to organization. Underrepresented groups in education can be broadly classified into those having given gender identities, socio cultural identities, special needs, and socio-economic conditions. Adequate steps must be taken urgently to understand the obstacles students face and to implement remedial measures ensuring inclusive and equitable participation of children from the under privileged groups. The national education Policy focuses intensified policy efforts to support all underrepresented groups in school education.

Key words: *Equitable education, underrepresented groups, National policy on education, Skill attainment, Compulsory education, Educational disparities, etc.*

Introduction

Education is the systematic and deliberate process that equips the learner with knowledge, attainment of skills, values, and attitudes which enable them

to participate effectively in all spheres of life. There will be no doubt by saying that education is a process be it bi-polar or tri-polar as viewed by many educationists and

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ideologists revolve around a central aspect i.e. learner. The entire process of education is worthless if it is not as per the consideration of the learner as an individual and as the part of a big society, so classrooms should be designed to welcome the diverse learners and address their individual needs.

The constitution of India guarantees free and compulsory education to children of every section. It guarantees every child the right to education of a comparable quality. The Supreme Court of India says, the right to education flows directly from the right to life and is related to the dignity of the individual. More than 500 million people around the world are disabled as consequences of mental or physical or sensory impairment. In developing countries more than 90% of differently abled children are without any form of rehabilitation and education.

The major objective of the draft national policy on Education 2019 is to achieve an inclusive and equitable education system so that all children have equal opportunity to learn and thrive, and so that participation and learning outcomes are equalized across all genders and social categories by 2030. In its preamble, the Chairman of the committee Sri. K. Kasthurirangan commented that, the vision of India's new education system has accordingly been crafted to ensure that it touches the life of each and every citizen, consistent with their ability to contribute to many growing developmental imperatives of this country on the one hand, and towards creating a just and equitable society on the other. Education of Children With Special Needs (CWSN) has witnessed several changes, shifting from segregation to inclusion into the mainstream. The 86th

amendment of the constitution of India that made education a fundamental right was passed in the year 2002. The article 21A in the constitution, which was inserted as part of the 86th amendment says that it is the right of all children to get free and compulsory education up to the age of 14 years.

Education is the largest tool for achieving social justice and equality for all. For achieving an inclusive and equitable society, inclusive and equitable education is an essential goal in its own right. In our society, each and every one has the opportunity to dream, thrive, and contribute to the nation (Pattnaik 2014). There are certain factors that affect people's capacity to benefit from the education system, compounding social cleavages that hold the nation back from growth, innovation, and progress. The major factors among them are prejudice and bias, based on gender, social and economic status, and special needs. The draft national policy on Education, 2019 aims to mould the system of education that benefits all children so that no child loses any opportunity to learn and excel because of the circumstances of birth or background.

The Indian Education Commission (1964-66) was the first statutory body to suggest that "education of handicapped children has to be organized not merely on humanitarian grounds but also on grounds of reality". The commission also emphasized that the education of handicapped children should be "an inseparable part of the general education system". The commission recommended for the adoption of two approaches, special education and integrated education. During 1980s, many differently abled students began to be integrated

into the regular classroom on a part time basis. By the late 1980's attempts to educate children with disabilities in the regular classroom on a fulltime basis were intensified. Integrated education for disabled children was the favoured practice in all countries into 1994 World Conference on Special Education Needs at Salamanca, Spain. (Dash, 2012).

The National Curriculum Framework for School Education (NCFSE, 2000) brought out by the NCERT, recommended inclusive schools for all without specific reference to pupils with Special Educational Needs (SEN) as a way of providing quality education to all learners. According to NCFSE, segregation or isolation is good neither for learners with disabilities nor for general learners without disabilities. Societal requirement is that learners with special rules should be educated along with other learners with inclusive schools, which are cost effective and have sound pedagogical practices. Education of children with disability has been part of the National Policy on Education (NPE) 1986 and the Programme of Action (POA) 1992. These policies stress on reducing dropout rates, improving learning achievements and expanding access to students. The 93rd amendment of the constitution of India has made education a fundamental right for children in the 6-14 years age group. It is mandatory for all children to be brought in the system of education irrespective of disabilities.

India has signed the convention on the Rights of Child (CRC 1989). The three most important principles of this convention are the right to participation, the right to

information and the right to organization. The convention on the Rights of the Child does not concern itself only with the protection of children and the delivery or provision of services and programmes, but also ensures that children have the right to determine the quality and nature of these services and programmes. The National Curriculum Framework (NCF 2005) says about children's rights and participation of all children as, Inclusive education is about embracing all, Disability is a social responsibility – accept it, No selection procedures to be adopted for denying admission to learners with disabilities and Children do not fail, they only indicate failure of the school. The national curriculum Framework focuses on the principle Accept difference Celebrate diversity.

A policy of inclusion needs to be implemented in all schools and throughout our education system. The participation of all children needs to be ensured in all spheres of their life in and outside the school. Schools need to become centers that prepare children for life and ensure that all children, especially the differently abled, children from marginalized sections, and children in difficult circumstances get the maximum benefit of this critical area of education (NCF 2005).

National Policy on Education, 1986

The National Policy on Education (NPE) mainly focused on the removal of disparities in the field of education especially those children who need special needs. To NPE, 'the objective should be to integrate the physically and mentally handicapped with the general community as

equal partners, to prepare them for normal growth and to enable them to face life with courage and confidence". The policy also stressed on special emphasis on the removal of disparities and to equalize educational opportunity especially for Indian women, Scheduled castes and Scheduled tribes.

The major measures will be taken according to NPE related to differently abled children are;

1. Whenever it is feasible, the education of children with motor handicaps and other mild handicaps will be common with that of others.
2. Special schools with hostels will be provided, as far as possible at district headquarters, for the severely handicapped children.
3. Adequate arrangements will be made to give vocational training to the disabled.
4. Teachers training programmes will be re-oriented, in particular for teachers of primary classes, to deal with the special difficulties of the handicapped children.
5. Voluntary effort for the education of the disabled will be encouraged in every possible manner.

Various data regarding education and 2011 census shows that, over the last three decades, the Indian education system and successive government policies have made steady progress towards bridging gender and social category gaps in all levels of school education. There is tremendous growth in the field of education for the differently abled. Various policies and programmes were introduced by the Central government and various State governments for the promotion of education for the unprivileged groups who

are part and parcel of the concept of inclusive education. However, large disparities still remain, especially at the secondary level, particularly for groups that have been historically underrepresented in education.

Underrepresented groups in education can be broadly classified into those having given gender identities, socio cultural identities, special needs, and socio-economic conditions. Under gender identities, women and transgender individuals are included. Scheduled Castes, scheduled Tribes, OBCs, migrant communities and Muslims are included under the head socio cultural Identities. While overall enrolments in schools decline steadily from Grade 1 to Grade 12, this decline in enrolments is considerably more pronounced for many of these Underrepresented groups. According to Unified district Information system 2016-17 data, 19.6% of students belong to Scheduled castes at the primary school level, but this percentage falls to 17.3% at the higher secondary level. The condition is more dangerous for the scheduled Tribe Students because their rate of enrolment declined 10.6% to 6.8%. The Muslim students also in a pathetic condition, from 15% to 7.9% and for the differently abled it was 1.1% to 0.25%. When analyse these data, it is clear that the greater declines were for female students within each of these underrepresented groups and the decline is steeped in the case of higher education.

The above statistical figures make clear that inequities affect children from the primary class itself. Adequate steps must be taken urgently to understand the obstacles students face and to implement remedial measures ensuring inclusive and

equitable participation of children from the under privileged groups across all levels of school education, beginning in a child's early years. This steps will also help ensure that all children irrespective of disabilities and other issues will be a part of an inclusive and equitable society when they grow up, which in turn will raise the peace, harmony, and productivity of the nation.

Reason for exclusion and discrimination in education

According to the National Policy on Education, 2019, the basic reason for the exclusion of children from the underprivileged group is that they often suffer from lack of access to schools, especially quality schools. In addition to accessing, there are a lot of other reasons for the exclusion and discrimination in education. Many other issues create barriers to learning which in turn lead to low attendance, poor learning outcomes, and higher rate of dropouts. Poverty plays a major role in exclusion and discrimination. Children from poorer homes often also suffer nutritional deficiencies that have a direct impact on learning.

The lack of quality infrastructure, functional and secure toilets, and safe drinking water in schools in poorer areas represents a severe form of discrimination in education for children from socio-economically disadvantaged communities. The lack of good libraries, laboratories, and learning supplies at school hits children from disadvantaged communities the hardest, as they generally will not have as many educational resources at home. Social mores and biases also contribute the reason for

exclusion and discrimination in education. Many of the communities in India believe that girls need not go through formal schooling. School curriculum and textbooks also play a role for the exclusion and discrimination in education. For some communities, the connection between formal schooling and their own lives is unclear, e.g. in cases of exclusionary curricula that do not refer to what is familiar, valuable, or relatable to them. Indeed, any analysis of the existing curricula, pedagogy or textbooks exhibits a biased picture of life where the view of the "powerful" prevails: for example, the earning member of a family

is almost always male in our textbooks; names of children in stories might not reflect all communities; there are almost no references to people that are differently-abled. Thus many of our classroom processes do not welcome or encourage children from disadvantaged or underrepresented communities.

Upliftment of underrepresented groups in education

The Draft National Education Policy focuses intensified policy efforts to support all underrepresented groups in school education. The major areas recommended by the policy are,

1. Establishment of Special Education Zones

Special Education Zones will be set up in disadvantaged regions across the country. The various census data reveals that there are significantly higher proportions of students from underrepresented groups in certain geographical areas. The Central government

will support extra investment and per-child expenditure in the ratio of 2:1 for each rupee spent by the State in these Zones. These extra investments will be spent on multiple aspects required for improving educational outcomes in these regions.

2. Availability and capacity development of teachers

Inclusive education will be an integral part of both pre-service teacher education as well as in in-service professional development, including for Anganwadi workers, pre-school and school teachers, school leaders, and other education functionaries. These programmes will ensure that all teachers are continuously sensitised about different learners and hence will be able to cater to the educational needs of all learners, particularly from URGs .

3. Teacher Pupil Ratio

The Draft National Policy suggests teacher Pupil Ratio in schools with a high proportion of learners from underrepresented groups should not be more than 25:1. This ratio is keeping in mind the remedial measures and bridge activities that will be required at every such school on a continuous basis until such time that the gaps are bridged.

4. Creation of inclusive school environments

The policy proposes to establish mechanisms to address discrimination, harassment and intimidation. Schools will define and enforce rules and regulations to ensure privacy, dignity, safety, and access to all school resources, activities, and events for learners from underrepresented groups.

(a) Eliminating exclusionary practices

Clear criteria on equity and inclusiveness will be laid down that schools will be expected to follow. Criteria for assessing equity and inclusiveness of all schools will be developed and given adequate weight during accreditation or self-evaluation processes.

(b) Sensitizing learners

All students will develop sensitivity and appreciation of the diverse cultures and traditions to which we belong. A concerted set of actions on various fronts will be implemented, e.g. through inclusion of narratives around different socio-economic situations in the curriculum, questioning simplistic labeling of individuals on the basis of their community or beliefs, etc. Basic human values of tolerance, inclusiveness, equity, empathy, helpfulness, service, etc. will be incorporated throughout the curriculum.

(c) Inclusive curriculum

School curricula, syllabi and teaching learning materials will be reviewed to identify and remove overt or hidden bias and stereotyping. In all curricular reform, a concerted effort will be made to mainstream issues related to underrepresented groups in curricula for school education as well as for teacher development programmes.

5. Financial support to individual students

(a) Targeted scholarships

A special National Fund will be created specifically for providing scholarships and developing resources and facilities for students from underrepresented groups.

Additionally, data will be linked to the National Repository of Educational Data (NRED) to ensure that no student is denied due support or resources, while also ensuring that the privacy and dignity of students are always respected.

(b) Alternative means of support

In addition to provide scholarships, other means of support may also be made available. Some of them are,

- Selection of talented and meritorious students from underrepresented groupss to participate in National Tutors Programme and Remedial Instructional Aides Programme as educational role models, tutors, and instructional aides.
- Food in morning, particularly for learners in economically-disadvantaged areas, following similar quality standards as for midday meals.
- Special internship opportunities under various departments concerned with the development of underrepresented groups.

The National Education Policy 2019 provides a framework for the transformation and modernization of the education system especially focusing on the education of underrepresented groups in order to respond to the requirements of fast-changing and knowledge-based societies. Highest priority is accorded to the task of ensuring universal access to an education of high quality and breadth that would support India's continued ascent, progress, and leadership on the global stage in terms of economic development, social justice and equality. An education system built on the premises of quality and equity is considered central to

sustainable development, achieving success in the emerging knowledge economy and society, for socio-economic mobility, and for building an equitable, just and humane society.

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TRANSFORMATIONAL ADVANCEMENT OF ENGLISH EDUCATION: AN INDIAN PERSPECTIVE IN THE MODERN ERA

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Abstract

In the modern era of globalization, English enjoys the status of an international language. After realizing the advantages of knowing English language, a large number of people began to learn it and consequently English education attained a greater importance in the world. India, where English is strongly rooted since the colonial invasion, also witnessed the advancement in English education. This paper is an attempt to evaluate the various aspects of the transformation of English education in modern India.

Keywords: Wood's dispatch, Official language, Lingua franca, ELT

Introduction

India is a multilingual nation where a number of different languages have been used by people in different parts of the country. Eighteen languages have been recognized in the Indian constitution for official use. The variety of languages in India underlines and affirms the very characteristic of Indian culture popularly acknowledged as 'unity in diversity'.

It has been nearly 400 years since English language came to our country with the British invaders. Since then English language and English education have enjoyed a privileged status in the academic

and non-academic sector of India. Though the invaders left India on 15 August 1947, the language they introduced stayed with us and exerted its influence in almost every field of the public life.

It is worth important to consider the fact that India, a multilingual nation, is the third largest English-speaking country in the world where the US and UK being the first and the second. In India, now it is increasingly catered as a must-know language. Knowing English will enable the individual to have a wide exposure to the outer world which will in turn make an influence in his personal and professional life.

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English occupies a prestigious position in the minds of the educated Indians. It has been used by people who belong to different language groups in their interpersonal communications. Being a multilingual nation, in India, English also serves the function of a connecting language or link language. In the administrative level, in the case of interstate dealings and center-state proceedings English plays the role of a common language. In India it is also the language of judiciary.

In the modern era of 21st century English has grown into the stature of an international language. The real importance of using English language is not just in how many people speak it but in what it is used for. English is being celebrated as the language of globalization and glocalization. It is the major language of trade and commerce, news and information, science and technology in this ever developing modern world. It is the language of higher education and research, telecommunication and internet, library, maritime communication and internal air traffic control. Thus it has attained the status of a global language in the ever changing economic context.

English was widely exposed to our country, thanks to the incorporation of English East India Company and the educational policies of Lord Macaulay. In the beginning, Britishers did not intend to spread English education in India just because of the fear that the educated Indians will eventually turn against and oppose the alien rule. So they mainly focused on the encouragement of classical learning. But eventually the political necessity made them to promote English education among

Indians. Meanwhile there occurred the oriental-occidental controversy regarding education in India and the committee headed by Macaulay insisted upon the importance of English education and the use of English language as the medium of instruction. Macaulay's motives in spreading English in India is just to create a class of persons 'Indian in blood and colour but English in taste, in opinions, morals and intellect'.

But English education in India attained a systematic structure after the introduction of Wood's Dispatch of 1854 which has been popularly known as the 'Magna Carta' of Indian education. In Wood's Dispatch it was affirmed that:

The English language is to be the medium of instruction in the higher branches and the vernacular in the lower. English is to be taught where there is demand for it but it is not to be substituted for the vernacular languages of the country. (22-23)

English continues to be the favourite language of the elite class and the majority of the educated middle class Indians in the post-independence era too. Though it is argued that English has the hegemonic colonial nature in it, all such arguments were not powerful enough to diminish the widely accepted practical use of English which makes this language a day to day necessity. The importance of English has been fully acknowledged by all the education commissions appointed by the government of India. The first education commission in post independent India, University Education Commission led by Dr. S. Radhakrishnan in 1950-1951 opined in the report:

...English be studied in high schools and in the universities in order that we may keep in touch with the living stream of ever-growing knowledge. (23)

Many other education commissions and agencies including Mudaliyar commission and the Central Advisory Board of Education also have examined the place of English in Indian Education system at different periods and all reports acknowledged the importance of English education in India.

English enjoys the role of second language in India today. In schools and colleges in India, English is taught as a second language. Fluency and proficiency in English is a well sought eligibility in acquiring well-paid jobs in the professional world. In India English was given a constitutional acknowledgement through the Official Language Act of 1965 which gave Hindi in 'Devanagari' script the status of official language of the union and English the status of the 'subsidiary' official language of India. Catering to the increasing importance of English in the modern era, many of the Indian states have made English a compulsory language in its educational system. The demand for the introduction of English language from the very beginning of the formal education of a child gets strong support from the educated society. The Position Paper on the Teaching of English prepared and published by the National Council of Educational Research and Training (NCERT) in connection with the National Curriculum Framework 2005 (NCF 2005) points out the Indian perspective about English language:

English in India is a symbol of people's aspirations for quality in education and fuller participation in national and international life...The level of introduction of English has now become a matter of political response to people's aspirations, rendering almost irrelevant an academic debate on the merits of a very early introduction. (1)

From the status of a language of educated elite persons, English has now transformed into the language of interconnection or a 'Lingua Franca' for communication, business purposes, administration, commerce and education. The question of "do we still need English in India?" seems to be irrelevant and redundant. A significant percentage of Indian students do well in foreign universities. English newspapers and magazines are well circulated and popular in the Indian society. The numerous English channels available in India influence and encourage the people to attain mastery over English. The mushrooming of English medium schools irrespective of the rural and urban areas in India is a clear indication of the admiration and affinity that the Indian people exhibits towards English language.

English education has improved tremendously in India in the last two decades. English education is manifested through English Language Teaching (ELT). The advancement of technology and the expansion of digitalized information has resulted the successful execution of ELT. Teaching any language is an act of acquiring a sequence of skills that consists of listening, speaking, reading and writing and so is in the case of English language. The introduction

of audio visual aids in English Language Teaching has tremendously assisted the language teachers to produce better output in the class rooms.

English education in modern India has become an important field in the educational system of the country. The government itself has realized the importance of English language and established English and Foreign Language University (EFLU) at Hyderabad to promote English education in the higher stages. English is now taught and studied not out of any compulsion, but after realizing the advantages of knowing it. Today, in India, the motives of teaching and learning English is no longer political, but scientific and technological. The transformation of English education in modern India is such that even the common people could realize the necessity of learning English language and incessant efforts have been made both at the public and private level to make it accessible to all who intends to learn it.

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THE CRUCIAL ROLE OF ACTIVITY BASED LEARNING IN COMMERCE AND MANAGEMENT EDUCATION

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Ramya .J**

Abstract

Education in recent years has undergone a radical change, which led to the development of newer areas of educational endeavour. One of the most important change is the shift from the teacher-centric to a learner-centric system. Activity-based learning (ABL) is one such successful teaching model, and has recently found its way in to the field of Commerce and Management. At its core, this approach provides a way to integrate learning within students' knowledge, and by exposing them to a variety of activities. Due to the high degree of interaction in ABL, essential instructor skills involve facilitating, motivating, enabling and coaching rather than simply presenting facts and figures didactically. Implementing an "innovative" teaching approach is only successful when the specific infrastructure and student situation are considered. Integrating ABL elements is thus a promising way to enhance students' learning experiences" in the field of commerce and management education.

Key Words: Activity based learning, Crucial role, Reshaping

Introduction

There are numerous individual learning theories attempting to find answers to the problems of helping students learn and adapt to new situations; two stand out: behaviourist theory and cognitive theory. Behaviourist theory states that only small bits of information are transferred to learners,

and learning success is achieved only when a connection is established between a stimulus and a response. The second theory, cognitive theory, stresses the importance that learning is a result of the interaction of a particular structure and a person's own psychological environment. In this theory,

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learning modifies the student's "world of knowledge" by interaction processes, so that he or she acquires new insights or changes old ones.

Activity-based learning (ABL) model is a cognitive-learning model which is considered a "constructivist" learning theory. Its core premises include the requirement that learning should be based on doing some hands-on experiments and activities. The idea of activity-based learning is rooted in the common notion that children are active learners rather than passive recipients of information. If child is provided with the opportunity to explore on their own and an optimum learning environment then the learning becomes joyful and long-lasting.

Need for Reshaping the Commerce and Management Education

In recent years Commerce and Management schools have come under attack for the poor job they do of providing relevant training and skills for their students. There is growing corporate demand for pedagogical techniques that focus on their immediate problems rather than on lofty theories or even case studies. Change is driven by many other factors as well, including the increasing importance of international rankings, public pressure on teaching performance and the more focused agendas of governmental funding agencies. Primarily as a result of the changes in the way business organizations function, colleges of business are subject to pressures from a number of stakeholder groups, including employers, advisory boards, accrediting bodies, alumni, legislators, and students.

As institutions of higher education are perceived to exist for the public good, they are increasingly held accountable for the quality of outputs produced. An emphasis on skill development has transformed the curriculum debate, Business speakers at a recent international Association for Management Education symposium on continuous learning, continued to make the plea as they challenged commerce and management schools to "be more proactive and partner with business leaders in their communities and to make their curricula more relevant".

Important ABL Techniques in Commerce and Management Education

To become more impressive to commerce and management education following activity based learning Techniques should be taken into consideration during the academic study period.

Internships: Internships are coordinated activities and agreements that allow students to work in a work place for a significant period of time. Internships are mostly used in higher level of education.

Industrial Tour/Field Trip: Industrial visit/ Field trips provide direct experience in a natural setting. It is a bridging point between the education and industry. This is done to highlight pragmatic application of knowledge.

Brain Storming: Here a group of participants tackle a single problem and storm their brain for new ideas in a free and uninhibited manner. All possible solutions are listed as they are formulated without any evaluations, which are reserved for the end of the session.

Educational Websites: In smart class learning education is provided by computers, internet and multimedia, and also several educational websites which provide interactive learning environment for learners. These educational websites designed in a manner where learning is a fun. Once students learn to operate the website, they enable to learn individually. In such an environment, the teachers' role is to facilitate learning.

On The Job Projects: The universities have introduced on the job training projects/ aspects (work integrated learning) in their courses to make students more industry savvy and thus more effective in what they do in the workplace.

Class discussion: It is a planned, informal group technique in which small number of participants joins in a purposeful talk about a topic, under the guidance of a leader. A worthy follow-up activity should also be done.

Audio- visual aids: Audio- visual aids are the different types of tools that appeal to the sense of hearing and vision and are used in classrooms for presentation of variety of information.

Collaborative learning group: This is where we allot learners in groups of 3-6 people and they are given an assignment or task to work collectively. This assignment could be either to answer a question to present to the entire class or a project. The students in the group choose a leader and a note-taker to keep them on track with the process.

Student debate: A student debate is an active way for students to learn because they

allow students the chance to take a position and gather information to support their views and explain this to others. It lets them gain some experience with giving a verbal presentation.

Reaction to a video: A reaction to a video is also an example of active learning because most students like to experience videos. We have to be sure that the video relates to the topic that they are studying at the moment.

Conference/Seminars: In commerce and management education seminar refers to structural group discussion that may precede or follow a formal lecture, often in the form of an essay or paper presentation by students and teachers. It provides sharing of experience, group thinking and develops understanding.

Symposium: Symposium is a discussion by different specialist or speakers on the same topic, emphasizing or dealing with different aspects of the similar theme.

Advantage of Abl Approach for Teachers and Student in Commerce and Mangment Education

For Teachers

It saves teacher's time and effort as it is easier to perform experiment than to supervise.

It is one of the best techniques of teaching to get the participation of the Students.

It helps to promote relevant and useful discussions in the class -rooms and also provides opportunity to question and to review

Activity-based method of teaching make the students keep busy in various activities like observing, taking notes, answering and questioning, drawing diagrams and so on.

Activity-based method of teaching provides a realistic, practical, learner centred and utilitarian values to the teaching learning process.

Activity-based method of teaching helps to bring change in the atmosphere of the class. The traditional monotony goes away.

In Activity-based method of teaching, the attitude of the teacher is very friendly. The pleasant and natural atmosphere thus created, greatly helps proper learning.

For Students

Commerce students are provided with the knowledge of computer accounting software e.g. TALLY ERP 9 etc. It helps the students in the development of knowledge and skills.

The commerce and management college should provide education through computers, internet and multimedia, and educational websites providing the interactive learning environment for learners.

Students will be provided with a commerce lab in every institution and there should be discussion on practical aspect of commerce. It helps the students to develop competencies at mastery level.

Under ABL approach the students can have insight and better understanding of various complicated and difficult topics such as how to prepare Demand draft/ Pay orders, Deposit cash into bank, withdrawal

of cash, Cheque procedure and other bank transactions.

Practical accounting classes helps the students to understand the original format of Journal, Ledger, Subsidiary books, Debit note, credit note etc. and how to record it by himself in these format. It provides a realistic and practical learning for the students.

Institution following ABL approach will try to provide a provision of short term practical training in any business organization or in a production unit. The period may be of 10 to 15 days or more. It may be in vacation period. This training should be compulsory every year during the college education. It helps the pupils to develop scientific attitude and get training in scientific method.

Seminars, Lecture of eminent educationist and experts on various topics, symposium are organised by the institute. It will be helpful to enhance the analytical capacity of the students.

Conclusion

The world we live in is dynamic, where time determines everything. The growing high-tech environment, changing consumer behaviour, economic trends, importance of customer service-based differentiation strategies are making it necessary that a student should be able enough to deal with all possible circumstances. The curriculum and programs are generally designed by academicians without any feedback from industry. At present, various accreditation bodies in commerce and management education stress the need to integrate what industry needs with what universities

produce. Thus teaching of various subjects and engaging students meaningfully in the classroom have become truly challenging. It has been observed that students retain more information when active learning methods are used in the classroom. An outcome of successful learning would be that the student has acquired the basic literacy skills and is able to apply this knowledge or skill learnt in a relevant situation. The study reveals that Activity based learning is better than chalk and talk method, retention ratio will increase, attendance in class and confidence level of the students will improve. Learning becomes fun and the subject can be learnt without burden. It also develops other skills like creative and communication skill, teamwork etc. among students.

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THE EFFECTIVENESS OF BLENDED LEARNING ON ACHIEVEMENT IN MATHEMATICS

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Abstract

It is in this scenario that we are exploring the relative importance of Information Technology and I.T enabled education. Rapid advancement in Science and technology has an impact on all the realms. Thus IT skill sets have become one among the important life skills in this modern era. The purpose of the study was to find out the effectiveness of Blended Learning on Achievement in Mathematics. It is a quasi experimental study, a total of 80 students were divided into two groups with 40 members each. One group is treated as control and another group as experimental. Blended learning and Achievement in Mathematics are the variables in the present study. The result shows that Blended Learning can enhance the achievement in Mathematics.

Keywords: Effectiveness, Blended Learning, Achievement

Introduction

Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs and habits. Education frequently takes place under the guidance of educators, but learners may also educate themselves. There are many methods for teaching and learning process. Effective learning depends on many factors. Traditional teaching techniques, based mainly on a teacher explaining a topic and students taking notes, may still be used full on occasion, but education today revolves more around encouraging the

students to awaken their curiosity and desire to learn. A number of different teaching techniques have emerged due to this change in education. According to Yen & Lee (2011), the use of technology in the class room has simply given education a new lease of life allowing us to approach old ideas in new ways. The online learning or e-learning mode has been a major trend in higher education.

Due to this modern trend in education, blended Learning plays a major role in the

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present education scenario. In 2006, the term became more concrete with the publication of the first *Handbook of Blended Learning* by Bonk and Graham. Graham challenged the breadth and ambiguity of the term's definition, and defined «blended learning systems» as learning systems that “combine face-to-face instruction with computer mediated instruction”.

Blended learning is considered, complimentary use of face – to – face teaching, online tools technology and resources to enhance student education. It encompasses student use of internet, mobile devices and social media in their learning, the use of Virtual Learning Environment, e- assessment, lecture capture and desk top capture, and other learning and teaching approaches, usually mixed together with traditional face- to- face teaching. Since the Blended Learning is mixed-mode learning we can blend two or more strategies for learning a single concept. It will help to clarify the abstract mathematical ideas as concrete. Online learning stimulates pupil participation and also makes the teaching learning process interesting.

Literature Review

Jessica Ravenel, Dawn T. Lambeth and Bob Spires (2014) designed a study on Effects of Computer- Based Programs on Mathematical Achievement scores for Fourth-Grade students. They concluded that engagement among students in the computer-based group is more than that of the students in the hands-on group. Yaghmour and Kholoud Subhi (2016) investigated a study on Effectiveness of Blended Teaching Strategy on the

Achievement of Third Grade Students in Mathematics. The findings showed that there is a statistical difference on items of achievement test for third grade students in mathematics combined between the performances of the members of the two groups in favor of the experimental group who were taught using the Blended Education strategy.

Dowling, Godfrey and Gyles (2003) conducted a study in which the association between the learning outcomes of students and two teaching modules: traditional face-to-face and hybrid flexible delivery. Results indicated that the hybrid flexible delivery model is more positively associated with students' final marks and improved learning outcomes. Lin, Ya-Wen' Tseng, Chih-Lung, Chiang and Po-Jui (2017) conducted a research on the The Effect of Blended Learning in Mathematics Course. The findings revealed that the blended learning experience benefitted students in the experimental group by having a positive effect not only on the learning outcomes, but also on their attitudes toward studying mathematics in a blended environment. The studies indicate that Blended Learning has positive effect on the Achievement in Mathematics.

Theoretical Framework

The term '*effectiveness*' is the capability of producing a desired result. It is the outcome of the experiment when the influence of one factor is dependent. Good (1973) defined the term Effectiveness as the “use of plan for instruction or presentation which causes desired change in learner's behavior” (Good, 1973).

Blended Learning is defined as the teaching models that are integrated with technology, such as e-mails, streaming media, and the Internet, and can be combined with traditional teaching methods, Marsh & Drexler (2001) and Willett (2002).

Statement of the problem

The present study aims to find out the effectiveness of Blended Learning on the Achievement in Mathematics. Hence the present study is entitled as “Effectiveness of Blended Learning on Achievement in Mathematics among Secondary School Students”

The objective of the study

The objective of the study is to examine the effectiveness of Blended Learning on the Achievement in Mathematics.

Methodology

Experimental method is used for the present study.

Participants. The sample for the present study consists of 80 students

Table 1

Summary of the Descriptive Statistics of the Scores of the Achievement in Mathematics of the entire sample

Group	Test	n	M	Md	Mo	SD	Sk	Ku
Control	Pre-test	40	5.73	5.50	5.00	2.16	0.74	1.35
	Post-test	40	8.900	8.00	8.00	4.58	1.00	0.617
Experimental	Pre-test	40	5.13	5.00	5.00	2.75	0.31	0.22
	Post-test	40	11.55	11.5	11.00	4.98	0.215	0.46

Table 2 presents the test of significance of the difference between the mean pre-test

of class IX at Sabari Higher Secondary School, Palakkad district. A class with 40 students was considered as control group and another group with 40 students was treated as experimental group. The control group is taught with traditional method on the topic ‘Solids’ in Mathematics. The experimental group is taught with Blended Learning method in the same topic.

Measures. Achievement test in Mathematics.

Data Analysis

The statistical tools employed are descriptive Statistics; Test of Significance of difference between two means (*t* test) was done to find out the significant difference between two means and Analysis of Covariance (ANCOVA).

Results

Table 1 presents the Descriptive Statistics of the Scores of Achievement in Mathematics of both groups.

and post-test scores of Achievement in Mathematics of the control group.

Table 2

Data and Results of Test of Significance of the Difference in the Mean Pre-Test and Post-Test Scores of Achievement in Mathematics of the Control Group.

Control group	n	M	SD	t	p
Pre- test	40	5.73	2.16		
Post-test	40	8.9	4.58	4.45	P<0.05

The table indicates that there exists a significant difference between the mean pre-test and post-test scores of Control Group.

Table 3

Data and result of Test of Significance of Difference in Mean Pre-test and Post-test Scores of Achievement in Mathematics of the experimental group.

Experimental group	N	M	SD	t	p
Pre- test	40	5.13	2.75		
Post-test	40	11.55	4.98	8.45	P<0.05

Table 3 indicates that there exists significant difference between the mean pre-test and post-test scores of experimental group at 0.01 level.

Table 3 presents the mean pre-test and post-test scores of Achievement in Mathematics of the experimental group.

Table 4 shows the result of ANCOVA for the post-test scores Achievement in Mathematics for the Experimental and Control groups by considering pre-test scores as covariate.

Table 4

The result of the Test of Significance of Difference in the Adjusted Mean Scores of the Test on Achievement in Mathematics.

Source of variation	SS	Df	MS	F	P
Between Groups	78.75	1	78.75	3.69	<0.05
Within Groups	1640.41	77	21.3		

Table 4 indicates that the adjusted F value for $df1/77$ is 3.69, which is significant in 0.01 level.

Discussion

The results show that post-test scores on Achievement in Mathematics of the control group are significantly higher

than that of pre-test. Also there is a significant difference in the mean pre-test and post-test scores of the experimental group. While comparing the post-test scores of experimental and control group there is a significant difference between the mean post test scores of control

and experimental group. It means the achievement in Mathematics is enhanced by using Blended Learning method. As there is a significant difference in the post-test scores between the control and experimental groups, and the experimental group post-test scores are higher than that of the control. While comparing the adjusted mean post-test scores of experimental and control group by considering pre-test scores as co-variance there exist a significant difference between the scores. Hence it can be concluded that Blended Learning is effective on the Achievement in Mathematics.

The implications of the study

Since Mathematics is a dry subject, it is necessary to bring advanced teaching methods for the transaction of the contents. Blended Learning Approach is a remedy for reducing the complexities of teaching Mathematics. The abstract nature of Mathematics is another cause for making the subject as a difficult one. Blended Learning is helpful for reducing the abstractness of the mathematics. Online instruction helps the learners to learn with their own pace and time. Hence it will be helpful to understand the contents and makes a curiosity among the learners. Hence the use of Blended Learning is helpful for the better Achievement in Mathematics.

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THE CONCEPTUALIZATION OF EDUCATION AND ENGAGED PEDAGOGY IN BELL HOOKS' *TEACHING TO TRANSGRESS: EDUCATION AS THE PRACTICE OF FREEDOM*

Ashima Bharathan P.K*

Introduction

To fulfill that mission, my teachers made sure they “knew” us. They knew our parents, our economic status, where we worshipped, what our homes were like, and how we were treated in the family. (Hooks)

Writer, professor, and human rights activist, bell hooks is one of the most promising ‘cross-over’ academics of the later twentieth century. Her works focus on the flourishing of race and gender in today’s world. Born as Gloria Jean Watkins on September 25, 1952, bell hooks spent his childhood on Hopkinsville in Kentucky, a small, isolated (by race) town in suburban Kentucky. She recollected her locality as a “world where folks were content to get by on a little, where Baba, mama’s mother, made soap, dug fishing worms, set traps for rabbits, made butter and wine, sewed quilts, and wrung the necks of chickens” (Hooks). She later expressed how this region survived the hardships racism has created into an origin of strength. The neighborhood where she

was raised , furnished young grandeur with her opposition to racism, but it also provided her with the favorable and unfavorable experiences that would mould her feminism i.e. reinforcement of equal rights for women

Elaboration

Teaching to Transgress: Education as the Practice of Freedom, a labour of non-fiction by teacher, writer, and social activist bell hooks, looks into a close analysis of the classroom and its invigorates the challenges teachers and students encounter ,surrounding identity and freedom in an academic space. It also discusses the scope of education to help students access that freedom. Hooks penned this book in the 1990s as she initially started working as a professor in New York City.

This book is devoted to teaching. Of the 14 chapters, an index and commencement, the author makes clear a number of feelings, identifications and theories on education. From the initial stage itself, she declare

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that the classroom and the act of teaching are important. By the conclusion of the book, teachers and students both have new recognition and ideas to put into practice how to improve education in the classrooms through which they identify themselves.

Bell Hooks was always enthusiastic about learning and getting an education. It was only after she engaged in graduate school Hooks identified the teaching method had faults. She promoted close reading rather than merely spitting the ideas what the students have studied. Most students failed in their application level and attaining concepts as their only intention was to crack the exams. This form of education does not allow the student to read closely. She also think the other reason could be because of the separation of black and white. Women's feminist groups had another outlook on feminism. The white groups were concentrated primly on feminism which focused on white women. The black group had focus on feminism but aimed t all women as well as the racial separation. A major inspiration in Hooks life was Paulo Freire, she incorporated the works in her own. She wanted a visible change in the classroom change from feeling like a prison to a place where students felt free and the education would motivate them not only to discuss about it in class but also makes them feel confident. hooks had an idea of changing the normal classroom. She wanted an interactive classroom merging the discussions from a lecture by the teacher to a social interaction between the students and professors. As this need more time she focused on making the classroom where the students 'want to be' rather than 'need to be' change to really occur. Today's education has

become more desirable with a liberal take in the classroom arrangement. But all this still require time to follow a new method of teaching. To escape from the lecture, study, and testing format that we have all come to know and love. We also need to realize that the classes need to give lectures, sometimes continuous interaction with the teaching material is not sufficient because when it settles down sometimes the students need to know absolute facts.

The essence of Hooks' writing is the notion of engaged pedagogy of which base is feminist pedagogical theories to motivate students to involve as active members of both the classroom and society in order to raise voice against oppression. In Hooks' viewpoint, this is the only pedagogy worth approaching in the classroom, and a rare one too, especially in multicultural classrooms. Hooks connotes her understanding of oppression and studies based on her own black background in the South, where she attended both isolated and integrated schools. According to Hooks she gained more from her colored educators from the segregated school than she studied in integrated classrooms. Black educators provided her a better understanding of the differentiation she was supposed to face, and the way world would admire her as a young black woman.

Teaching to Transgress is arranged as a series of essays and interviews that consider a number of classroom background and how they are molded by oppression and differentiation. Through these observations, hooks provides some activities to facilitate engaged pedagogy in the classroom to help the students think about and talk about

the forces moulding students educational experience. Hooks poses some important questions like: How do we cope with students who don't want to learn and teachers who don't want to teach? How do we participate in and help facilitate multicultural classroom environments? How should we deal with sexism and racism in academic spaces?

Hooks' ideology is embedded in the notion of freedom and how to it could be made possible by education and learning. She believes firmly that its easy for any aspirant to learn how to use engaged pedagogy in their respective classrooms, and the prime purpose of education is to encourage students to become freer. Deeply focused to classrooms as highly unique and emotional spaces, a number of her essays deal with feelings which include rage, misery, love, and reconciliation. Hooks supports in facilitating conversations about these feelings and personal occurrences that point to larger matter of racial bias, gender bias, and other forms of persecution inside and outside the classroom; many of her essays put forward methods for tutors to teach the same.

One main occupant of the book is mentioned in the title: the use of education as the deliberate activity of strengthening and the usage of freedom. The book present itself from the viewpoint of an South African-American woman . She accomplished both racially separated and desegregated schooling. She identified that her colored instructors political and social agenda better supported her than the situation in the integrated environment. She quoted that whether a being female or the outnumbered, or white and male, the main idea given in integrated schools by whites was to accept

and to respect the domination of 'authority figures'.

This book opens up a number of matters like race, gender and class identity. It is vsible in the motivation to dismantle restrictive social forms as per the context they are titled: white supremacy, male authority, and class. Heterosexuality is speculate. Various issues are addressed as are put forth before the consciousness of the author. Many of Hooks consideration, based upon at least one version of the truth, ran into complication within the context of racially mingled higher education during her student days. The logic for this is that a number of them were viewed as possible subversion and rebellion. She had a strong agenda that is to teach for liberation. The prominent problem is in the relationship of trust, and the scarcity there within the system that sets some people up for failure and others for victory.

The only means by which the teachers can think about creating the world a beautiful place, is to fully understand the kinds of supremacy both good and bad that we deal with our students. One of the topic that hooks' work posed on us was the query of who we are in the classroom. This essay reflects our own pedagogical practices, and think about the ways in which hooks' work apprise our understanding in teaching learning process. we should come to a belief that, while teaching to transgress sometimes results in discomfort for both teachers and students, in that agitation lies the comfort of recognizing that the lawbreaking classroom is the one in which learning occurs. For Susan Hill, hooks' notion on teaching briefed with many religious issues. For example, if we remember that the incident

that resulted Adam and Eve's exclusion from the Eden Garden was consuming the fruit from the Tree of the Knowledge, then demanding students to cross limitations to err in order to acquire is unsettling. This is true in the context of theological studies, where navigating the ways religion moulds individual and traditional attitudes and practices can rebel with religious allegiance.

Students are encouraged to become passionate builders of their knowledge and makers of their own communities. They become used to and in ease with new teachers. They need to learn the method to cross boundaries and structure two way communication with different types of families. Hooks helps to preserve vice teachers locate ways across the boundaries, before preparing to enter their own respective classrooms. Students should become passionate establishers of their individual knowledge and builders of their own communities. Constructing community is identifying the worth of each individual and ignore the instructor's honoured position in the classroom. When each voice can be raised, there will be disagreements. As bell hooks briefs the classroom cannot be safe and cooperative. In various teacher education classrooms, strong mores work against intense engagement that might proceed to conflict. But when truly involved minds fight against, the clash of views and traditions can motivate a solution more stronger than any one stand point.

Bell hooks' (1994c) engaged pedagogy, explained in *Teaching to Transgress: Education as the Practice of Freedom*, goes far away developing students fetch a prescribed level of literacy, the nurture of

professional skills and adaptation to the status quo, to bring up a reflective and critical attitude to social realities. The pedagogy shriek a re-conceptualization of the mastery, connecting theory to practice, student accreditation, multiculturalism, and indulgence in passion, to facilitate learning more enjoyable and fruitful. Engaged pedagogy is a 'transgressive' pedagogy. The importance of hooks' social and educational evaluation to the Kenyan economy focuses on four primary equivalence between Kenya and the United States: (a) presence of Blacks, (b) the footprints of White civilization, (c) the patriarchal system, and (d) the association of social fame to material accession.

Ultimately Hooks's book regarding teaching and education, it possesses a mission to disentangle the larger unjust social, political, and economic systems that maintain oppressive power structures. She is particularly concerned with issues of race, gender, and class – or, more specifically take apart white predominance, patriarchy, and social class. With this as her target, she puts forward a number of solutions to the problem of education as she sees it, irradiate the ways that education keep alive those power structures and talking about ways to destabilize those structures for teachers and students. Some of these methods include motivating students to think about not considering another person's experience or view point as a place of learning, rather than assuming the differences are invincible. She also discuss teaching students that difference in opinion are a necessary and inevitable part of both education and life, and teaching students to think of conflicts as a room for change and growth, other than annoyance, violence, and fea.

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TEACHING ATTITUDE AMONG B.ED. TRAINEES IN DISTANCE EDUCATION: AN EMPIRICAL STUDY IN COIMBATORE

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ABSTRACT

Education in its broadest sense is any act or experience that has a formative effect on the mind, character, or physical ability of an individual (e.g., the consciousness of an infant is educated by its environment through its interaction with its environment); and in its technical sense education is the process by which society deliberately transmits its accumulated knowledge, values, and skills from one generation to another through institutions. Teachers in such institutions direct the education of students and might draw on many subjects, including reading, writing, mathematics, science and history. Quality education is a pre-requisite for national, regional and global development. For delivery of quality education, we need quality teachers who are committed to teaching and equipped with necessary knowledge, skills and competencies for effective teaching. The role of teacher assumes greater significance in this deteriorating scenario of primary education. Dr.S Radhakrishnan aptly said "Until and unless we have dedicated and committed teachers, who can take teaching as a mission in their lives, we cannot have a good educational system. Teacher should be the best minds of the country". Teacher attitudes are important variables in classroom application because of the relationship between attitudes and action. Teacher attitudes are often translated into specific classroom and instructional practices which in turn affect student behavioral and learning outcomes (Cook, 2002). A Bachelor of Education (B.Ed.) is an undergraduate academic degree which prepares students for work as a teacher in schools, though in some countries additional work must be done in order for the student to be fully qualified to teach. Distance learning (education) is a modern system of non- formal education. There are different terms used for distance learning which include Distance Education, Distance Teaching, Open Education, Open Learning etc. There is a need of Distance Learning in today's education. The researcher made an attempt to investigate the "Attitude among distance education B.Ed Trainees". The study is focused as teacher among B.Ed trainees. The age level of the teachers between 23-60 years. To study attitude towards teaching among B.Ed., trainees in distance education. As the present

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study was intended to collect data pertaining attitude towards teaching. distance education and other related variables in distance education centers in and around Coimbatore district. Descriptive survey method was used. The investigator selects a sample of trainees being 23 – 60 years old. The numbers of respondents 'were 296, out of which 86 were male and 210 were female trainees. It is concluded from the present study, that there is a difference in the level of attitude towards teaching among B.Ed. trainees in Distance Education. The study reveals that there is a significant difference in the attitude towards teaching among B.Ed. trainees in distance education in relation to Sex and Teaching Experience.

Key words: Education, Attitude, Teaching, B.Ed. Trainees, Distance Education, etc.

Introduction

Education in its broadest sense is any act or experience that has a formative effect on the mind, character, or physical ability of an individual (e.g., the consciousness of an infant is educated by its environment through its interaction with its environment); and in its technical sense education is the process by which society deliberately transmits its accumulated knowledge, values, and skills from one generation to another through institutions. Teachers in such institutions direct the education of students and might draw on many subjects, including reading, writing, mathematics, science and history. This technical process is sometimes called schooling when referring to the compulsory education of youth. Teachers in specialized professions such as psychology, may teach only a certain subject, usually as professors at institutions of higher learning. There is also instruction in fields for those who want specific vocational skills, such as those required to be a pilot. In addition there is an array of education possible at the informal level, e.g., at museums and libraries, with the Internet, and in life experience.

Quality education is a pre-requisite for national, regional and global development.

For delivery of quality education, we need quality teachers who are committed to teaching and equipped with necessary knowledge, skills and competencies for effective teaching. Teaching is an art and the quality of teaching depends on the love, dedication and devotion of the teacher towards the subject of the knowledge. The quality of any teaching programme cannot rise above the quality of its teachers.

The role of teacher assumes greater significance in this deteriorating scenario of primary education. The destiny of the nation is being shaped only in the classroom. A competent teacher can bring the entire world in to the classroom. Dr.S Radhakrishnan aptly said “Until and unless we have dedicated and committed teachers, who can take teaching as a mission in their lives, we cannot have a good educational system. Teacher should be the best minds of the country”.

Attitude

Attitudes are formed by direct experience as well as by implicit learning and may reflect personality (Zimbardo & Lippé, 1991). Attitudes are typically

conceptualized as having three related components: cognitive (i.e., the idea or assumptions upon which the attitude is based), affective (i.e., feelings about the issue), and behavioral (i.e., a predisposition toward an action that corresponds with the assumption or belief) (Wood, 2000). Attitudes are functional enough as much as they simplify complex subjects, express fundamental values and beliefs, and mediate or guide behavior (Brock & Shavitt, 1994).

Characters of Attitude

- Favourableness
- Intensity
- Salience
- Attitudes are acquired
- Attitudes are more or less permanent
- Attitudes involve subject object relationship
- Attitudes involve affective, cognitive and action components

Teacher Attitude

Teacher attitudes are important variables in classroom application because of the relationship between attitudes and action. Teacher attitudes are often translated into specific classroom and instructional practices which in turn affect student behavioral and learning outcomes (Cook, 2002). Reinke and Moseley (2002) indicate that teacher attitude is an important variable in classroom application of new ideas and novel approaches to instruction. Kennedy and Kennedy (1996) say that methods must be established to facilitate the development of teachers' attitudes that supports contemporary instructional applications of

research conclusions and correspond with best practices in education.

B.Ed Degree

A Bachelor of Education (B.Ed.) is an undergraduate academic degree which prepares students for work as a teacher in schools, though in some countries additional work must be done in order for the student to be fully qualified to teach. A B.Ed program may have direct entry from high school; as a combined degree with another bachelor's degree (e.g., BA/B.Ed); or as an after-degree program where the candidate has obtained a bachelor's degree, usually, the field in which the student wishes to teach. A good rapport or previous experience with young children or teens is also a desired characteristic of applicants.

There are many courses and degrees provided by the colleges and universities which offer learning through distance education. Now, as it is said, a knowledgeable person only can impart knowledge to others. And this noble work of imparting education to others is done by none other than a teacher. The person should have a B. Ed. degree to get a job as a teacher. Good thing is that you need not attend a regular college or university in person to do B.Ed. and this is the biggest advantage of Distance Learning Program in India. The most common methodology followed for this degree is through the Correspondence Courses.

Distance Education System

Distance learning (education) is a modern system of non- formal education. There are different terms used for distance learning which include Distance Education, Distance Teaching, Open Education, Open

Learning etc. There is a need of Distance Learning in today's education.

Concept Of Distance Learning

Distance learning (education) is a modern system of non- formal education. It is imparted through correspondence or postal courses, contact, electronics media like radio, television, video and audio cassettes etc. and other audio - visual aids.

Need and Importance of Distance Education

The concept of distance learning has emerged in various advanced countries of the world. The following points highlight the need and importance of distance education:-

Statement of The Problem

The researcher made an attempt to investigate the "Attitude among distance education B.Ed Trainees". The study is focused as teacher among B.Ed trainees. The age level of the teachers between 23-60 years.

Objectives of the Study

To study attitude towards teaching among B.Ed., trainees in distance education.

Literature Review

U.K Kulkarni (2011), find out the relation between teaching competence and attitude towards teaching B.Ed trained teachers working in up- graded primary schools. A total number of 100 B.Ed trained teachers working in up graded primary school from Bijapur taluk were selected by using random sampling technique. On the basis of present study the following conclusions could be drawn that male and female, rural

and urban, arts and science and graduate and post graduate teachers respectively differ from significant correlation in respect of their teacher attitude.

According to Fullan (2001) both individual teacher characteristics and collective or collegial factors play roles in determining curriculum implementation. Some teachers, depending on their personality and influenced by their previous experiences and stage of career, are more self actualized and have a greater sense of efficacy, which leads them to take action and persist in the effort required to bring about successful implementation.

Sharma (1971) aimed at studying the relationship between characteristics possessed by teachers and teaching effectiveness with a view to predict teacher's success. The combination of five predictors namely, teaching attitude, academic grades, socioeconomic status, teaching experience and age appeared to be sound predictors of teaching effectiveness. Roy (1971) also studied the relationship between teachers' attitude and teaching efficiency and found a positive relationship between the two.

Methodology

As the present study was intended to collect data pertaining attitude towards teaching. distance education and other related variables in distance education centers in and around Coimbatore district. Descriptive survey method was used. The population of the study was distance education B.Ed. Trainees located in and around Coimbatore district. The trainees were selected from different B.Ed. Distance Education Study Centres situated at Coimbatore. The study

area mainly focuses among B.Ed., trainees of Barathidasan University-Trichy, Tamil University-Tanjore and IGNOU-New Delhi. In the present study the investigator used cluster sampling technique to select the samples. The centers were selected randomly from different localities comprising both

male and female trainees, different age of the trainees, years of experience, level of teaching of sample. The investigator selects a sample of trainees being 23 – 60 years old. The numbers of respondents' were 296, out of which 86 were male and 210 were female trainees.

Scoring Procedure Adopted

Table 1
Scoring Procedure

SUB SCALE	ITEMS NUMBER	SA SDA	A DA	UD UD	DA A	SDA SA
Teaching Profession	7 positive	4	3	2	1	0
	8 negative	0	1	2	3	4
Class room Teaching	8 positive	4	3	2	1	0
	7 negative	0	1	2	3	4
Child centered practices	10 positive	4	3	2	1	0
	5 negative	0	1	2	3	4
Educational practices	8 positive	4	3	2	1	0
	7 negative	0	1	2	3	4
Pupils	5 positive	4	3	2	1	0
	10negative	0	1	2	3	4
Teachers	5 positive	4	3	2	1	0
	10negative	0	1	2	3	4

Analysis and Results

Table 1: Influence on Teachers Learning

in Distance Education based on all the Six Variables (Mean Scores)

Dimensions	N	Mean	Std. Deviation
Teaching Profession	296	43.0439	7.19002
Class Room Teaching	296	35.4088	5.07421
Child Centered Practices	296	39.0743	6.22906
Educational Process	296	37.8649	6.59291
Pupils	296	38.1284	7.40021
Teachers	296	38.6182	6.49899

This indicates the level of teachers attitude based on the influencing factors

among B.Ed. trainees in distance education.

Table 2
Frequency and Attitude Towards Teaching

Factors	Low			Moderate			High		
	Q1	F	%	Q2	F	%	Q3	F	%
Teaching Profession	39	35	12	44	138	47	48	123	42
Class Room Teaching	32	62	21	35	188	64	39	46	16
Child Centered Practices	35	27	9	40	151	51	44	118	40
Educational Process	34	58	20	39	140	47	43	98	33
Pupils	34	53	18	39	210	71	42	33	11
Teachers	35	50	17	40	162	55	43	84	28

According to the factor Teaching Profession, the table shows that few (12%) of the respondents belong to low level of attitude towards teaching maximum (47%) of the respondents belong to moderate level and the remaining 42% of the respondents belong to high level of attitude towards teaching.

According to the factor Class Room Teaching, 21% of the respondents belongs to the low level of attitude towards teaching most (64%) of the respondents belong to moderate level of attitude towards teaching and the remaining 16% of the respondents belong to high level of attitude towards teaching.

According to the factor Child Centered Practices, 9% of the respondents belong to the low level of attitude towards teaching, more than half (51%) of the respondents belong to moderate level of attitude towards teaching and the remaining 40% of the respondents belong to high level of attitude towards teaching.

According to the factor Educational Process, 20% of the respondents belong to the low level of attitude towards teaching, less than half (47%) of the respondents belong to moderate level of attitude towards teaching and the remaining 33% of the respondents belong to high level of attitude towards teaching.

According to the factor Pupils, 18% of the respondents belong to the low level of attitude towards teaching, majority (71%) of the respondents belong to moderate level of attitude towards teaching and the remaining 11% of the respondents belong to high level of attitude towards teaching.

According to the factor teachers, 17% of the respondents belong to the low level of attitude towards teaching, more than half (55%) of the respondents belong to moderate level of attitude towards teaching and the remaining 28% of the respondents belong to high level of attitude towards teaching.

In total, it is clear that 19.6% B.Ed. trainees belongs to the low level of attitude while 34.8% of the B.Ed. trainees belong to the moderate level of attitude, finally, 45.6% of the B.Ed. trainees belongs to the high level of attitude towards teaching. From this analysis it is evident that majority

(45.6%) of the B.Ed. trainees showed high level of attitude towards teaching. Hence, the null hypothesis-1 is rejected. Further it can be concluded that there is significant difference in the level of attitude towards teaching among B.Ed., Trainees in Distance Education.

Table 3

Significant Difference in the Attitude towards Teaching among B.Ed. Trainees in Distance Education in Relation to Sex

Attributes	Sex	N	Mean	Std. Deviation	d.f.	't'	Sig.	Level of Sig. @ 0.05%
Teaching Profession	Male	86	39.0233	8.04689	294	13.348	.000	S
	Female	210	44.6905	6.10392				
Class Room Teaching	Male	86	33.7326	5.15963	294	0.409	.523	NS
	Female	210	36.0952	4.88729				
Child Centre Practices	Male	86	36.1860	6.66953	294	4.912	.027	S
	Female	210	40.2571	5.64251				
Educational Process	Male	86	34.6395	7.37869	294	13.499	.000	S
	Female	210	39.1857	5.75985				
Pupils	Male	86	34.8256	7.78716	294	7.256	.007	S
	Female	210	39.4810	6.80502				
Teachers	Male	86	35.7907	7.29563	294	15.756	.000	S
	Female	210	39.7762	5.77343				
Total	Male	86	230.5930	39.04247	294	23.989	.000	S
	Female	210	259.0762	29.30330				

S : Significant

NS : Not Significant

According to the table, calculated 't' value is 23.989 is more than the table value (3.84) which is found to be statistically significant at 0.05% level for all the factors except 'class room teaching'. Hence, the null hypothesis 2 is rejected and it can be concluded that there is significant difference

in the Attitude towards teaching among B.Ed. trainees in distance education in relation to sex.

From the above table, it is inferred that female B.Ed. trainees showed good attitude towards teaching than male B.Ed. trainees.

Table 4

Significant difference in the attitude towards teaching among b.Ed. Trainees in distance education in relation to teaching experience

Factors	Experience	N	Mean	Std. Deviation	d.f.	't'	Sig.	Level of Sig. @ 0.05%
Teaching Profession	Below 7 Years	167	42.4132	7.64281	294	6.078	.014	S
Class Room Teaching	Above 7 Years	129	43.8605	6.49609				
Child Centred Practices	Below 7 Years	167	35.0659	5.35728	294	3.263	.072	S
Educational Process	Above 7 Years	129	35.8527	4.66553				
Pupils	Below 7 Years	167	38.6587	6.45258	294	3.701	.055	S
Teachers	Above 7 Years	129	39.6124	5.90856				
Total	Below 7 Years	167	37.4192	7.18795	294	13.090	.000	S
	Above 7 Years	129	38.4419	5.70760				
	Below 7 Years	167	38.0120	7.78552	294	1.803	.180	NS
	Above 7 Years	129	38.2791	6.89653				
	Below 7 Years	167	38.2216	6.68878	294	1.450	.229	NS
	Above 7 Years	129	39.1318	6.23295				
	Below 7 Years	167	248.1497	37.42971	294	12.652	.000	S
	Above 7 Years	129	254.2326	31.03363				

S : Significant

NS : Not Significant

According to the table, calculated 't' value is 12.652 is more than the table value (3.84) which is found to be statistically significant at 0.05% level for all the factors except 'pupils' and 'teachers'. Hence, the null hypothesis 4 is rejected and it can be concluded that there is significant difference

in the Attitude towards teaching among B.Ed. trainees in distance education in relation to teaching experience.

From the above table, it can be inferred that when the teachers' get more years of experience, their level of attitude towards teaching also gets improved.

Table 5

Significant Difference In The Attitude Towards Teaching Among B.Ed. Trainees In Distance Education In Relation To Level Of Teaching

Factors	Level	N	Mean	S.D.	d.f.	't'	Sig.	Level of Sig. @ 0.05%
Teaching Profession	Primary Level	92	41.52	6.79				
Class Room Teaching	High School Level	204	43.73	7.27	294	.004	.948	NS
	Primary Level	92	35.13	5.44				
	High School Level	204	35.53	4.90	294	.038	.846	NS

Child Centred Practices	Primary Level	92	37.92	6.57	294	.472	.492	NS
	High School Level	204	39.59	6.01				
Educational Process	Primary Level	92	37.13	6.76	294	.095	.758	NS
	High School Level	204	38.19	6.50				
Pupils	Primary Level	92	37.69	7.86	294	.883	.348	NS
	High School Level	204	38.32	7.19				
Teachers	Primary Level	92	38.88	6.20	294	1.033	.310	NS
	High School Level	204	38.50	6.63				
Total	Primary Level	92	246.39	35.37	294	1.29	0.271	NS
	High School Level	204	252.78	34.53				

S : Significant

NS : Not Significant

According to the table, calculated 't' value is 1.29 is less than the table value (3.84) which is found to be statistically not significant at 0.05% level for all factors. Hence, the null hypothesis 5 is accepted and it can be concluded that there is no significant difference in the Attitude towards teaching among B.Ed. trainees in distance education in relation to the Level of Teaching.

Summary of Results

Findings

It is clear that 19.6% B.Ed. trainees belongs to the low level of attitude while 34.8% of the B.Ed. trainees belong to the moderate level of attitude, finally, 45.6% of the B.Ed. trainees belongs to the high level of attitude towards teaching. From this analysis it is evident that majority (45.6%) of the B.Ed. trainees showed high level of attitude towards teaching. Hence, the null hypothesis-1 is rejected. Further it can be concluded that there is significant difference in the level of attitude towards teaching among B.Ed., Trainees in Distance Education.

- There is a difference in the level of attitude towards teaching among B.Ed., Trainees in Distance Education.

- There is significant difference in the Attitude towards teaching among B.Ed. Trainees in Distance Education in Relation to Sex. it is also inferred that female B.Ed. trainees showed good attitude towards teaching than male B.Ed. trainees.
- There is significant difference in the Attitude towards teaching among B.Ed. Trainees in Distance Education in Relation to Teaching Experience.
- There is no significant difference in the Attitude towards teaching among B.Ed. Trainees in Distance Education in Relation to the Level of Teaching. It is also found that when the teachers' get more years of experience, their level of attitude towards teaching also gets improved.

Suggestions and Conclusion

It is necessary to identify the Teacher's attitude in distance education B.Ed teachers. Because the teachers already they have completed their diploma in teacher training. So they will be having the knowledge towards teacher attitude and they are working as a teacher in government and private schools and impart knowledge to the

students. The task of education is to help the students to understand the society in which they live and to develop ideas of life to work for changing the society. The work of the teachers is to guide the development of the pupils by controlling their experience. Teacher's attitude not only affects the student's behavior in the class room but also influence the behavior of the students. It is concluded from the present study, that there is a difference in the level of attitude towards teaching among B.Ed. trainees in Distance Education. The study reveals that there is a significant difference in the attitude towards teaching among B.Ed. trainees in distance education in relation to Sex and Teaching Experience.

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PROBLEM SOLVING ABILITY OF SECONDARY SCHOOL STUDENTS PLAYING VIDEO GAMES

Dr. T.C. Thankachan*

Abstract

Interactive electronic media entertains children, enriches their imagination, ignites their creativity, encourage them to think divergently, and motivates them to learn more. Video games introduce young students to the computer technology and the online world. Various research studies indicate that appropriately designed multimedia instruction enhances students learning process. The use of IT makes learning more effective and meaningful. Video games can promote skill development in the following areas: critical thinking, control engagement and feedback. In addition gaming can help students see relevance of situations to their own environment and learn strategies to work in a self – paced environment. Games are a creative teaching strategy that enhances learning and problem solving. The present study intends to find out the problem solving ability of children playing video games. The sample was 400.

Key words: Video games, Accuracy, Problem solving ability, Technology, Social Media, Collaborative Learning, Mental Capacities, etc.

Introduction

Interactive electronic media entertains children, enriches their imagination, ignites their creativity, encourage them to think divergently, and motivates them to learn more. Video games are natural teachers. Children find them highly motivating; by virtue of their interactive nature, children are actively engage with them; they provide repeated practice; and they include reward for skillful play. Media play an important role in the development of cognitive skills. These

facts make it likely that video games could have large effects some of which are intended by game designers, and some of which not be intended. According to Malone (1981), the intrinsic appeal of computer game play is derived from its ability to foster curiosity, challenge and fantasy; all aspects of play that should appeal to children. According to Piaget cognitive development of a person takes place by constant interaction with physical and social environment.

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Several researchers have found a positive relationship between game-playing and cognitive skills in adults, including attention (Green & Baviler, 2006) and reasoning (Greenfield et.al., 1994).

Mental Capacities refers to a person's ability to make their own decision (MCA 2005). Mental Capacity is an important aspect of an individual's total development. Mental capacity is always used to represent a person's brain power in different areas of competency. It is a person's ability to learn and remember information, to recognize, concept and their reaction. Mental Capacities are intellectual functions and are the set of mental abilities and methods are held to underpin successful learning and experience. These are following:- *Following instructions* - an ability to act according to the instructions or directions and obey others; *Problem solving* - the process of finding solutions to difficult or complex issues; *Multitasking* - is the ability of performing more than one task at the same time; *Quick thinking* - having or showing an ability to think or react quickly; *Accuracy* - the quality or state of being correct or precise; *Concentration* - the action or power of focusing all one's attentions.

Howard Gardner's Theory of Multiple Intelligence

Howard Gardner of Harvard University has propounded a unique theory of intelligence called the "The theory of Multiple Intelligence". According to him human intelligence or cognitive competence can be better described as a set of an individual's multiple abilities, talents and mental skills related to a multiple number of domains of domains of knowledge in a particular cultural setting.

It is first appeared in his book, 'Frames of Mind: The theory of Multiple Intelligence'. Through his new theory, Gardner challenged the notion of general intelligence, 'g' and then questioned the very basis of prevailing intelligence tests by asking how an individual's intellectual capacities could be captured in a single measure of intelligence. Indeed, he tried to give a broad base to the concept of intelligence and its measurement by providing a multiple frame. Elaborating his pluralistic view of intelligence further, he concluded that there are seven independent types of intelligence that grow and develop differently in different people, depending upon their hereditary characteristics or environmental experiences. These different types of intelligence have been named by him as;

1. Linguistic Intelligence
2. Logical-mathematical Intelligence
3. Spatial Intelligence
4. Musical Intelligence
5. Bodily kinaesthetic Intelligence
6. Intra-personal Intelligence
7. Inter-personal Intelligence
8. Naturalist Intelligence
9. Existential Intelligence

Linguistic Intelligence

This type of human intelligence is responsible for all kinds of linguistic competence abilities, talents and skills, available human beings. It can be best broken down into components like syntax, semantics and pragmatics as well as more school-oriented skills such as written or oral expression of understanding.

Logical-Mathematical Intelligence

This type of intelligence is responsible for all types of abilities, talents and skills, in areas related to logic and mathematics. It can be broken down into components like deductive reasoning, inductive reasoning, scientific thinking including solving of logical puzzles, carrying out calculations and the like.

Spatial Intelligence

This type of intelligence is concerned with the abilities, talents and skills involving the representation and manipulation of spatial configuration and relationship. Many of us as adults make use of kind intelligence in the sphere of our work.

Musical Intelligence

This type of intelligence covers the abilities, talents and skills pertaining to the field of music. It may be well demonstrated through one's capacity for pitch discrimination, sensitivity to rhythm, texture and timbre, ability to here themes in music; and in its most integrated forms, the production of music through performance or composition.

Bodily kinesthetic Intelligence

This type of intelligence is concerned with the set of abilities, talents and skills involved in using one's body or its various parts to perform skilful and purposeful movements. A child may be seen to demonstrate such intelligence in moving expressively in response to different musical and verbal stimuli or different body parts in organized sports.

Intra-personal Intelligence

This type of intelligence is consists of an individual's abilities to enable him to know his self. It includes knowledge and understanding of one's own cognitive strengths, styles and mental functioning, as well as one's feelings, range of emotions and skills to utilize one's fund of knowledge in practical situations. In brief, intrapersonal intelligence helps an individual to understand his own self by providing an insight into his total behavior –what he feels, thinks or does. It is, therefore, said to be most private of the intelligences that a person possesses.

Inter-personal Intelligence

The counterpart of intrapersonal intelligence in one's cognitive structure is interpersonal intelligence. It consists of the abilities to understand individuals other than one's self and one's relations to others. In addition, it includes the ability to act productively, based on the understanding of others. The knowledge and understanding of others is the quality that is needed for social interactions in one's day-to-day life. In practical life, this type of intelligence is most visible among psychotherapists, teachers, sales people, and politicians and religious leaders.

Naturalist Intelligence

The area has to do with nurturing and relating information to one's natural surroundings. It is the ability to discriminate among living things (plants, animals) and sensitivity to other features of the natural world (clouds, rock configurations). This ability was clearly of value in our evolutionary past as hunters, gathers, and

farmers; it continues to be central in such roles as botanist or chef.

Existential intelligence

It is the ability and proclivity to pose (and ponder) questions about life, death and ultimate realities. `

Need and Significance of the Study

Video games introduce young students to the computer technology and the online world. Various research studies indicate that appropriately designed multimedia instruction enhances students learning process. Now a day IT plays an important role in the present educational system. The use of IT makes learning more effective and meaningful. All learners should use the computers for their different learning needs, they should learn IT skills. Video games are immensely popular around the world .They are played on computers, handheld devices, cell-phones, and game consoles. Students play games at home, arcades, schools, in automobiles and virtually anywhere that an electronic device can be operated. At the present time video game centers show a growing trend. They cheat the school students providing false information and compel to spend more time for playing video games.

Since the late 1960s computer networks (electronic mail, bulletin board services and computer conferencing) have been adopted and adapted by educators to enhance the curriculum by expanding access to expertise and educational resources, to increase student interaction and peer collaboration both within and between classrooms, and for the delivery of credit and non- credit courses

and programs. Computer networks enhance traditional forms of face-to-face and distance education and enable new and unprecedented educational interactions, creating the basis for a new paradigm; network learning.

Video games can promote skill development in the following areas: critical thinking, control engagement and feedback. In addition gaming can help students see relevance of situations to their own environment and learn strategies to work in a self – paced environment. Games are a creative teaching strategy that enhances learning and problem solving. Video games offer participant engagement and interactivity. Games can be a good instruction delivery system. Video gaming helps the cognitive development of the students. Cognitive development means changes that occur in mental activities such as attending, perceiving, learning, thinking, and remembering. Computer games are catching more and more attention from educators today. Role playing games can improve problem solving skills.

Statement of the Problem

The present study intends to find out the major Social Networking Sites used by Teacher Trainees of Kottayam District. The research problem selected by the investigator is entitled as, ***“Problem Solving Ability of Secondary School Students Playing Video Games.”***

Operational Definitions of the Key Terms

Mental Capacities are the set of mental abilities and methods are held to underpin successful learning and experience. The two major mental capacities se are:-

Problem solving is the process of finding solutions to difficult or complex issues.

Video Games are various games involving images controlled by players on a cathode – ray tube or other electronic screen (Webster’s new world Online dictionary). Games played on computers, hand held devices, and game consoles. Games are: Shooter, FPS, Adventure platform, Arcade, RPGs, Puzzle, Simulations, Strategy, Sports, Fighting, Dance, Survival horror, Hybrids.

School children in this study are both boys and girls of ninth and seventh standard students coming between the age of fourteen to fifteen from the government schools, aided schools, and unaided schools in Kottayam District.

Objectives of the Study

1. To study the distribution of scores on Problem Solving Ability among the Students of Standard Nine playing Video Games.
2. To study the Problem Solving Ability among students of standard Nine playing and not playing Video Games.

Methodology of the Study

Methodology gives a detailed account of the methods adopted and the procedures followed by the investigator. It includes the research design of the study, variables, tools used and a detailed description of the various phases in the construction of tools. Methodology of the study is the totality of procedure followed by the investigator adopted descriptive survey method.

The sample is a representative proportion of the population. The sample of the study involved the Government, Aided, and Unaided schools in Kottayam District. It considered of four hundred students. The sample of the students was drawn from boys and girls in Kottayam District.

Tools for the Study

The following tools are prepared by Investigator.

1. Tool titled the “Mental Capacities scale”
2. Tool titled “Video Game identification inventory”

Statistical Techniques used for Study

The study mainly followed descriptive analysis for effective conclusions. At the same time the inferential statistics also were used. The investigator mainly used the descriptive statistics such as, Mean, Percentages, Standard Deviation, Graphical Representation, ‘t’ test, etc. for data analysis.

Data analysis and Interpretation

The investigator had formulated the first objectives as “To study the distribution of scores on Accuracy and Problem Solving Ability among the Students of Standard Nine playing Video Games”. For the present study the data pertaining to the above objective were collected by administering the tool titled “Mental Capacities scale” constructed by the investigator. To analyze this objective, the investigator used descriptive statistics with respect to number and percentage. The data is given in the table below.

Table 1

Means of Scores on Components of Problem Solving Ability among the Students of Standard Nine playing and not playing video games

Components	Category	Mean
Problem solving	Playing	27.2
	Not playing	27.3

From table 1 the investigator observes that the Means of scores on Problem Solving and Logic among the Students of Standard Nine playing video games was 27.2 or not playing video games was 27.3. Means of scores on Problem Solving and Logic among the Students of Standard Nine playing and not playing video games are relatively same. Means of scores on Problem Solving among the Students of Standard Nine playing and not playing video games are almost

Table 2

Number Mean, Standard Deviation and t -value of the Problem Solving and Logic of the students playing and not playing Video Games.

Variable	Category	N	Mean	S.D	df	t-value	Remarks
Problem Solving	Playing	341	27.2	3.7	398	.105	Not significant at 0.05level
	Not Playing	59	27.3	3.7	398		

The investigator presents in the table 5.9 the number, Mean, Standard Deviation, and t -value of the scores of among the Problem Solving and Logic Students of Standard Nine.

From table 2 the investigator observes and interprets that obtained t -value for the students Problem Solving and Logic is .105 which is less than the table value at 1.96

equal.

To study the significant difference between means of scores on Problem solving among the Students of Standard Nine playing video games and not playing video games

The investigator used the descriptive statistics Mean, Standard Deviation and the inferential statistics like two tailed t- test for large sample. The description of the analysis is given in the following section.

For the analysis of the data the investigator has formulated the null hypothesis as, H₀: There is no significant difference between the means of scores on Problem Solving among the students in terms of playing and not playing Video Games.

In order to analyses the null hypothesis the investigator used the two tailed t – test for large independent sample. The t -value set as 1.96 at .05 level of significance with degrees of freedom 398 (400-2).

at .05 level of significance with degrees of freedom 398. It shows that means of the scores on Problem Solving and Logic among the Students of Standard Nine playing and not playing video games not differ significantly.

Therefore the investigator accepted the null hypothesis “there is no significant difference between the means of scores on

Problem Solving of students playing and not playing video Games”.

Conclusions of the Study

There is a significant difference between the Accuracy of the students playing video games and the students not playing video games. The scores on Accuracy among the Students of Standard Nine playing video games is higher than those students not playing video games and it may be said that video game playing has significant influence on Accuracy of the Students of Standard Nine Playing Video Games. There is no significant difference between the means of scores on Problem Solving of students playing and not playing video Games.

Suggestions for Improving Educational Practices

The investigator has listed below a few educational implications emerged from the present study.

1. Develop specially designed educational games will help the effective transaction of the curriculum.
2. Educational video games in instructional strategies will helps to attainment of educational objectives.
3. Video games can provide attractive and instructionally effective frameworks for learning activities.
4. Video games can develop the problem solving skill among the students.
5. Teachers and parents help the students to select informative video games.
6. Games provide a playful environment in which the learners follow prescribed rules as they strive to attain a challenging goal.

7. Increased use of video games negatively affects the academic achievement of students.
8. Video games can develop various I T skills of game players.

Suggestions for Further Research

1. A study on the same variables can be conducted with a large sample from schools of all districts of Kerala.
2. Similar studies can be done at different levels of educational system such as Upper primary, Higher Secondary and College level.
3. The present study has used only limited variables further research can be carried out including more psycho- social variables and academic achievement.
4. Study should be conducted on educational benefits of video games.
5. Study should be conducted on behavior of students playing video games

Conclusion

In the fast growing scientific and technological era Video games becomes the most popular entertainment medium to young people in the world. In the present study the investigator study the Mental Capacities and Selected Personality Variables among the students playing and not playing video games. The investigator would feel gratified if the findings of the present study would lead to a better understanding of the importance of the educational and academic use of video games on collaborative learning in the present educational scenario.

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3C3DIE MODEL FOR PEACE EDUCATION

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Abstract

In this paper, the investigator has proposed a new model for peace education viz., 3C3DIE model for peace education. Its syntax include eight steps a) Conflict Presentation, b).Conflict Analysis c)Contemplation of solutions/strategies for conflict resolution d)Disclosure of solutions/suggestions regarding strategies e) Discussion on pros and cons of solutions/strategies f) Decision/ Design of strategies to be adopted g) Implementation of the strategies h)Evaluation of strategies. The 3C3DIE model for peace education is based on the peace values upheld by all religions especially, The Bible and the Gandhian Concept of Peace. The investigator briefs the various meanings of Peace, the Peace values upheld by world religions, The peace values upheld in The Bible, Peace and Peace education in Mahatma Gandhi's view.

Introduction

Education is the process of bringing up a social being. It is a continuous process of developing the innate powers of man which are natural, harmonious and progressive. According to Mahatma Gandhi, it is the drawing out of the best in child and man-body, mind and spirit. According to Swami Vivekananda, education is not the amount of information put into your brain and runs riot there undigested all your life. We must have life building, character making and in taking of ideas. Education invariably aims at developing a well balanced and integrated personality. It has a great role in building peace, harmony, tolerance and understanding to help create a better society for all. In the contemporary situation, we need to

teach youngsters how to deal with conflict creatively and nonviolently, how to establish and maintain peace within themselves, within family, immediate environment, within classroom and school and within society at large.

1.1 Concept of Peace

Peace is a state of tranquility or quiet such as freedom from civil disturbance, a state of security or order within a community provided for by law or custom, freedom from disquieting or oppressive thoughts or emotions (J. H. Newman). It is harmony in personal relations, a state or period of mutual concord between governments, a pact or agreement to end hostilities between those

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who have been at war or in a state of enmity (*New York Times*). One may lead one's life in respect, love, harmony and cooperation with others, one may be honest, just and truthful to oneself, to others, one may be compassionate and eager to offer one's contributions to welfare of others, the community and the society at large. Sometimes, due to the individual differences things may not happen so. It is a fact that all wars have originated in human minds which are not in harmony with oneself and with others.

A new Concept of Peace

We cannot say that there is peace when there are dehumanizing situations, when there are prisons, poverty. Peace has a new meaning other than national security that is human security. It is not only the absence of strife. It is a kind of freedom where everybody have enough food, shelter and livelihood for tomorrow, enjoy the opportunity to live, to grow, to prosper, to express oneself and to follow one's faith. In a peaceful society, there will not be any submissive, subjugated, or suppressive citizens. Irrespective of caste, colour, creed and gender everybody enjoys due respect and equal opportunities. In such a peaceful society, there will be a solid foundation for sustainable future. Maxim (2015) brings out the disparity between a submissive and peaceful society by highlighting the fact that 'in a patriarchal society a submissive woman may not create much strife in the family, but it will always be at the cost of a woman's fundamental rights. Similarly in a caste-ridden society, there will be peace and tranquility as long as the lower castes are submissive and obedient to the higher. But isn't it at the expense of the large number

of people who do not have a right to claim equality? This could be applied to widows, minorities, children, illiterates etc. He calls this kind of peace as peace at a great 'cost'.

Home is the Primary Agency of Peace

Family is a place where there is most intimacy, uniqueness, similarity and lack of privacy. It is a place where, children become most selfless, practise love, service and all other qualities. It is home where children find the need of self assertiveness and own place and position which makes family conflicts often acute. The ways of handling family problems and quarrels among siblings give children the most important training in maintaining peace in relationship in all phases of human life. It is the beginning of peace education. The membership in a family provides children belongingness to widen groups such as clan, tribe, caste, social class, and region, religious or political groups. The membership in these groups often provide children the training to disagree or contradict than to agree or be together. There is an urgent need for educating children for world peace. In this task, family, school, caste, society and political parties have a great role to play.

Peace at Different Levels

Thankachan and Austin (2011) identified peace at different levels.

- i. *Peace at individual level:* Love, truth and justice are the pillars of peace. If we love anything or anybody, we will deal it with care, concern and we will preserve it. Peace at individual level means care and concern, compassion, love, respect, trust, courage and joy, sense of freedom and absence of conflict within oneself.

- ii. *Peace at interpersonal level:* Peace at interpersonal level means love, empathy, compassion, cooperation, listening, appreciation, acceptance and tolerance of differences and friendship among individuals
- iii. *Peace at community level :* Peace at community level means reconciliation, tolerance, mutual respect, appreciation and protection of environment and healthy family relationship
- iv. *Peace at National Level:* Respect for child, women and human rights, citizenship, freedom from bias and stereotypes, national integration, secularism, and intercultural and multicultural harmony.
- v. *Peace at global level:* Awareness of global issues, peaceful resolution of international conflicts, environmental concerns, appreciation of world's cultural heritage.

Harmony and love originate from individual level and spread to interpersonal, community, national and global levels.

1.2 Peace and World Religions

Religion has a power to make peace. The role of religion in peace making is overlooked because media often doesn't give enough attention to the efforts of religion in this matter. All the religions have a significant strain emphasizing peace. The heads and believers of religions actively involve in peace making, many times.

The world's main religions Christianity, Islam, Hinduism and Buddhism have many things in common. The common factors and upheld values among the believers of these religions are:

- Importance to non-violence
- Respect to human life
- Ideals of love
- Benevolence
- Goal of making the followers to better beings
- Teach perfecting mind, body and spirit
- Teach not to lie, steal or kill
- Unselfishness
- Path of virtues and goodness
- Control the undisciplined mind
- Advocate its believers to lead a spiritual life, which is peaceful, disciplined, ethical and wise
- Advocate to extend contribution to human happiness (Gyatso, 1989)

The focus of all religions is the spiritual actualisation of man, inner peace, inner happiness, true joy, his peaceful life in society and the well being of society at large. Religions inspire its believers to involve in peace making and charitable activities that makes other's life more comfortable and pleasant. Religion may aim power, money and fame if it deviates from its original goal and faith. Then, its original zeal for the inner peace may vanish and it may reduce to be an instrument that creates strife. Religions have played this double role at different points in history. It is said that religion is like a candle that can illuminate one's cottage; it can also set it on fire: the choice is one's own, what use is made of it. We have seen the fulfillment of this proverb in almost all the religions.

Even today, we observe strife in many countries in the name of religion. Salman Rushdie (2005) once said, "The simple truth is that whenever religion gets into society's driving seat, tyranny results."

(The Guardian, March 18, 2005). Looking at history, or even the present context, we see sometimes religion causes the driving force for strife, even though, we cannot ignore the role played by religion in peace building throughout history. Religion has been an impetus and inspiration for peace building and creating socially just society (Maxim, 2015).

1.21 Concept of Reconciliation: the Core Peace Value in The Bible

In the biblical perspective, reconciliation is core to establishment of peace. The Idea of Jubilee year is very significant to maintain the social system. The observation of Jubilee year was aimed to break the greed-exploitation spiral through releasing the slaves, restoring the land, cancelling the debt etc., with an intention of restoring everything to its original nature. The purpose of Christian concept of reconciliation is to create the 'year of Lord's favour'. Jesus announced His public ministry by proclaiming the acceptable year of Lord (Jesus' manifesto). The characteristics of which was good news to the poor, release of captives, recovery of sight to the blind, liberty to those who are oppressed. (Lk4.18-19).

The reconciliation should be fulfilled in different levels.

- Reconciliation With God,
- Reconciliation with Fellow Human Beings And
- Reconciliation with Nature.

This reconciliation includes all people irrespective of their goodness, and persons of all kinds who were marginalised and excluded.

1.3 Peace in Mahatma Gandhi's Views

According to Mahatma Gandhi, peace is the absence of tensions, conflict, and all forms of violence including terrorism and war. It is the ability of humans to live together with harmony. It implies creation of a non-violent social system. That means there will be a society free from structural violence. It is the duty to practice justice in social, economic, cultural and political fields. Gandhi sees Hunger as systemic violence.

According to Gandhi, Ela (1993) Gandhiji believed the idea that there cannot be true and lasting peace unless there is equal opportunity for all. "You cannot have a good social system when you find yourself low in the scale of political rights, nor can you be fit to exercise political rights and privileges unless your social system is based on reason and justice. You cannot have a good economic system when your social arrangements are imperfect. If your religious ideas are low and groveling, you cannot succeed in ensuring equal status for women, and the access to opportunities for all is the ultimate that would bring independence to the people of India." In Gandhiji's view, the solutions for conflict are three fold.

- That the goal of the struggle for peace and democracy is for the good of all; not just the good of the majority.
- That one has to be prepared to make sacrifices to attain this.
- That political power in itself does not result in peace and democracy; we have to work and strive for peace and democracy.

Gandhi viewed education as vital in the overall development of the individual

as well as the society. This education has to be given to the students so that they can learn and imbibe the ethics and values of a humanitarian, just and peaceful society i.e. 'Sarvodaya Samaj. It includes international cooperation and understanding along with creation of a just world order, willingness to share the earth's resources to meet the needs of all. There is a shift from greed to need. Peace also includes ecological balance and conservation of the environment by adopting the lifestyle conducive to the wholeness of creation. The psycho-spiritual dimension of peace cannot be overlooked. Peace begins in the human heart, then spreads to the family, peer group, classroom and community, to the nation and the entire world.

1.31 Core values to ensure peace

Where there is love there is peace. Failure of love causes discrimination, hatred and denial of opportunities. To love others means to do good for others. Compassion arises out of deep sense of belongingness, love and brotherhood. It will help to overcome barriers and prejudices. Truth goes in line with peace whereas falsehood with violence. Being true is natural and lying is artificial to human nature. Peace and justice are the two sides of the same coin. When there is injustice it undermines peace. Commitment to justice must be deemed as the hallmark of an educated man.

1.4 Peace Education

According to Peace Education Working Group of UNICEF, peace education "refers to the process of promoting the knowledge, skills, attitudes and values ... to prevent conflict and violence." Peace education means education for promoting and

maintaining peace. Gandhi sees *satyagraha* as the revolutionary mode of action to establish peace, and *sarvodaya*, a fuller and richer concept of people's democracy (Bose, 1981). Gandhiji's idea of peace is primarily located in his idea of *Ahimsa* i.e. non-violence. Gupta (1968) observes that Gandhi's ideas of trusteeship and passive resistance form the basis of a peaceful and just society.

Gandhian concept of education is based on the all round development of human personality that includes physical, intellectual and spiritual development. According to Gandhi, "By education I mean an all round drawing out of the best in child and man." Gandhi's important writings on education are compiled in two books; '*Basic Education*' (1951) and '*Towards New Education*' (1953). According to Gandhi, western education is based on materialism and its value is like the value of land or property. For him, education is a very broad concept which can solve many problems of society and world.

His principle *Nai Talim* states that knowledge and work are not separate. In his educational curriculum '*Basic Education for all*', he emphasises that the function of education is to create ideal citizens - individual overwhelming with virtues and always well behaved is the pre-requisite for coherent and comprehensive development. Such education is intended to change the hearts of individuals. Explaining the meaning of genuine education Mahatma Gandhii says, "Genuine education does not consist of cramming a lot of information and numbers in mind. Nor it lies in passing the examination by reading a number of books,

but it lies in developing character. It is a real education which inculcates internal virtues (values) in human beings. If you can develop such virtues, it will be the best education” (quoted in Sitara, 2010).

1.41 Development of Values through Basic Education

Gandhi’s basic education is based on all the aspects (factors) relating to life. His philosophy shows a new path for solution to the problems of the entire world, by placing the universal human values at social and national level. It contains three doctrines which he acquired from reading the book “Unto the Last” (by Ruskin).

- “Welfare of all (universal welfare) is our welfare.
- The work of a barber and lawyer should be equally appraised because the right of livelihood is equal for all.
- Simple and laborious life of a farmer is the real life”.

Gandhi set up *Phoenix Ashram* (hermitage) in south-Africa to apply these doctrines in daily practice. He took up experiments of education there. Thus it can be said that the seeds of his educational thoughts originated when he was in South-Africa, (based on his experiment). His main findings were:

- Education for character building, education through mother-tongue
- Place of manual work in education and co-education
- Hostel residence and community life
- Moral education through character and good conduct
- Education of soul should be imparted through teacher’s (model) life rather than through books

- Health education for physical fitness and health and insistence for simple life
- Importance for self-help and self-reliance
- Education For Thoroughness (Strength)
- Education For Citizenship
- Education for personality development
- Education for avoiding caste and colour distinction, education for vocation useful for life
- Education for equality of all the religions, education based (founded) on truth, non-violence and justice” (Sitara, 2010)

After his return to India, he continued his educational experiment at Shantiniketan, Kocharab Ashram, Sabarmati Ashram and Gujarat Vidhyapeeth and put forward “*Vardha educational Scheme*” before the nation in 1937. It is meant for the primary stage of education. His concept of “comprehensive basic Education (*Samagra Nai Talim*) put forward in 1947 exalts five national values known as national *Panchsheel* included in NPE 1986 viz., (a) Cleanliness (b) Truthfulness (c) Hard work (d) Equality and (f) Co-operation.

In basic education system education is imparted through mother tongue, as it inculcates values like love towards mother tongue and *Swadeshi* (native). Another emphasis in basic education is Education through hard work because it helps developing values like respect for manual labour, sense of co-operation, and feeling of being mutually helpful through manual work, development of friendship feeling, economical self-reliance, team spirit and sincerity. Basic education was activity centered. According to Gandhi, craft, art, health and education should all be

integrated into one scheme. His notion of *Nai Talim* is a gorgeous blend of Craft, Art, Health and education.

Ravi (2011) observes that “non-violence is the basis of basic education. Through non-violence Gandhi wants to develop qualities which are necessary for building a non-violent society, which is against exploitation and centralization”. Gandhi put forward the idea of ‘*Sarvadharmā Samābhava*’, which means equality of religions. It is an effective remedy even today, to cure the increasing tensions among different religious groups. Gandhi advocates for “a curriculum including religious instruction, focusing on moral cleansing of individuals, which includes tenets of faiths of different religions so that the individuals understand and appreciate the doctrines of great religions of the world in a spirit of respect and tolerance, which in turn leads to a better appreciation of their own religion and the unity of all religions. Additionally, it sensitizes the individual towards his/her moral duties and responsibilities and teaches, tolerance to its respective followers as all religions, based on love and compassion towards humanity.

The basic education of Gandhi leads to the education which helps to maintain peace at different levels, inner peace of the individual, peace at interpersonal level, in community, in larger society and peace at the national and global levels. According to Field (2006) nonviolence education or Gandhian Studies emphasizes positive concepts of peace (rather than peace as absence of strife).

1. 5 Strategies for Peace Education

In order to highlight the need of reconciliation and peace at different

levels-individual, social, national, international-, we need a peace oriented pedagogy in which all lessons have ample opportunities to incorporate peace values. The methods of teaching that could be used for peace education should include creative, child centered, largely experiential and participatory aspects. The techniques such as creation of appropriate learning experiences, discussion, debates, presentation, group projects, role plays, dramas, composing peace poems, developing sensitivity to others, story telling, observation of days of national and international importance etc., can be used for instruction. Apart from these, teachers can design innovative strategies to develop the knowledge, skills and attitude among students towards peace building. The investigator developed a new model for peace education namely, *3C3DIE model for peace education*.

3C3DIE model is based on the values mentioned in The Bible (which are upheld by all the religions) and the Philosophy of Mahatma Gandhi. These values are: love, co-operation, truth, nonviolence, sincerity, forgiveness, honesty, kindness, respect for others, moral stability, tolerance, empathy, compassion, discipline, dharma and interdependence.

1.51 The Fundamental Elements of 3C3DIE Model for Peace Education

The investigator adopted the elements of teaching model established by Joyce and Weil(1998) for the new 3C3DIE model also. It includes i) Focus ii) Syntax iii) Principle of Reaction iv)Social System v) Support System vi) Application Context and vii) Instructional and Nurturant Effects

1. Focus : It is the central aspect of the model constituting the objectives of teaching and aspect of the environment. The objectives of the 3C3DIE model for peace education are stated below.
 - To analyse the conflicting context
 - To identify the problem or peace conflict in the presented context
 - To contemplate alternate solutions to the peace problem/conflict
 - To share the proposed solutions to the conflicts
 - To discuss the pros and cons of suggested solutions
 - To take decisions regarding strategies to be adopted to solve issues/problems and to maintain peace
 - To implement the selected strategies for solving conflict
 - To evaluate the effectiveness of adopted strategies for solving conflict
2. Syntax: The syntax includes sequences of steps or activities involved in the teaching, using the model. There are eight phases in this model which include different instructional styles and learning activities for problem solving or conflict resolution.
 - Conflict Presentation: The teacher asks the students to describe a disagreement, argument or fight they had with someone or to present an imaginary conflict.
 - Conflict Analysis: The teacher asks the students i) to explore the cause of the conflict ii) the people involved in the conflict iii) to identify their feelings during the conflict iv) the probable effects –positive and negative - of the conflict to each persons involved in it. The students analyse the context of conflict at this stage.
 - Contemplation of solutions/ strategies for conflict resolution: The teacher prompts the students to think over the solutions/ strategies to be adopted to solve the conflict
 - Disclosure of solutions/suggestions regarding strategies: The teacher sets the stage to disclose the solutions/ strategies to solve the conflict
 - Discussion on pros and cons of solutions/strategies: The students under the leadership of the teacher analyse each solution and find out the pros and cons of each.
 - Decision/ Design strategies to be adopted: The students identify the most suitable solutions which have less negative effects and more positive effects. They design strategies to implement the select decision.
 - Implementation of the strategies: At this stage, the students implement the selected decision and conflict resolution strategies
 - Evaluation of strategies: After implementing the conflict resolution strategies the students evaluate its effectiveness in terms of conflict resolution and peaceful relations.

3. **Principle of reaction:** It refers to how the teacher facilitates and responds to the activities of the students. The peace conflicting context is systematically presented and students ponder on the solutions/strategies, they present the proposed solutions/strategies to the group, expose them to open discussion to identify the pros and cons of each. The teacher makes the students select the most suitable solutions or strategies to solve the conflicting context, guides them to design the implementation of it. The solutions should help the students to imbibe the peace values uphold by the world religions and Gandhian concept of Peace. The teacher guides the students in the implementation stage also. After implementation, the whole process is evaluated under the guidance of the teacher.
4. **Social System:** The social system describes the teacher and student roles, relationships and the norms observed and student behavior which is rewarded.
5. **Support System:** It refers to the additional requirements other than the usual human skills and capacities of the teacher and ordinary facilities available in the classroom. The peace conflicting context can be presented with the help of projectors, newspapers, press, media, personal explanations, computer assistance etc.
6. **Application Context:** This model can be adopted for peace education in the moral science / value education classes specifically for solving social issues and conflicting contexts. It is developed by the investigator. This model is useful

for solving conflicts among children in classrooms. A leader can use this model in various groups.

7. **Instructional and Nurturant Effects:** Instructional effects are those effects which are directly achieved by the learner by going through the steps of the model. The instructional effects of 3C3DIE model are social sensitivity, self knowledge, emotional intelligence, problem solving skills, communication skills, skill for formulating hypothesis, skills to analyse pros and cons, skills to design strategies, etc.

Nurturant Effects occur by experiencing the environment created by the model. Nurturant effects of the 3C3DIE for peace education are development of creative abilities, healthy interpersonal relationship, cooperation, respect to other's opinion, acquisition of the *values* and *knowledge* and developing the *attitudes*, *skills*, and *behaviors* to live in harmony with GOD, with oneself, with others, and with the natural environment. The application of this model will imbibe the peace values upheld by the World religions and the Gandhian concept of peace. Slowly students may be transformed to a person with calm but creative, integrated personality, who keeps love, compassion and forgiveness to all humankind and to the living and nonliving things in nature.

Conclusion

Today's classroom has to be shifted as a place where children learn the lessons of making peace in conflicting contexts. The peace making in the heart of human kind is a prerequisite for maintaining world peace and sustaining generations. Every war starts in an

individual's mind. So the training given to each child is very important. 3C3DIE model is a model of teaching meant for providing peacemaking and conflict resolution skills among students. The investigator hopes that the practice of it in the classrooms will help the students become lovers of peace and harmony. It is hoped that peace and harmony in classroom, school, home and native place will spread over the society, community, nation and the entire humanity. Let tomorrow be a place where all can live with hope and tranquility without the separation of creed, cast, colour and regional and language differences.

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INVOLVEMENT IN SCIENCE CLUB ACTIVITIES AMONG SECONDARY SCHOOL STUDENTS

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Abstract

Science Club is an organisation which assists and supplements the more formal training in science received in lesson periods, and so plays a valuable part in the education of secondary school pupils. In order to make the functioning of science clubs in our schools more effective NCERT has suggested activities such as science exhibition, project, science quiz, day celebrations etc. which are desired to be organised by science clubs. The present study aims to find out the level of involvement in science club activities of secondary school students of Kottayam district, Kerala, India. A self-constructed tool titled, 'Science Club Activities Involvement Scale' was administered among 400 students of standard nine. The significant difference between the Means of Scores with respect to science club membership and type of management also were found out. The results show science club members have significantly high involvement in science club activities than that of non-members and government school students have high involvement in science club activities than that of aided and unaided school students

Key Words:

Introduction

Science is a dynamic, expanding body of knowledge covering ever new domains of experience. In the present era, science determines the destiny of our life and provides renaissance in every field. Because of these reasons science education plays a pivotal role in school curriculum. Kerala Curriculum Framework (KCF, 2007) lists the development of scientific temperament, recognizing and developing one's own

interest and activities in technical fields, developing scientific literacy that provides for building awareness of scientific process as important aims of science education.

Science club is an organisation providing extracurricular activities related to science education. It is formed at the school level for the students who are interested in proceeding advanced science experience. "It is a group of young people from 12 to 18 years of age, organised to pursue in an interesting and

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orderly manner, under proper relationship and guidance a definite programme of scientific investigation and experimentation” (UNESCO, 1956). The basic principle involved in the science club is ‘learning by doing’. The individual learn and remember things better through doing rather than just study or read them. So in the present system of education science club activities plays an important role.

In order to make the functioning of science clubs in our schools more effective NCERT conducted Science Club Sponsor’s Workshops and suggested some activities which are desired to be organised by science clubs. These activities are science exhibition, project, bulletin board, science quiz, day celebration, science fair, field trips, essay writing competitions, wall magazine preparation, preparation of models and charts, science magazine and poster preparation.

‘Organisation of club activities and designing projects that nurture leadership qualities and personality development’ is a suggestion put forward by KCF (2007) for curriculum formation. Organisation of science club activities and ensuring active participation of students in these are the means to attain this goal. In order to ensure active involvement of children in club activities assessment and evaluation are necessary. So by assessing the involvement of the students in science club activities the teacher can realise the attainment of the aims of education.

Need for the Study

Science Club is an organisation which assists and supplements the more formal

training in science received in lesson periods, and so plays a valuable part in the education of secondary school pupils. Moreover it broadens the subject matter beyond the limits of the syllabus, according to the pupils’ own interest. It is an organisation, which helps in the development of scientific attitude, develops genuine interest in science and scientific activities and supplements the work of the classroom and the laboratory. Science club channelize the energies of students and make use of their skills and talents, which satisfy their instincts and urges and, help in their overall personality. In science club, there is no restriction and the students can work on their own ideas with full freedom.

The document “assessment and action plan” (Kerala Academy of Sciences, 1989) stated the importance to spruce up and strengthen the school science laboratories and set up a vibrant culture of science clubs. KAS (1989) also recommend to extend the science club culture to higher secondary level because the science club activities are enabling tool aimed at sparking interest of students in science.

Student’s involvement in club activities encourages healthy development of their faculties because of the support and opportunities that are present in these activities when compared to formal classroom situation. Students who participate in structured activities are more likely to respect diversity, play the roles and contribute as a member of organisation. Active participation in club activities may be linked to positive outcome, including improved grades, test scores, more school engagement and increased educational aspirations. Students may derive pleasure

from these activities with an optimal level of surprise, discrepancy or incongruity each of which includes arousal.

Objectives of the Study

1. To study the distribution of the scores on Involvement in Science Club Activities among the Students of Standard Nine
2. To find out the significant difference if any, between the Means of Scores on Involvement in Science Club Activities among the Students of Standard Nine with respect to
 - Science Club Membership and
 - Type of Management

Hypotheses of the Study

1. There exists a significant difference between the Means of Scores on Involvement in Science Club Activities among the Students of Standard Nine with respect to
 - Science Club Membership and
 - Type of Management

Methodology of the Study

For the present study the investigator randomly selected 25 schools from Kottayam district and collected information regarding the functioning of science clubs in these schools. From these schools the investigator selected nine schools where the science club activities were going on at a satisfactory level. A survey was conducted on 400 Students of Standard Nine who were randomly selected from these schools, by using descriptive survey method. The Investigator used a self-constructed tool namely 'Science Club Activities Involvement Scale' for measuring the Involvement in Science Club Activities among the Students of Standard Nine.

Analysis and Interpretation of Data

Distribution of the Scores on Involvement in Science Club Activities

Analysis and interpretation of the data was done by using Descriptive Statistics namely Frequency Distribution, Mean, Standard Deviation and Skewness. The investigator presents the Frequency Distribution of the scores on Involvement in Science Club Activities in Table 1.

Table 1

Frequency Distribution of the Scores on Involvement in Science Club Activities

Class Interval	Frequency	Percentage
25-35	5	1.25
35-45	17	4.25
45-55	77	19.25
55-65	117	29.25
65-75	103	25.75
75-85	53	13.25
85-95	25	6.25
Above 95	3	0.75
Total	400	100

Table 1 shows that 397 or 99.25% of the total sample of Students lie below the score 95. Only 0.75% of Students of Standard Nine lie above 95. 117 of the total 400 students lie in the class 55-65, 77 students lie in the class 45-55, 17 students lie in the class 35-45, 103 students lie in the class 65- 75, 53 students lie in the class 75- 85, 25 students lie in the class 85-95, only five students lie in the class 25-35 and three students lie above 95.

The Descriptive Statistics employed for the distribution of the scores on Involvement in Science Club Activities is presented in Table 2.

Table 2

Variable, Number of Students, Maximum Score, Minimum Score, Mean, Standard Deviation and Skewness of the Scores on Involvement in Science Club Activities

Variable	No. of Students	Maximum Score	Minimum Score	Mean	SD	Skewness
Involvement in Science Club Activities	400	96.28	26.68	64.29	13.08	0.119

From Table 2, the investigator observes that the Mean of the scores on Involvement in Science Club Activities of the Students of Standard Nine is 64.29, Standard Deviation is 13.08, Minimum Score obtained is 26.68 and Maximum Score obtained is 96.28. The skewness of the scores on Involvement in Science Club Activities is 0.119. It is positively skewed. That means the scores on Involvement in Science Club Activities

have a tendency to centered at the lower end of the distribution.

The investigator classified the whole sample into three categories; High Involvement ($>M + 1\sigma$), Moderate Involvement (between $M + 1\sigma$ and $M - 1\sigma$) and Low Involvement ($<M - 1\sigma$). Here M is the Mean and σ is the Standard Deviation. The classification is given in Table 3.

Table 3

Classification of the Students in the Total Sample on the basis of their Mean and SD

Level of Involvement in Science Club Activities	Range	No. of Students	Percentage
High	$>M + 1\sigma$ (> 77.37)	64	16
Moderate	Between $M + 1\sigma$ and $M - 1\sigma$ (77.37 - 51.20)	296	74
Low	$<M - 1\sigma$ (< 51.20)	40	10
Total		400	100

From Table 3 the investigator observes that 64 Students of Standard Nine scored above 77.37. They constitute 16% of the total sample. They have High Involvement in Science Club Activities. There are 40 Students of the Standard Nine scored below 51.20 constituting 10% of the total sample. They have Low Involvement.

There are 296 Students of Standard Nine lie between 77.37 and 51.20 constituting 74% of the total sample. They have Moderate Involvement. Thus the investigator concludes that majority of the Students of Standard Nine have Moderate Involvement in Science Club Activities.

Comparison of the Means of Scores on Involvement in Science Club Activities among the Members of Science Club and Non Members of Science Club

For the analysis of this objective the investigator formulated the null hypothesis H_0 1 (3):

“There exists no significant difference between the Means of Scores on Involvement

in Science Club Activities among the Members of Science Club and Non Members of Science Club”.

In order to test the null hypothesis the investigator used test of significance of difference between two large independent samples. The t value was set as 1.97 and p value as .05 at .05 level of significance with degrees of freedom 398 ($N = 400$). The data and results are presented in Table 4.

Table 4

Comparison of the Means of Scores on Involvement in Science Club Activities among the Members of Science Club and Non Members of Science Club

Variable	Category	N	Mean	SD	df	t value	p value
Involvement in Science Club Activities	Members	128	70.87	14.24	398	7.35*	.000
	Non Members	272	61.19	11.25			

Note: * $p < .05$ significant at .05 level

From Table 4, the investigator observes that the obtained t value ($t_{(398)} = 7.35, p < .05$) is found to be significant at .05 level. Thus the null hypothesis H_0 1 (3): “There exists no significant difference between the Means of Scores on Involvement in Science Club Activities among the Members of Science Club and Non Members of Science Club” is not accepted. Therefore the investigator concludes that Members of Science Club are found to be significantly highly involved in Science Club Activities in comparison to Non Members.

Comparison of the Means of Scores on Involvement in Science Club Activities with respect to Type of Management

For the analysis of this objective the investigator formulated the null hypothesis H_0 1 (4): “There exists no significant difference between the Means of the Scores on Involvement in Science Club Activities among the Students of Standard Nine with respect to Type of Management”.

The investigator presents the Number, Mean and Standard Deviation of the scores on the Involvement in Science Club Activities among the Students of Standard Nine with respect to Type of Management in Table 5.

Table 5

Comparison of the Means of Scores on Involvement in Science Club Activities with respect to Type of Management

Variable	Type of Management	N	Mean	SD
Involvement in Science Club Activities	Government	139	70.58	13.88
	Aided	156	61.55	12.54
	Unaided	105	60.63	9.15

The investigator tested the null hypothesis using one way analysis of variance (One Way ANOVA). The value of F was set as 3.02 at .05 level of significance with degrees of freedom between group as 2 and within group as 397. The investigator

presents the Number, Category, Degrees of Freedom, Sum of Squares, Mean Square and F value of the scores on Involvement in Science Club Activities among the Students of Standard Nine with respect to Type of Management in Table 6.

Table 6

Variable, Category, Sum of Squares, Degrees of Freedom, Mean Square, F value and p value of the Scores on Involvement in Science Club Activities among the Students of Standard Nine with respect to Type of Management

Variable	Category	SS	df	MS	F value	p value
Involvement in Science Club Activities	Between Group	8574.08	2	4287.04		
	Within Group	59717.94	397	150.42	28.50*	.000
	Total	68292.02	399			

Note: * $p < .05$ significant at .05 level; SS - Sum of Squares; MS - Mean Square

From Table 6 the investigator observes that the obtained F value ($F_{(2,397)} = 28.50, p < .05$) is found to be significant at .05 level. It indicates that the Means of Scores on Involvement in Science Club Activities among the Students of Standard Nine with respect to Type of Management differ significantly. Thus the null hypothesis H_0 (4): "There exists no significant difference between the Means of Scores on Involvement in Science Club Activities among the

Students of Standard Nine with respect to Type of Management" is not accepted. The investigator interprets that Type of Management has significant influence on Involvement in Science Club Activities among the Students of Standard Nine.

The investigator used Multiple Comparison for the different pairs of Involvement in Science Club Activities, since there exists a significant difference in the Means of Scores on Involvement in

Science Club Activities among the Students of Standard Nine with respect to Type of

Management. The pair wise comparison is presented in Table 7.

Table 7

Multiple Comparisons of Different Pairs of Involvement in Science Club Activities

Type of Management (I)	Type of Management (J)	Mean Difference (I - J)	Standard Error	p value
Government	Aided	9.02*	1.43	.000
Government	Unaided	10.54*	1.58	.000
Aided	Unaided	1.51	1.55	.982

Note: * $p < .05$ significant at .05 level

From Table 7 the investigator interprets that

- There exists significant difference between the Means of Scores on Involvement in Science Club Activities among the Students of Standard Nine from Government and Aided Schools.
- There exists significant difference between the Means of Scores on Involvement in Science Club Activities among the Students of Standard Nine from Government and Unaided Schools.
- There exists no significant difference between the Means of Scores on Involvement in Science Club Activities among the Students of Standard Nine from Aided and Unaided Schools.

Therefore the investigator concludes that the students of Government Schools have high Involvement in Science club Activities than the Students of Aided and Unaided Schools.

Major Findings of the Study

The major findings of the study are given below.

- The investigator found that 74% of the total students have Moderate

Involvement, 16% of the Students of Standard Nine have High Involvement and 10% of the students have Low Involvement in Science Club Activities.

- There exists a significant difference in the Means of Scores on Involvement in Science Club Activities among Members of Science Club and Non Members of Science Club. Science Club Members have significantly high Involvement in Science Club Activities than that of Non Members.
- There exists a significant difference in the Means of Scores on Involvement in Science Club Activities with respect to Type of Management. Government School Students have high Involvement in Science Club Activities than that of Aided and Unaided School Students.

Conclusion

The present study is an earnest attempt of the investigator to study in detail, the topic under consideration with all the limitations. The study conclusively revealed that most of the students have an average level of involvement in science club activities. There exists significant difference

in Involvement in Science Club Activities with respect to Science Club Membership and Type of Management. The findings are of prime importance as they contribute to theory and practice of education. The investigator would feel gratified if the findings of the present study would lead to a better understanding of the importance of Involvement in Science Club Activities among students.

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