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LEARNING STYLES AS DETERMINANTS OF PRIMARY SCHOOL PUPILS' ACADEMIC PERFORMANCE IN SOCIAL STUDIES IN CALABAR EDUCATION ZONE, NIGERIA

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Abstract

This study investigated learning styles as determinants of pupils' academic performance in Social Studies in primary schools in Calabar Education Zone, Cross River State Nigeria. To guide the study, three research questions and hypotheses were formulated. The Ex-post-facto research design was adopted for the study. The population of the study was 2,596 primary six pupils in public primary schools. Simple random technique was adopted in selecting a sample size of 1,491 primary six pupils comprising of 757 male and 734 female from the selected public primary schools. Structured questionnaire titled, Pupils Learning Style Questionnaire (PLSQ) and Academic Performance Test in Social Studies (APTSOS) were used for data collection. The research instruments were validated and the reliability of the instrument was established based on a trial study using test re-test method. The hypotheses were analyzed using One-way Analysis of Variance. The result of the analysis revealed that aural, logical and kinesthetic learning styles significantly determine pupils' academic performance in social studies in Calabar Education Zone, Cross River State. Based on the findings, it was recommended among other things that Social studies teachers should promote group discussion and encourage pupils to listen attentively in the classroom so that verbal learners can participate effectively in the classroom. Also, that teachers should be audible enough to enable aural learners understand what they are teaching and often encourage physical activities and use demonstration in order to give the pupils hands-on activities to explore different skills to test and retain their learning abilities.

Keywords: *Learning styles, Social Studies, academic performance, primary school, etc.*

1. Introduction

The problem of pupils' poor academic performance has been a long problem in Calabar Education Zone. The situation is growing worse as years go by. Studies have been conducted to find lasting solutions to this ugly situation. Some researchers had

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attributed this problem to poor incentive system from the government, lack of effective internal and external supervision of schools, while some linked poor academic performance of pupils to poor teaching resources/instructional materials available to teachers, general conditions of infrastructure among other factors in public primary schools in Nigeria.

Government, in respond to various recommendations made by researchers, had in recent times has extended the school time and provision of learning materials has been put in place. Nevertheless, the problem still persists. This is evident in the high rate of pupils' failure in examination, high rate of dependent on examination malpractice among primary school pupils to pass examination in the area. Therefore, upon the observed deterioration in the academic performance of pupils, one curiously wonders if the high failure rates and the poor performance of the pupils is not a reflection of the teaching quality or pupils' learning styles.

The influence of pupils' learning styles and their academic performance in Social Studies in primary schools is an issue of concern to the researchers. It is based on this, that the researchers wants to find out how do pupils learning styles in terms of kinesthetic, Aural and logical influence their academic performance in social studies in primary schools in Calabar education zone?

Kinesthetic learning style refers to a learning style where learners learn best with an active hands-on approach. These learners favour interaction with the physical world. Most of the time kinesthetic learners have a difficult time staying on target and can become unfocused effortlessly (Yamazaki, 2005). If the teacher presents a lesson without provision of things that learners can use their hands, kinesthetic learners may not follow and that may lead to their low performance in social studies.

Again, aural learning is a learning style in which learners learn through listening. An auditory learner depends on hearing and speaking as the main ways of learning. Aural learners must be able to hear what is being said in order to understand and may have difficulty with instructions that are drawn but if the writing is in a logical order it can be easier to understand (Syler, Cegielski, Oswald & Rainer, 2006). They also use their listening and repeating skills to sort through the information that is sent to them. An aural learner prefer to use sound and music in learning and the often have a good sense of pitch and rhythm. Typically, they can sing, play a musical instrument, or identify the sounds of different instruments. According to Yamazaki (2015) aural learning is one of the three different learning styles popularized by Neil D. Fleming in his VAK model of learning. An auditory learner will typically remember what the teacher says, and will be a helpful participant most of the time as long as the social strengths of this type of learner do not get in the way. Pupils who tend to favour this type of learning in the classroom, and can be easily distracted by those around them. Although they are great listeners, they can tune-in to everything else going on in the class, too (Thorton, Haskell, & Libby, 2006).

Furthermore, logical learning style is one of eight types of learning styles, or intelligences, defined in Howard Gardner's theory of Multiple Intelligences. Logical learning style refers to a person's ability to reason, solve problems, and learn using numbers, abstract visual information, and

analysis of cause and effect relationships. Logical learners are typically methodical and think in logical or linear order (Seyedeh, 2011). Pupils that adopt logical learning style may be adept at solving mathematical problems in their heads and are drawn to logic puzzles and games. Pupils with mathematical logical learning styles learn best when taught using visual materials, computers, statistical and analytical programmes, and hands-on projects (Coakes & Steed, 2003). They prefer structured, goal-oriented activities that are based on mathematical reasoning rather than less structured, creative activities with inexact learning goals. Logical learners would find a statistical study more appealing than analyzing literature or keeping a journal.

However, some pupils are or kinesthetic while others are auditory or logical learners. Thus the question now is how pupils learning styles determine pupils' academic performance in social studies in primary school in Calabar Education Zone, Cross River State, Nigeria? The answer to this question forms the basis of this research study.

2. Literature Review

Kinesthetic learning style refers to a leaning style where learners learn best with active hands-on approach. These learners favour interaction with the physical world. Most of the time kinesthetic learners have a difficult time staying on target and can become unfocused effortlessly (Yamazaki, 2005).According to Zin, Zaman and Noah (2002), kinesthetic learning styles style is a learning style in which learning takes place by the pupils carrying out physical activities, rather than listening to a lecture or watching demonstrations. The kinesthetic learners learn best by interacting or experiencing things around them. They benefit from hands-on engagement, rather than listening to a lecture or reading from a book. They like to act things out and use their bodies to remember facts (Beacham, Elliott, Alty & Al-Sharrah, 2002).Kinesthetic learners will enjoy role playing, building, hands-on experiments, dance or physical activity, and sports. Using these physical inclinations will enable them to remember and process information better, rather than sitting at a desk or lengthy study sessions. They avoid tests that require a lot of writing, particularly essays. These learners are more suited to demonstrating mastery in bursts, such as multiple choices; fill in the blank or brief definitions. When possible, evaluation through physical expression is more effective, as in writing and performing a play (Bates & Leary, 2001).

However, Zhang (2004) carried out a study on the kinesthetic learning style and pupil's academic performance in Find Art in Reading. The study adopted exploratory research design. The major objective of the study was to determine whether there is a significant relationship between kinesthetic learning style and pupil's academic performance in Find Art. Pearson Product Moment Correlation Coefficient was used in test of hypotheses. The study found that kinesthetic learning style has significant relationship on pupil's academic performance in Find Art in Reading. Also, ChanLin (2009) carried out a study on the influence of kinesthetic learning style and pupil's academic performance in Home Economics in Ghana. The study adopted the survey research design. The population of the study was 560 and sample size of 230 was randomly selected for the study. One way analysis of variance was used in data analysis and test of hypotheses. The study

found that kinesthetic learning style has significant influence on pupil's academic performance in Home Economics in Ghana.

Furthermore, Duff and Duffy (2012) carried out a study on the effect of kinesthetic learning style and academic achievement of pupil in public school in Pretoria, South African. The study adopted the survey research design and used a population of 500 male and 500 female pupils in public secondary schools in Pretoria. T-test and analysis of variance ANOVA was used in testing the hypotheses. The study found that kinesthetic learning style has significance effect on pupil's academic achievement in public schools in Pretoria. Again, Yamazaki (2015) carried out a study to investigate the relationship between kinesthetic learners' academic performance and academic achievement of verbal learners in Iran. The study adopted the survey research design and used a population of 1783 male and female people in 43 public schools in Iran. Pearson Product Moment Correlation Coefficient analysis was used to establish whether there is a significant relationship between kinesthetic learners and verbal learners in terms of their academic performance and achievement. The study found that kinesthetic learning styles have a weak positive relationship with academic performance of learners that adopt them. The study emphasis that teachers should adopts teaching styles that enhance pupils learning.

Also, Felder (2009) carried out a study on the implication of kinesthetic learning style and academic performance of primary five and six pupils in public schools in Southern Jordan. The study adopted the survey research design and utilizes data from both the primary and the secondary sources. The population of the study was 1400 comprise of both male and female pupils in 60 public primary schools in Southern Jordan. The Kolb's Learning Styles Inventory (LSI) was used in gathering data for the study. Ordinary Least Square regression analysis was used in testing the hypotheses of the study. The study found that kinesthetic learning style has significant effect on pupils' academic performance. Zin, Zaman and Noah (2012) carried out a study on the effect of teaching style on kinesthetic learners in Malaysia. The study adopted the survey research method and used a sample size of 400 respondents. Multiple regression analysis was used in testing all the hypotheses. The study found that teaching style has direct effect on kinesthetic learners' academic performance in public primary schools in Malaysia. Another study carried out by Jilardi (2011) on the implication of kinesthetic learning style on pupils score in English language in Paris using case study approach found that kinesthetic learning style have weak positive effect on pupil academic performance in English language in Paris. However, the study highlighted the important for educational psychologists to know how learning styles influence pupils' academic achievement in different countries, and from there to design possible means of intervention for promoting effective learning and academic achievement.

Furthermore, Chioma (2015) carried out a study on the influence of kinesthetic learning style, teaching aid and pupils understanding of mathematics in primary school in Enugu State. The study adopted the survey research design and simple random sampling technique was used in selecting a sample size of 270 pupils from

15 schools. Multiple regression analysis was use in test of hypotheses. The study found that kinesthetic learning style and teaching aids influence pupil understanding of mathematics.

Aural learning is a learning style in which learners learn through listening. An auditory learner depends on hearing and speaking as a main way of learning. Aural learners must be able to hear what is being said in order to understand and may have difficulty with instructions that are drawn but if the writing is in a logical order it can be easier to understand (Syler, Cegielski, Oswald & Rainer, 2006). They also use their listening and repeating skills to sort through the information that is sent to them. An aural learner prefer to use sound and music in learning and the often have a good sense of pitch and rhythm. Typically they can sing, play a musical instrument, or identify the sounds of different instruments. According to Yamazaki (2015) aural learning is one of the three different learning styles popularized by Neil D. Fleming in the VAK theory of learning. An auditory learner will typically remember what the teacher says, and will be a helpful participant most of the time as long as the social strengths of this type of learner do not get in the way. Pupils, who tend to favour this type of learning in the classroom, can be easily distracted by those around them. Although they are great listeners, they can tune-in to everything else going on in the class, too (Thorton, Haskell, & Libby, 2006).

As indicated by Zualkernan, Allert and Qadah (2006), one of the most significant issues in learning to learn is an individual's taking the responsibility for his/her own learning. The individuals should know what their own learning styles are and what characteristics this style has and they should thereby behave according to this style. In this way, the individual can acquire the constantly changing and increasing amount of information without need for the assistance of others. When the learner takes the responsibility of his/her own learning, they attribute meaning to the process of learning. They develop an understanding of his/her own form of learning style and becomes much more satisfied with the environment they interacts with. Every opportunity for learning is a chance to develop. It is in the learner's hand to use different ways and develop the learning styles that suit them (Coffield, 2004).

According to Coakes and Steed (2003), each individual is unique and different from everyone else. Each is a product of his or her environment with different interests and values and each has their own unique way of learning. Learners all learn by feeling, reflecting, thinking and doing, but they all differ in terms of which mode of learning styles they prefer. Learners' preference for one mode over the other determines their learning style preference. Style being any pattern we see in a person's way of accomplishing a particular task (Pashler, McDaniel, Rohrer & Bjork (2009). This has important implications for the teaching of children. Children approach learning in many different ways. They have their own personal preference in how to go about learning. Different learning styles suit different children. Left to themselves, they tend to use these styles across a whole range of different situations (Lee, 2007). Education is about people and people are different. Furthermore, the educational system often ignores this diversity, and restricts learners and teachers to specific modes of learning, and teaching. However

pupils adopt difference learning styles and this impact on their academic performance. However, Piaget (2009) studied the influence of aural learning style on pupils' academic achievement in Sydney. The study adopted the survey research method. The population of the study was 750 pupils randomly selected from 32 schools. The study found that aural learning style has significant influence on pupils' academic achievement in Sydney.

A different study conducted by Ennis (2014) on the analysis of aural learning style among primary school pupils and its effect on their academic performance in South Africa, shows that aural learning style significantly influence pupils academic performance in primary schools. Again, Canfield (2010) carried out a study to evaluate the effect of aural learning style on pupil academic performance in public schools in Jordan. The population of the study comprised of 1,140 pupils in 40 public schools in Jordan. The survey research design was used for the study. The ordinary least square regression was used to test all the hypotheses of the study. The study found that aural learning style has significant effect on pupils' academic performance in public schools in Jordan.

Also, Bates and Leary (2012) carried out a research to investigate the relationship between aural learning style and academic achievements using a total of 317 pupils in an Islamic school in Malaysia and employed the survey research method. The Learning Styles Survey (LSS) instrument which is based on Joy Reid's Perceptual Learning-Style Preference Questionnaire (1987) was used. The statistical procedures employed in this study were one-way ANOVA, and multiple regression analysis. The

analyses of the data indicated a significant relationship between overall academic achievement of pupils and the adoption of aural learning style. It was also found that the high, moderate and low achievers have a similar preference pattern of learning in when adopting aural learning style.

Furthermore, Reinert, and Sewall (2011) carried out a study on the impact of aural learning styles on the academic achievement of primary school pupils in Tehran. Survey research method was used for the study; the Kolb Learning Style Inventory (1999) was administered in eight public schools in Tehran. The mean of test scores in five subjects, namely English, science, mathematics, history and geography, was calculated for each pupil and used as a measure of academic achievement. A total of 285 Grade 10 pupils were randomly selected as sample of the study. The results of the analyses of variance showed that there is a statistically significant difference in the academic achievement of the pupils that correspond to the four learning styles; in particular, the mean scores for the converging and assimilating groups are significantly higher than for the diverging and accommodating groups. The study emphasis that teachers need to align their teaching style with pupils' learning styles to enhance their performance. Zualkernan and Allert (2010) carried out a study on the implication of aural learning styles on pupil academic success in public schools in Pakistan using survey research method. The study was conducted in 34 public school with a population of 1102 pupils who responded to the Jeffrey Barsch's Learning Style Inventory and their test scores were used to calculate the statistical coefficient to indicate their academic success. The study found that

aural learning style has significant effect on pupils' academic success.

Furthermore, Andem (2015) carried out a research on the influence of aural learning styles on pupil performance in art subject of Social Studies, CRK and Commerce. The study adopted the survey research design and a sample size of 217 pupils was used for the study. The Learning Styles Survey (LSS) instrument was used in gathering data. The statistical procedures employed in this study were One-Way ANOVA, and Multiple Regression Analysis. The study indicated a significant relationship between aural learning styles and pupil academic performance in art subject of Social Studies, CRK and Commerce.

Logical learning style is one of eight types of learning styles, or intelligences, defined in Howard Gardner's theory of Multiple Intelligences. Logical learning style refers to a person's ability to reason, solve problems, and learn using numbers, abstract visual information, and analysis of cause and effect relationships. Logical learners are typically methodical and think in logical or linear order(Seyedeh, 2011).Pupils that adopt logical learning style may be adept at solving mathematics problems in their heads and are drawn to logic puzzles and games. As indicated by Reidam (2007) that adopt mathematical logical learning styles enjoy school activities such as mathematics, computer science, technology, drafting, chemistry and other "hard sciences," and design. Mathematical linguistic learners prefer logical order in instruction and often work best in structured, organized environments. They have strong visual analysis and memory and problem solving skills (Barmeyer, 2004). According to Coakes and Steed (2003) Pupils with mathematical logical learning styles learn best when taught using visual materials, computers, statistical and analytical programmes, and hands-on projects. They prefer structured, goal-oriented activities that are based on mathematics reasoning rather than less structured, creative activities with inexact learning goals. Logical learners would find a statistical study more appealing than analyzing literature or keeping a journal.

According to Ferla, Valcke and Cai, (2009), many pupils recognize that each person prefers different learning styles and techniques. Learning styles group common ways that pupils learn. Everyone has a mix of learning styles. Some people may find that they have a dominant style of learning, with far less use of the other styles. Others may find that they use different styles in different circumstances. There is no right mix, nor any styles fixed. Pupils can develop ability in less dominant styles, as well as further develop styles that they already use well. Using multiple learning styles for learning is a relatively new approach. This approach is one that educators have only recently started to recognize. Traditional schooling used (and continues to use) mainly linguistic and logical teaching methods. It also uses a limited range of learning and teaching techniques (Felder & Brent, 2005). Many schools still rely on classroom and book-based teaching, much repetition, and pressured exams for reinforcement and review.

Learning style has an important place in the lives and academic achievement of learners. When the learners know his/ her learning style, she/he will integrate

it in the process of learning so that they can learn more easily and fast and will be successful (Holliday, 2009). It is important that individuals receive education in areas suitable for their learning styles. A person educated in an area having no relationship to his/her learning style may lack confidence and may be less successful and frustrated. Knowledge of learning style also provides information to the pupil as to why she/he has learnt in a different way than others. It helps to control the process of learning. It is vital because one of the most important signals in learning is to learn to be autonomous, that is, for the individual to take responsibility for his/her own learning.

However, Park and Choe (2005) carried out a study on logical learning style and pupils' academic achievement in Mathematic in public primary school in New Delhi. The study adopted the survey research design. The population of the study was 820 and sample size of 327 was used for the study. The main objective of the study was to determine the nature of relationship between logical learning style and pupils' academic achievement in Mathematic in public primary school in New Delhi. Pearson Product Moment Correlation Coefficient was used in data analysis and test of hypotheses. The study found that there is significant positive relationship between logical learning style and pupils' academic achievement in Mathematic in public primary school in New Delhi. Furthermore, when mismatches exist between learning styles of most pupils in a class and the teaching style of the teachers, the pupils may become bored and inattentive in class, do poorly on tests, get discouraged about the courses, the

curriculum, and themselves, and in some cases change to other curricula or drop out of school (Rutz, 2003). The level of learning achieved by a learner is one of the most important factors which indicate the success of a learning environment. In order to ensure the effectiveness of teaching environments, it is important to take account of characteristics, abilities and experience of learners as individuals or as a group when beginning to plan a learning environment (Bates & Leary, 2001).

According to Werner (2003) learning styles is the conditions that enables learners to percept, to process, to storage, and recall the learning contents. Reidam (2007) believed that learning style is the method that people prefer it over those other methods in learning such as learning in school. It is necessary that teachers, school managers and other members of instructional team take to account differences of learning styles of pupils. Study carried out by Tella (2009) on the effect of logical learning style on pupils academic achievement in Indian using survey research method and a sample size of 400, revealed that logical learning style has significant influence on pupils' academic achievement. Felder and Silverman (2013) carried out a study in implication of logical learning styles on pupils' academic achievement in French in South Africa. The study adopted exploratory approach and used a five-dimension scale to categorize learning styles. Percept dimension (sensing-intuitive) and process dimension (active- reflective) are two dimensions that borrowed from Brigs and Kolb's model of learning styles. Sensing learners tend to like learning facts; intuitive learners often prefer discovering possibilities and relationships.

The study found that logical learning style has significant influence on pupils' academic achievement in French language. Further findings shows that logical learners tend to retain and understand information best by doing something active and discussing what they learn with others which enhances their academic performance. The study indicates that reflective learners prefer to think about it quietly first.

Other dimensions of Felder and Silverman model of learning styles are input (visual-verbal), organized (inductive-deductive), and understand (sequential-global) dimensions. Visual learners remember best what they see; pictures, diagrams, flow charts, timelines, films, and demonstrations. Verbal learners get more out of words written and spoken explanations. Sequential learners tend to gain understanding in linear steps, with each step following logically from the previous one. Homayoni and Abdolahi (2013) in their studies, on the relationship between logical learning styles and academic achievement of primary school pupils showed a direct correlation between logical learning style and pupil academic achievement. Similarly, Rahmanpur, Palezeyan and Zamane (2008) carried out a study on the influence of logical learning style on pupils' academic performance in mathematics in Scotland. The study adopted the survey research design and used a population of 400 hundred pupils. The study found that logical learning style has significant positive influence on pupils' academic performance in mathematics in Scotland.

In a study carried out by Pashler, (2013) on the implication of logical learning style

on mathematics performance of pupils in Pakistan, using survey research design and a sample of 1750, comprise of male and female pupils in 42 primary schools in Pakistan. The study found that logical learning styles have positive effect on pupils' academic performance in Pakistan.

Hargadon (2014) carried out as study to investigate the relationship between logical learning styles and pupils' academic performance in Turkey. The study adopted the survey research design and uses a sample size of 285 pupils in 17 schools in Turkey. Pearson Product Moment Correlation coefficient was used to test all the hypotheses. The study found that there was a positive relationship between logical learning styles and pupils' academic performance in the selected schools in Turkey. Also, Bejork (2014) carried out a study on the influence of logical learning style and academic achievement of pupil in Kenyan. The study adopted the survey research design and uses a sample of 1650 drawn from 48 public schools. Pearson Product Moment Correlation coefficient was used to test all the hypotheses. The study found that logical learning style significantly influence pupils' academic achievement in Kenyan.

Furthermore, Nakpodia (2016) carried out a study on the influence of logical learning style, teaching method and pupils' academic performance in mathematics in Osun State. The study adopted the survey research design. The population of the study was 743 pupils selected from 20 public schools in Osun State. Multiple Regression analysis was used for the test of

hypotheses. The study found that teaching methods influence logical learners and impact significantly on their academic performance significantly.

3.   Purpose of the study

The main objective of the study was to examine pupils' learning styles as determinants of academic performance in Social Studies in primary schools in Calabar Education Zone, Cross River State Nigeria. Specifically, the study seeks to:

1. determine the influence of kinesthetic learning style on pupils' academic performance in Social studies

2.   assess the influence of aural learning style on pupils' academic performance in Social studies

3. investigate the influence of logical learning style on pupils' academic performance in Social studies

4.   Research questions

The following research questions were stated to guide the study.

1. Does kinesthetic learning style influence pupils' academic performance in Social studies?

2. How does aural learning style influence pupils' academic performance in Social studies?

3. To what extent does logical learning style influence pupils' academic performance in Social studies?

5. Research hypotheses

The following hypotheses were stated to direct this study

1. There is no significant influence of kinesthetic learning style on pupils' academic performance in social studies.

2. There is no significant influence of aural learning style on pupils' academic performance in social studies.

3. Logical learning style does not significantly influence pupils' academic performance in social studies.

Method and Design

The research design that was adopted for this research was Ex-post Facto design. This is because its major concern is the examination of facts, principles, knowledge and phenomenon that had already occurred and therefore not manipulated. The population of the study comprised the entire primary six pupils in all the public primary schools in Calabar Education Zone with 2,596 primary six pupils, comprising 1,318 male and 1278 females. A simple random sampling technique of random numbers was employed by the researcher to select 1,491 which represent 57% of the population of primary six pupils in the study area. The sample showed that757which represent 51% were male while734 which represent 49% were female from the 63 randomly selected public primary schools in Calabar Education Zone, Cross River State. Two instruments were used for data collection. The first one was Pupils Learning Style Questionnaire (PLSQ) and second is a 20 item Academic Performance Test in Social Studies (APTSOS). Validity and reliability of the instruments were ascertained and the reliability ranged from 0.861-0.917. This indicated that the instrument was reliable for the study as shown in Table 1.

Table 1
Cronbach alpha reliability coefficient (N = 50)

Variable	item	No of Items	X	Variance	SD.	Rxy
Logical learning style	11-15	5	15.90	36.99	6.08	0.894
Aural learning style	16-20	5	16.40	34.16	5.84	0.885
Kinesthetic learning style	21-25	5	16.48	32.09	5.66	0.876
Pupils grades	1-20	20	16.14	34.20	5.85	0. 861

Source: Field work, 2017

Hypotheses Testing

Hypothesis 1:

Kinesthetic learning style does not significantly determine Pupils' academic performance in social studies. The independent variable in this hypothesis is Kinesthetic learning style while the dependent variable is pupils' academic performance in social studies. Simple regression analysis was employed to test the hypothesis. The result of the analysis is presented in Table.2

Table 2
Simple regression result of the prediction of Kinesthetic learning style on pupils' academic performance in social studies

R	R Square	Adjusted R 2Square	Std. Error of the Estimate		
.505(a)	.255	.254	6.65701		
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	22564.078	1	22564.078	509.165*	.000(a)
Residual	65986.249	1489	44.316		
Total	88550.327	1490			

a. Dependent Variable: pupils' academic performance in social studies

b. Predictors: (Constant), Kinesthetic learning style

The simple regression analysis of the prediction of Kinesthetic learning style on the pupils' academic performance in social studies produced an adjusted R^2 of .254. This indicated that the Kinesthetic learning style accounted for 25.4% to determine pupils' academic performance in social studies in the study area. This finding is a critical indication that Kinesthetic learning style is relatively high in the area of the study. The F-value of the Analysis of Variance (ANOVA)

obtained from the regression table was F = 509.165 and the sig. value of .000 (or p<.05) at the degree of freedom (df) 1 and 1489. The implication of this result is that Kinesthetic learning style is a significant predictor of pupils' academic performance in social studies.

Hypothesis 2

Aural learning style does not significantly determine pupils' academic performance in social studies.

The independent variable is Aural learning style while the dependent variable is pupils' academic performance in social studies. Simple regression analysis was employed to test this hypothesis. The result of the analysis is presented in Table 3.

Table 3

Simple regression result of the prediction of Aural learning style on pupils' academic performance in social studies

R	R Square	Adjusted R Square	Std. Error of the Estimate		
.655(a)	.428	.428	5.83001		
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	37940.628	1	37940.628	1116.260*	.000(a)
Residual	50609.699	1489	33.989		
Total	88550.327	1490			

a. Dependent Variable: pupils' academic performance in social studies

b. Predictors: (Constant), Aural learning style

The simple regression analysis of the prediction of Aural learning style on the pupils' academic performance in social studies produced an adjusted R^2 of .428. This indicated that the Aural learning style accounted for 42.8% to determine pupils' academic performance in social studies in the study area. This finding is a critical indication that Aural learning style is relatively high in the area of the study. The F-value of the Analysis of Variance (ANOVA) obtained from the regression table was F = 1116.260 and the sig. value of .000 (or p<.05) at the degree of freedom (df) 1 and 1489. The implication of this result is that Aural learning style is a significant predictor of pupil academic performance in social studies.

Hypothesis 3

Logical learning style does not significantly predict Pupils' academic performance in social studies. The independent variable is Logical learning style while the dependent variable is pupils' academic performance in social studies. Simple regression analysis was employed to test this hypothesis. The result of the analysis is presented in Table 4

Table 4

Simple regression result of the prediction of Logical learning style on pupils' academic performance in social studies

R	R Square	Adjusted R 2Square	Std. Error of the Estimate		
.609(a)	.371	.370	6.11666		
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	32841.622	1	32841.622	877.801*	.000(a)
Residual	55708.706	1489	37.414		
Total	88550.327	1490			

a. Dependent Variable: pupils' academic performance in social studies
b. Predictors: (Constant), Logical learning style

The simple regression analysis of the prediction of Logical learning style on the pupils' academic performance in social studies produced an adjusted R^2 of .370. This indicated that the Logical learning style accounted for 37.0% of the determinant pupils' academic performance in social studies in the study area. This finding is a critical indication that Logical learning style is relatively high in the area of the study. The F-value of the Analysis of Variance (ANOVA) obtained from the regression table was F = 877.801 and the sig. value of .000 (or p<.05) at the degree of freedom (df) 1 and 1489. The implication of this result is that Logical learning style is a significant predictor of pupil academic performance in social studies.

Discussion of findings

The research hypothesis one was stated as kinesthetic learning style does not significantly influence pupil academic performance in social studies. From the analysis of hypotheses five, it was revealed that kinesthetic learning style significantly influence pupils academic performance in social studies in Calabar education zone. This finding corroborates Duff and Duffy (2012) who found that kinesthetic learning style has significance effect on pupils' academic achievement. Also, the finding was supportive of the finding of Felder (2009) who found that kinesthetic learning style has significant positive effect on pupils' academic performance. Furthermore, this finding lend credence to Jilardi (2011) who found that kinesthetic learning style has significant positive influence on pupils' academic achievement in primary schools.

Research hypothesis two was stated as aural learning style does not significantly influence pupil academic performance in social studies. The result from the test of hypothesis two showed that, aural learning style significantly influences pupils' academic performance in social studies in Calabar Education Zone. This findings is in line with Ennis (2014) who found that aural learning style significantly influence

pupils academic performance in primary school. The finding is in consonance with the finding of Andem (2015) who found a significant relationship between aural learning styles and pupil academic performance in art subject of Social Studies, CRK and Commerce. Also, the finding supported the finding of Zualkernan and Allert (2010) who found that aural learning style has significant effect on pupils' academic success. Similarly, the finding was in line with the finding of Reinert, and Sewall (2011) who found that aural learning has significant positive influence on pupils' academic performance. However, the study emphasis that teachers need to align their teaching style with pupils' learning styles to enhance their performance and academic achievement.

Research hypothesis three was stated thus, logical learning style does not significantly influence pupil academic performance in social studies. The result from the test of hypothesis three showed that logical learning style significantly influence pupils academic performance in social studies in Calabar education zone. This finding was supported by the study of Pashler, (2013) who found logical leaning style to have positive effect on pupils' academic performance in the selected primary schools. Similarly, the finding supported the earlier finding of Hargadon (2014) who found that there was a positive relationship between logical learning styles and pupils' academic performance in the selected primary schools. Also, the finding is in line with the finding of Nakpodia (2016) who found that logical learning style has significant positive influence on pupils' academic performance.

Conclusion

Conclusively, taking into consideration pupils' diverse learning styles, designed instructional methods that take care of those diversities and remain sensitive of such during the teaching process could improve pupils learning and academic performance. Also, providing various learning materials which can bring diversity in the classroom by employing, logical, aural and kinesthetic materials and designing curriculum in a flexible way to reach a variety of learning styles could improve pupils learning and academic performance.

Recommendations

Primary school teachers should often utilize teaching aids to explain better and present information in order to help logical learners to understand and improve their academic performance.

Teachers should also be audible enough to enable aural learners understand what they are teaching.

Primary school teachers should often encourage physical activities and use demonstration in order to give the pupils hands- on activities to explore in different skills to test and retain their learning abilities.

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JUVENILE DELINQUENCY AMONG FEMALE SECONDARY SCHOOL STUDENTS IN GWALE LOCAL GOVERNMENT AREA OF KANO STATE, NIGERIA

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Abstract

This study investigated juvenile delinquency among female secondary school students in Gwale Local Government Area of Kano state. Two research questions were formulated to guide the investigation. The study adopted a descriptive survey design. A simple random sampling technique was used to select five secondary schools and 150 female secondary school students for the study. The research instrument employed for the study is questionnaire tagged Female Students' Appraisal Questionnaire (FSAQ). The face and content validity method was employed in validating the questionnaire items while the test-re-test technique was used to ascertain the reliability coefficient of the instrument which is 0.839, and adjudged reliable for the study. The study utilized quantitative method of data analysis such as percentages and Pearson Product Moment Correlation (PPMC) statistic in order to effectively find the relationship as well as the influence of the variables on the phenomenon under study. The findings of the study revealed that there is a prevalence of juvenile delinquency among female secondary school students in the study area and there are numerous psychological and social factors which influence the promotion of delinquent behaviours among female secondary schools students in the area under study. These factors include drug abuse, social media, poverty, domestic violence and indiscipline. The study concludes with recommendations such as policy makers, teachers, educational administrators and school proprietors should focus on evolving effective strategies to enlighten and sensitizing female secondary school students on the dangers associated with juvenile delinquency through seminars, awareness campaigns, and guidance and counselling services.

***Keywords:** Juvenile Delinquency, Females, Secondary Schools, etc.*

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Introduction

Juvenile delinquency is the act of breaking the law by children or young people which is also referred to as "youth crime," as well as delinquent behavior amongst the young people. More often than not, people also call those young people who engage in delinquent acts as either "juvenile delinquents" or "youth criminals" (Piquero, 2003). Juvenile delinquency has been defined as behavior exhibited by young persons and the related crimes committed, which are not socially acceptable to the society in which they belong (Siegel & Welsh, 2011). In every society, there are sets of norms which members are expected to observe, however, not every member of the society abides by those norms. Members who live contrary to the set norms are referred to as delinquents. Therefore, juvenile delinquency is relatively a term which connotes the deviant behaviors of young person's especially under the age of 18. Social learning theory posits that Juveniles or children learn to engage in delinquency through association with or exposure to others. This implies that individuals learn delinquency from others. The theory explains that behavior is a reflection of people observing and imitating others and imagining the consequences of their own behavior. Gabriel Tarde was the first to recognize this tendency. He argued that people learn criminal behavior by associating with others and imitating their behavior. Tarde's work inspired others like Skinner, Walters and Bandura to develop more elaborate explanations.

On the other hand, the Social Strain Theory propounded by American sociologist, Robert King Merton in 1975 and later corroborated by Agnew in 1992, assumes that humans are conforming organisms who only violate the law when the disjunction between goals and means becomes so great that the individual believes he or she can no longer pursue socially sanctioned goals via legitimate channels. According to Merton, a society that emphasizes goals over the means to obtain these goals; and that restricts access to opportunities for legitimate advancement is establishing the conditions for anomie and future criminality. Agnew's general strain theory offers a promising framework for understanding juvenile delinquency. A major type of strain according to Agnew's general strain theory consists of experiencing unpleasant events or circumstances, including aversive situations at home, particularly arguments and violence (Berns, 2004). The social strain theory proposes that adolescent or juvenile are pressed into delinquency by negative emotional reactions that result from being situated in an aversive situation from which they cannot escape. The theory was criticized for not being scientific but speculative and interpretative. Juvenile delinquency in Nigeria is a major social problem which affects the whole society and constitutes a serious impediment to development. Several researches have shown that young people in contemporary Nigeria are mostly involved in drug abuse and numerous other criminal activities (Curt & Anne, 2009; Muhammed, 2010; Nkwopara, 2011). In corroborating this fact, National Drug Law Enforcement Agency (NDLEA) lamented that the young people are the ones most involved in illicit drug usage and dealings in the country. In recent years, the availability and misuse of illicit substances among the youth (male and female) especially in Nigeria remained

a serious social problem confronting the nation. Oshikoya et al (2006) reported that:

There have been consistent rapid increases in the incidence of substance abuse in Nigeria starting from the 10 years of age. Despite efforts by the National Drug Law Enforcement Agency (NDLEA) and other tiers of government in the country to prevent and control the social problem, it has remained a source of serious law violation and other criminal acts by all categories of users (male and female). The physical, psychological, social and economic consequences of the drug problems among youth are becoming more obvious and disturbing. Young people who persistently abuse substances often experience an array of problems, including academic difficulties, health related problems (including mental health), poor peer relationships and involvement in social vices such as stealing, bullying, secret cult activities. All these have negative consequences for family members, community and the entire society (as cited in Adenuga and Okesshola, 2018 p.99).

Kano, the most populous state in Nigeria, is hit by the prevalence of drug abuse that elicits various forms of crimes which put the lives of the youth and others in danger. Drug abuse in Northern Nigeria's most populous city has been on the rise in recent years, with anti-narcotics officials and experts warning of serious social consequences if the problem is not tackled. Kano has the country's highest drug abuse rate based on the number of seizures, arrests of addicts and convictions of arrested dealers, according to the National Drug Law Enforcement Agency. Curt and Anne (2009) listed acquisitive tendency, forgery, aggression, stealing, and sex delinquency as some of the types of delinquent behaviors among juveniles as a result of the prevalence of drug abuse. Without a doubt, the issue of juvenile delinquency has become a great concern in Nigerian secondary schools, especially in highly populated and urbanized areas like Kano state. Secondary school students' involvement in deviant activities and juvenile delinquency in Kano state especially the metropolis; which Gwale Local Government Area is part of, has reached an alarming rate. Furthermore, the recent increase in female involvement in deviant acts has also reached unprecedented heights. Studies have shown that juvenile delinquency is rampant among secondary school students due to a number of factors which, according to Samuel (2017) include; parents' attitudes towards their children, the community, social class, frustration, peer group influence, foreign ideas, poverty, ignorance/illiteracy, among others. Though, some types of delinquent behaviors may occur as a result of environmental circumstances, which in most cases lie outside the individual's moral psychic life and moral control (Hubner, 2005), it has constituted a problem that has led to student's attrition, late arrival at school, and low academic performance. Thus, the prevailing delinquent behaviors among female students and the effect of these on the society informed this study.

Research Objectives

1. Determine the types of juvenile delinquency prevalent among female secondary school students in Gwale LGA, Kano state.

2. Ascertain the influence of psychological and social characteristics in the promotion of delinquent behavior among female students.

Research Questions

1. What types of Juvenile delinquent behaviours are prevalent among female secondary school students in Gwale LGA, Kano state?

2. To what extent do psychological and social characteristics influence the promotion of delinquent behaviours among female students in Gwale LGA, Kano?

Method

The study adopted a descriptive survey design. The population of the study consisted of all the female secondary school students in Gwale Local Government Area of Kano State. A simple random sampling technique was used to select five secondary schools and 150 female secondary school students for the study. The research instrument employed for the study is questionnaire administered to the sampled female secondary schools students. The questionnaire was tagged Female Students' Appraisal Questionnaire (FSAQ). The face and content validity method was employed in validating the questionnaire items while the test-re-test technique was used to ascertain the reliability coefficient of the instrument which is 0.839, and adjudged reliable for the study. The study utilized quantitative method of data analysis such as percentages and Pearson Product Moment Correlation (PPMC) statistic in order to effectively find the relationship as well as the influence of the variables on the phenomenon under study. The figure below shows the demographic and social-economic characteristics of the respondents engaged in the study.
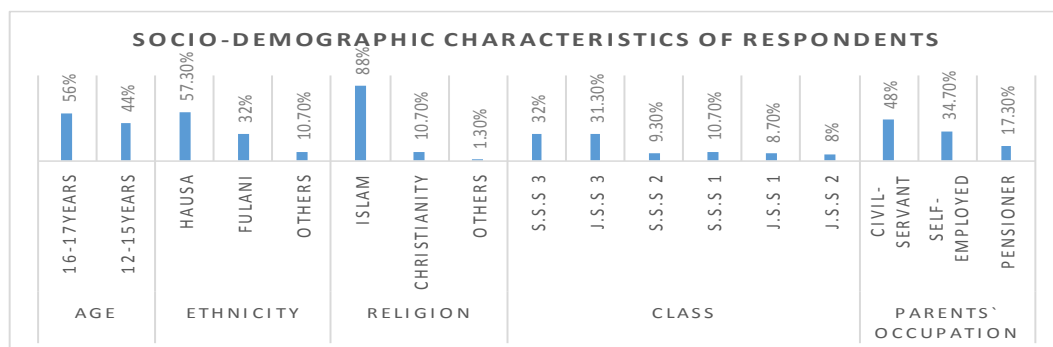
Figure 1: Demographic and Socio-Economic Characteristic of Respondents

Figure 1 above, presents an overview of the socio-demographic characteristics of the respondents such as age bracket, religious affiliation, ethnic group, class as well as the occupation of respondents' parents/guardians. Respondents between the ages 16 and 17 years constituted the major percentage of 56%. Were 44% are within the age bracket of 12 and 15 years. This shows fair representation of the various age groups in the study with a difference of 12%. This could be attributed to the fact that most respondents within this age range are at their adolescent age and are most suitable for the subject matter under study. The figure further elucidates that, majority of the respondents (57.3%) were Hausas, 32% were Fulanis while, Yoruba, Igbo, Nupe,

Kanuri and Babur tribes constituted 10.7%. Therefore, majority of the respondents were Hausa ethnic group. Much more, for the distribution of respondents by religious affiliation, a majority (88%) of the respondents were Muslims, the Christians were 10.7% while, 1.3% of the respondents indicated no religion. Thus, respondents who practice modern religions (i.e Islam and Christianity) were fairly distributed among the study population. From the figure, the distribution of respondents by class illustrated that, 32% of the respondents were Senior Secondary School 3 students, 31.3%, were Junior Secondary School 3 students, while 10.7%, 9.3%, 8.7% and 8% were from SS 1, SS 2, JSS 1

and JSS 2 respectively. Therefore majority of the respondents were SS 3 and JSS 3 students. Also, 48% of the respondents` parents were civil servants, 34.7% self-employed and 17.3% whose parents were pensioners. Thus, based on the responses, it can be inferred that, majority of the female secondary school students in Gwale LGA are Muslim-Hausas whose family occupation are white collar jobs and self-owned businesses, with few pensioners.

Results

Research Question One: What types of Juvenile delinquent behaviours are prevalent among female secondary school students in Gwale LGA, Kano state?
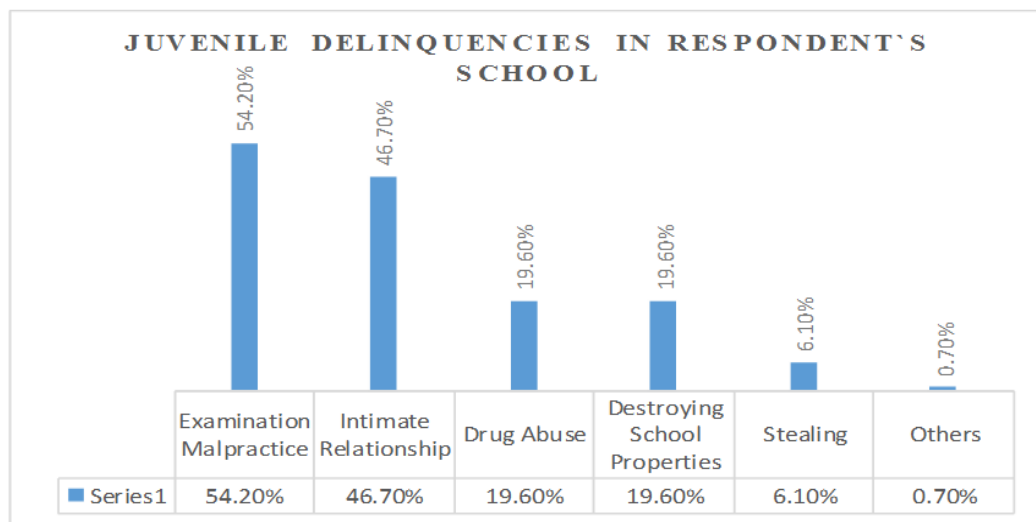
Figure 2: Forms of Juvenile Delinquencies Prevalent in among Female Students

Figure 2 indicates that majority of the respondents; 54.2% opined that, examination malpractice is the most highly practiced form of juvenile delinquency in their schools. Owing to presence of intimate relationship among secondary school students, 46.7% of the respondents

have school mummy, daughter, lover or both. While for 19.6%, the most prevalent form of juvenile delinquency in their school includes destroying school properties and drug abuse. Theft was found to be very minimal based on the responses of respondents which is 6.1%. And for 0.7%,

there are other forms of delinquencies in their school, such as truancy and absenteeism. Therefore, majority of the female secondary school students in Gwale LGA were aware of the incidences and different patterns of juvenile delinquencies and the prevalent of juvenile delinquencies among female secondary school students in the study area are examination malpractice, intimate relationship, drug abuse, as well as destruction of school properties.

Research Question Two: To what extent do psychological and social characteristics influence the promotion of delinquent behaviours among female students in Gwale LGA, Kano?

	Traumatic Experience	Poverty	Urban Area	Rural Area	Nuclear Family	Extended Family	Social Media	Drug Abuse	Domestic Violence	Movies	Peer Influence	Campaigns	Indiscipline
Traumatic Experience	1												
Poverty	-0.351	1											
Urban Area	0.1	-0.222	1										
Rural Area	-0.389	-0.057	0.458	1									
Nuclear Family	-0.551	0.427	-0.030	0.344	1								
Extended Family	-0.385	0.551	-0.268	0.01	0.672	1							
Social Media	-0.073	0.03	0.005	0.537	0.508	0.318	1						
Drug Abuse	0.621	0.1	-0.402	-0.438	-0.276	-0.048	-0.105	1					
Domestic Violence	-0.509	-0.032	0.1	0.690	0.779	0.327	0.497	-0.305	1				
Movies	-0.275	0.226	-0.373	-0.287	0.140	0.623	-0.130	0.009	-0.022	1			
Peer Influence	0.330	0.652	-0.227	-0.430	0.1	0.1	0.04	0.469	-0.367	-0.178	1		
Campaigns	-0.054	0.342	0.194	-0.405	0.343	0.356	0.004	-0.301	-0.212	0.229	0.417	1	
Indiscipline	-0.534	0.732	0.140	0.501	0.362	0.434	0.238	-0.117	0.226	0.203	0.150	-0.03	1

Figure 3: Influence of Psychological and Social Factors in the Promotion of Juvenile Delinquency

Figure 3 presents the factors that predispose juvenile delinquency based on the responses obtained. Whereby, negative or no correlations between the variables indicated red. While the positive correlations and the strong ones were indicated with blue and in bold respectively. The correlation indicated that traumatic experience is strongly correlated at .621 to drug abuse and peer influence at .330. Poverty and family status are strongly correlated at .427 and .551 for both nuclear and extended family respectively. There is a correlation between poverty and peer influence at .652, indiscipline at .732, campaigns at .342, and slightly with drug abuse at .1. Social media and poverty correlated at .03. The correlation at (.1) indicated that, some juveniles in urban area are exposed to domestic violence which makes them prone to crimes, while there is a correlation of .194 between urban area and sensitization campaigns. Juveniles from nuclear family correlated at .344 while their counterparts from extended families correlated at .01 respectively. Also, there is a correlation between nuclear family and social media at .537. There is also a strong correlation at .690 between rural area and domestic violence. There is a strong correlation at .501 between rural area and indiscipline. Furthermore, there

is a strong correlation (at .497) between social media and domestic violence. Drug abuse is found to have a correlation with peer influence as the positive correlation stood at .469. Similarly, there is a positive correlation (.226) between indiscipline and domestic violence. The correlation showed that, domestic violence causes indiscipline which may result to delinquent acts.

Discussion of Major Findings

The study findings revealed that the forms of juvenile delinquencies prevalent in the study area by female secondary school students are: examination malpractice, destruction of school properties, drug abuse and indecent relationships. These findings corroborate the findings of Onyekachi and Ugwuoke (2015) which showed that the acts of juvenile delinquency prevalent among female secondary schools students include bullying, physical fights, stealing, destruction of school properties, lies to obtain favors, absenteeism from school and drug abuse. The findings of the study also revealed that there are quite a number of factors both psychological, social and economic predisposing female secondary school students to committing juvenile delinquencies. The factors mitigating the incidences of juvenile delinquencies in the study area are: traumatic experience, exposure to domestic violence, peer influence, poverty, drug abuse, indiscipline, social media, movies and living in an areas prone to crime; to some extent, the delinquent behaviour is not solely the fault of the child but exposure to some psychological trauma and pressure posed by the environment and influences. This finding also corroborates the earlier findings of Oshikoya et al (2006) which

revealed that the physical, psychological, social and economic consequences of the drug problems among youth are becoming more obvious and disturbing as young people who persistently abuse substances often experience an array of problems, including academic difficulties, health related problems (including mental health), poor peer relationships and involvement in social vices such as stealing, bullying and secret cult activities.

Conclusions

1. There is a prevalence of juvenile delinquency among female secondary school students in the study area in spite of consequences such as social unrest, moral decadence, and poor academic performance.

2. There are numerous psychological and social factors which influence the promotion of delinquent behaviours among female secondary schools students in the area under study. These factors include drug abuse, social media, poverty, domestic violence and indiscipline to mention a few.

Recommendations

1. Policy makers, teachers, educational administrators and school proprietors should focus on evolving effective strategies to enlighten and sensitizing female secondary school students on the dangers associated with juvenile delinquency through seminars, awareness campaigns, and guidance and counselling services.

2. Parents should intensify efforts towards inculcating ethical, moral and spiritual values in their children, in addition to close supervision and monitoring of all their activities.

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AWARENESS ON RESEARCH ETHICS AMONG RESEARCH SCHOLARS IN KERALA

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Merlin Mariam Varghese**

Abstract

The objective of the study is to assess the level of Awareness on Research Ethics among Research Scholars in Kerala. The investigator surveyed a sample of 210 Research Scholars in Education under various Universities of Kerala. The sample was selected by using stratified random sampling technique to collect the data. Preliminary statistics, Percentage analysis, Test of significance of difference between means (t test) and One Way ANOVA (f test) were used for statistical analysis of data. The results revealed that research scholars in Kerala possess average level of awareness on research ethics.

***Keywords**: Awareness, Research Ethics, Research Scholars, etc.*

Introduction

The concept of Education is still in the process of evolution and this process will never come to an end. Epoch always demand a revision of the prevailing Educational ideals. Education and research is closely connected. It is the systematic collection and analysis of data related to the field of education. Research is a systematic approach to find or reveals something new or to the existing one. Research ethics is an important component in the modern research. In this technological era, rapid globalization leading the society to loss the basic morals and values. Chief Justice of the U.S. Supreme Court Potter Stewart (1955) once stated "Ethics is knowing the difference between what you have a right to do and what is right to do." They are actually norms for conduct that distinguish between right and wrong, acceptable and unacceptable behaviour. This study is going on through research scholars about their Awareness on Research Ethics. It is mainly focusing on three components from many. i.e., Plagiarism, Veracity and Human Subjects Protection.

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Need and Significance of the Study

Now, the word 'ethics' being as a controversial term in the technological epoch, because 'right' is getting manipulated into 'wrong' in many judgments. Researchers have to take the sole responsibility for the ethical conduct of their own research. The Indian government has responded to calls to take stricter measures to tackle scientific fraud. Still the possibility to think that some misconduct is carrying out many. May be that's why University Grant Commission (UGC,2019) is planning to conduct a review of the quality of PhD thesis for which doctoral degrees have been awarded in last 10 years by varsities across the country. The move comes following concern raised by various quarters about degrading quality of research in the country and duplication on subjects on which PhDs are done. It is impossible to avoid these headlines under the title of 'misconduct'. So the research scholars should have a deep knowledge about the code of ethics of research in their study. The investigator intended to assess the level of awareness among research scholars on Research Ethics. Since it take high time to focus more on importance of research ethics among research scholars. So this study is significant in the present scenario.

Objectives of the Study

The major objectives of the study are

1. To assess the level of Awareness on Research Ethics among research scholars in Kerala.

2. To assess the level of Awareness on Research Ethics among research scholars with respect   to the components

    a. Plagiarism

    b. Veracity

    c. Human Subjects Protection.

3. To compare the level of Awareness on Research Ethics between full time and part time research scholars in Kerala

4. To compare the level of Awareness on Research Ethics among research scholars in different universities of Kerala.

Methodology

The method adopted in this study is survey method.

Sample for the study

The present study was conducted on a sample of 210 Research Scholars in Education under various Universities of Kerala.

Tools used for the study

Research Ethics Awareness Test was used to collect data from Research Scholars of various Universities of Kerala. (Abdul Rasheed Poozhithara& Merlin Mariam Varghese, 2019)

Statistical Techniques

The investigator used the following statistical techniques for the study

1. Preliminary statistics

2. Percentage analysis

3. Test of significance of difference between means (t test)

4. One Way ANOVA (f test)

Data analysis and Interpretations

Data collected from a sample of 210 Research Scholars were used to assess the level of Awareness on Research Ethics among research scholars in different Universities of Kerala.

Preliminary analysis of data describes the basic properties of whole data collected for the study. It reveals the nature of the total sample in the study. For the process of preliminary analysis Mean, Median, Mode, Standard Deviation, Skewness and Kurtosis were calculated. The preliminary analysis for the total sample is presented in the Table 1

Table 1

Results of preliminary analysis of Awareness on Research Ethics among research scholars for the total sample

Mean	Median	Mode	SD	Skewness	Kurtosis
24.22	24.00	23	5.11959	0.031	-.372

From the preliminary analysis of the whole data collected, it is understood that mean value for the total sample is 24.22. The median for the total sample was found to be 24.00 and the value of mode is 23.The standard deviation of above sample is 5.11959. The values of skewness and kurtosis are 0.031 and -.372 respectively.

Analysis of the Level of Awareness on Research Ethics among Research Scholars in Kerala

The level of Awareness on Research Ethics is calculated by percentage analysis of the total sample. In the percentage analysis, the investigator categorized the sample into three groups such as high, average and low, according to the value obtained by m + σ and m − σ. The details of level of Awareness on Research Ethics among research scholars are presented in the table 2

Table 2

Level of Awareness on Research Ethics among research scholars in Kerala

Sl. No	Different level of awareness on Research Ethics	Size of the sample under this category	Percentage
1	High	40	19%
2	Average	136	65%
3	Low	34	16%
		210	100%

In the above table, among research scholars in Kerala 19% are having high level of Awareness on Research Ethics, majority(65%) having average level of Awareness on Research Ethics and 16% are having low level of Awareness on Research Ethics.

Analysis of the level of Awareness on Research ethics among Research Scholars with respect to the Components

This was done by analysing the scores of three components namely, Plagiarism, Veracity and Human Subject Protection. The level of Awareness on Research Ethics with

respect to the components are calculated by percentage analysis of the total sample. The details of level of Awareness on Research Ethics with respect to the components are presented in the below tables

Table 3
Level of Awareness on Research Ethics among research scholars with respect to the component Plagiarism

Components	Mean (M)	SD	High		Average		Low	
			No	%	No	%	No	%
Plagiarism	9.69	2.04174	40	19.04%	115	54.76%	55	26.19%

By analysing the table, 19.04% shows high Awareness on Research Ethics with respect to the component plagiarism. 26.19% shows low awareness and 54.76 % shows average level of awareness.

Table 4
Level of Awareness on Research Ethics among research scholars with respect to the component Veracity

Components	Mean (M)	SD	High		Average		Low	
			No	%	No	%	No	%
Veracity	7.71	2.34659	49	23.33%	116	55.23%	45	21.42%

From the table it is clear that 23.33% shows high level of Awareness on Research Ethics on the basis of the component Veracity. 21.42% shows low awareness and 55.23% shows average level of awareness.

Table 5
Level of Awareness on Research Ethics among research scholars with respect to the component Human Subjects Protection

Components	Mean (M)	SD	High		Average		Low	
			No	%	No	%	No	%
Human Subjects Protection	6.82	2.51376	64	30.47%	111	52.8%	35	16.66%

The table indicates that 30.47% shows high level of Awareness on Research Ethics with respect to the component Human Subjects Protection. 16.66% shows low awareness and 52.8% shows average level of awareness.

Comparison of Level of Awareness on Research Ethics among Full Time and Part Time Research Scholars in Kerala

Table 6

Test of significance in the Mean Scores of Awareness on Research Ethics among full time and part time research scholars in Kerala.

Group	N	Mean	SD	t- value
Full time research scholars	105	26.55	4.45702	
Part time research scholars	105	21.89	4.67052	7.407

The calculated critical ratio 7.407 greater than the table value 2.58 at0.01 level of significance. Hence there exists a significant difference in the level of Awareness on Research Ethics among full time and part time research scholars. The mean of awareness scores for full time and part time research scholars found to be (Mean =26.55) and (Mean=21.89) respectively. Furthermore, the mean score of full time research scholars is much higher when compared to part time research scholars. So full time research scholars

The investigator tested the significance of difference between full time and part time research scholars and the details are presented in the table 6

has significantly better awareness than part time research scholars.

Comparison of the Level of Awareness on Research Ethics among Research Scholars in Different Universities of Kerala.

This was done by analysing the scores based on different universities selected for the study. The investigator is using One way ANOVA for the comparison of the mean scores of different universities in Kerala. The data and analysis are presented in the table 7.

Table 7

Statistical Data and Results of One way ANOVA for the comparison of Mean Scores of Awareness on Research Ethics among Research Scholars in various universities of Kerala

Variable	Source	Sum of squares	df	Mean square	f	Level of Significance
	Between groups	113.685	4	28.421	1.086	Not Significant
	Within groups	5364.239	205	26.167		
Total		5477.924	236			

Calculated f value 1.086 is less than the table value 2.42 at 0.05 level of significance. So there is no significant difference in the Mean Scores of Awareness on Research Ethics among Research Scholars in various universities of Kerala. Hence there exists no significant difference in the level of Awareness on Research Ethics among research scholars in different universities of Kerala.

Summary

- The mean value for the total sample is 24.22. The median for the total sample was found 24.00 and the value of mode is 23.The standard deviation of above sample is 5.11959. The values of skewness and kurtosis are 0.031 and -.372 respectively.

- The percentage analysis revealed that there is an average level of Awareness on Research Ethics among research scholars in Kerala.

- The results found that research scholars differ in the level of Awareness on Research Ethics with respect to the components: Plagiarism, Veracity and Human Subjects Protection.

- There exists a significant difference in the level of Awareness on Research Ethics between full time and part time research scholars. Full time research scholars has significantly better awareness than part time research scholars.

- The result found that there exists no significant difference in the level of Awareness on Research Ethics among research scholars in different universities of Kerala.

Conclusion

The findings of the study highlight the importance of Awareness on Research Ethics among Research Scholars. It is important to adhere to ethical principles in order to protect the dignity and rights of the study. The quality of a study can be found in the trustworthiness of researcher. Ethical awareness enriches the researcher to draw out a pure copy of the study substance before the developing community.

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A STUDY ON THE FINANCIAL AND SOCIAL INSECURITY OF PRIVATE SECTOR EMPLOYEES

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Abstract

The paper deals with the financial and social insecurity of employees in private sector. Because of the lush of private sector organizations and shortage of employment in public sector and government organizations, many get satisfied with the job that they get in private sector. The study was an attempt to understand the pattern of disadvantages of the employees in private sector with special focus on financial and social factors. Data was collected from 60 respondents of Kottayam District using google forms. It was found that poor salary package and lack of job security were the major issues that the employees face. Because of being employed in private sector, they had low purchasing power, low standard of living, poor work life balance and difficulty in meeting their expenses. Further, they demand an attractive salary package and to fix minimum wages by Government

Key words: *private sector, financial insecurity, social insecurity, side income etc.*

Introduction

The private sector is the segment of a national economy that is owned, controlled and managed by private individuals or enterprises. The private sector has a goal of making money and employs more workers than the public sector. A private sector organization is created by forming a new enterprise or privatizing a public sector organization. The private sector is the part of the economy, sometimes referred to as the citizen sector, which is owned by private groups, usually as a means of enterprise for profit, rather than being owned by the state. The private sector employs most of the workforce in some countries. In private sector, activities are guided by the motive to earn money. The private sector is a key stakeholder in both urban and economic development, being a major contributor to national income and

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the principal job creator and employer. The private sector provides around 90% of employment in the developing world. The role of private sector includes developing and maintaining infrastructure and services, promoting and expanding existing businesses, addressing inefficiencies in the local economy, promoting human capital development, encouraging community development, promoting small, micro and medium enterprises, attracting investment in the city.

Background of the Study

Private sector constitutes the major part of the employment of our country. Even though there are public sector institutions in our country, the proportion of jobs offered by them is less. Of course, there are personal motives and attractions to get employed in either public or private sector.

The attractions for being employed in private sector includes many. Private sector offers higher salary packages at early ages and they receive exponential hikes in their package at the most productive point of life. So, one can become richer at his well age. The works done by an employee in a private sector organisation of challenging nature. So, for those who require a peaceful and safe life, private sector is not a good option. But for those who want to showcase all of their potentials and bring out the best in them, private sector is the best option. They have large opportunities, especially in corporate sector to advance themselves and give the best of them. This will be appreciated by the management too. Private sector has people who recognize and give credit to intelligence, talent and hard work. The scope of learning is good in private

sector compared to public sector. There are vast opportunities for advancement. Apart from that the physical conditions offered by private sectors at workplace are admirable.

In spite of having these advantages, many people are working in private sector unwillingly. The reasons may vary from person to person. But there are some common drawbacks and issues that demotivates people not to work in private sector.

Issues of Private Sector Employees-An Overview

In 2020, there were around 501 million private workers in India, the second largest after China. Of these over 94 percent work in unincorporated, unorganised enterprises ranging from pushcart vendors to home-based diamond and gem polishing operations. The organised sector includes workers employed by the government, state-owned enterprises and private sector enterprises. In 2008, the organised sector employed 27.5 million workers, of which 17.3 million worked for government or government owned entities. Unorganised sector, also known as own account enterprises, refers to all unlicensed, self-employed or unregistered economic activity such as owner manned general stores, handicrafts and handloom workers, rural traders, farmers, etc.

Private sector includes all different types of individual or corporate enterprises, both domestic and foreign, engaged in different fields of productive activity. Private sector enterprises are owned and managed by the private sector. These private sector enterprises are mostly characterized by

certain common characteristics like private initiative, profit motive and ownership and management in private hands. In private sector there is too much work load and less salary. They will fight for work reduction and more salary.

Unfair Pay

There is no chance to find an employee who thinks that he makes too much money. So, what the employers can do is to ensure fair wages- the wages according to the trend, performance of the employee, work load levied upon him. What employees can do to boost their pay checks is to emphasize their experience, improve their education, point out positive performance reviews, work less desirable, but higher paying shifts, and exemplify successes. One another major drawback is the lack of retirement benefits. The employees have to settle for very less once their productive age is over.

Lack of Communication

The biggest problem with any relationship is lack of communication. And that extends beyond personal life into work life. There are plenty of things employers can do to open the lines of communication, like making time for employees, giving feedback, listening closely, asking questions, not hiding in the office etc.

No Job Security

There is no guarantee for the time period that a present employee is retained in his place. Particularly, with the case of average employees, the issue of job security is crucial. Only outstanding performers can calm down themselves about their job security to some extent.

Under Appreciation

When employees feel unappreciated at work, the stress it creates a strike to the productivity and bottom line. There are several ways to display appreciation, but the simplest ones are sometimes all that's necessary. Sufficient amount of appreciation, motivation and reinforcement is necessary for a normal human to do work of any kind. This is one of the major causes of low job satisfaction.

Favouritism

At any time if someone receives special treatment at work without any particular contribution by them at work, it is favouritism. This is most common in private sector. It can be like more money, an undeserved promotion or a better schedule. Favouritism by an employer can be a destructive force to morale.

Overworked and absence of proper leaves

Without getting paid enough, the employees let the employees to undertake additional work and responsibility. Of course, it is necessary to an extend to make an employee advanced. This makes the employee struggle. He can neither quit the job nor continue further. This affects his work life balance crucially. At times, the employees do not find it convenient to get leaves. The employees have to skip even the important functions because of the cruel attitude of employers.

No Opportunity for Advancement

Finding a ceiling over the career is a worst situation. But this happens in most organisations. Many employees face problems of not getting promotions, trainings etc. If an employer feels that

one is qualified, he should be considered for advancement either of his position or his competence level. Job enrichment, enlargement etc. should be properly equipped. There are least opportunities for exercising autonomy and freedom in work done.

Challenging work and unhealthy work environment

The works assigned are mostly of challenging nature. The authority does not consider the capabilities of man before assigning the works. The incidence of challenging work leaves the employees in struggle and they become the victims of stress, pressure, poor health conditions etc. The companies etc. attract the young employees with higher packages at the time of their appointment and extracts the best part of them and once they become unproductive, they are thrown off.

Sexual Harassment and lack of maternity benefits

Discrimination on the basis of gender and the exploitation of women employees are also an important issue. The employees have to close their eyes to many malpractices to be retained in the job. Pregnant women are not properly considered even after various regulations by government.

The Effects are:

Low purchasing power and reduced standard of living

Purchasing power simply means how much one can buy of the money with them. The private sector employees earn comparatively less as compared to the public sector which reduces the buying power. The inflationary tendencies in economy leaves the employees at nothing. The private sector employees have to settle for less with the same work or more work done by them compared to public sector employers. They find it difficult to meet all the expenses of life.

Poor work life balance

Work-life balance is a concept that describes the ideal situation in which an employee can split his or her time and energy between work and other important aspects of their life. The overworked and exploited employees find it hard to balance the work and family life.

Low status and rejection from the society

Being employed in private sector is considered as low status job. The general society always consider private sector employees as good for nothing in some cases. They face severe rejections especially in marriage proposals.

Need and Significance of the Study

More than majority of the educated people won't be able to find out a job for them in a government agency or public sector undertaking during their life time. By the time, Government is moving further upon Privatisation. More and more academically qualified youth pass out year after year. The situation now is the influence of more private organisations and the increase in the number of qualified candidates. At one instance, the organisations need to fill their positions with employees and the job seekers want to settle themselves with a job. The only option left before the job seekers is to rely on the private sector organisations. It is their source of livelihood but still some of the basic considerations are not met with.

Hence a study is essential to understand the problems faced by the employees working in private sector, how the problems affect the employees and who do the employees wish to have to overcome their problems.

Objectives

1. To study the problems faced by employees at work place
2. To study the incidence of financial and social insecurity of the employees because of getting employed in private sector
3. To know the suggestions of employees in solving the problems faced at work
4. To know the pattern of secondary income generating activities

Methodology and Sample

The present study used descriptive survey method to find out the problems of farmers.

- Selection of the variable involved in the study.
- Construction and validation of the tool to measure the selected variable.
- Collection of the data using tools.
- Analysis of the data using statistical procedure like using tables, graphs, mean values.
- Interpretations of the findings.

The present study is basically an empirical one where both primary and secondary data have been used. For primary data, 60 private sector employees were randomly selected from Kottayam District. For collecting data, Questionnaires generated via Google Forms were used. Secondary data were collected from various

topic online journals, publications, articles and other e-resources were used. The study covers a period 01/03/2021 to 30/04/2021 and the relevant information was obtained.

Tools used in the Study

Questionnaires circulated via Google Forms was the only tool used to collect data. The questionnaire required the personal details of the employees as the first section. It was shaped as a checklist model questionnaire so that the number of questions is stipulated to minimum. Besides the pre set options, it was provided with sufficient space to express the extra matters from the perspective of the respondent.

Analysis and Interpretation

Age Wise Classification

Table 1
Age wise classification of Respondents

Age Group	No. of Respondents	%
20-29	48	80
30-39	6	10
40-49	3	5
Above 50	3	5
Total	60	100

The above table shows the age wise classification of respondents. 80% of the respondents belong to the age group of 20-29. 10% belong to the age group of 30-39. 5% of the respondents are between the age of 30 and 39. Another 5% are having the age of above 50.

Type of organisation

Table 2

Classification on the basis of type of organisation which the respondent work

Organisation	No. of Respondents	%
Schools	10	16.7
Colleges	8	13.3
Companies	16	26.7
Hospitals	3	5
Societies	3	5
Others	20	33.3
Total	60	100

The above table gives the details of the type of private sector organisation in which the respondents work. Most of the respondents (33.3%) work in the other types of private sector organizations which include Banks, Firms etc. 26.7% of the respondents work in Companies. 16.7% work in Schools, 23.3% work in Colleges and 5% each work at societies and hospitals.

Educational Qualification

Table 3

Classification on the basis of Educational qualification of respondents

Education	No. of Respondents	%
Higher Secondary	2	3.4
Graduation	17	28.3
Post-Graduation	32	53.3
Professional	8	13.3
Others	1	1.7
Total	60	100

The above table denotes the Educational qualification of the respondents. More than majority of the respondents have Post Graduation as their Educational qualification. 28.3% are graduates, 13.3% are professionally qualified, 3.4% has higher secondary education and 1.7% is from the other category.

Side Income Activities

Table 4

Classification on the basis of engagement in side income activities

Side Income Activities	No. of Respondents	%
Yes	40	66.7
No	20	33.3
Total	60	100

The above table shows the classification whether the respondents themselves or anyone else in the family is engaged in any non-regular side income generating activities. 66.7% of the respondents get income from other sources but 33.3% respondents have their salary as the main source of income for their family

Type of side income activities

Table 5

Classification of the side income activities

Activity	No. of Respondents	%
Agriculture	28	70
Animal Husbandry	5	12.5
Tailoring	0	0
Part time office works	0	0
Others	7	17.5
Total	40	100

40 respondents or their families are engaged in side income generating activities. The above table shows the classification of these activities. 70% of them receives other income from agriculture. 17.5% receive income from other activities that are not mentioned whereas 12.5% receives income from raising and rearing of animals.

Monthly Income of Family

Table 6
Classification on the basis of monthly family income of respondents

Income	No. of Respondents	%
Below 10000	9	15
Rs.10001 to Rs. 20000	22	36.7
Rs. 20001 to Rs.30000	13	21.6
Above Rs. 30000	16	26.7
Total	60	100

The above table shows the monthly family income of the respondents. 36.7% of the respondents have an income ranging between Rs. 10001 and Rs. 20000. 26.7% of the respondents has an income above Rs.30001. 21.7% of the respondents receive an income between Rs. 20001 and Rs. 30000 whereas 15% have an income below Rs. 10000

Issues faced by employees

Table 7
Response to the issues faced by employees

Sl. No	Issues	Response	%
1.	Poor salary package	39	65
2.	No job security	36	60
3.	Challenging work	19	32
4.	Unhealthy work environment (stress, pressure…)	22	37
5.	Demotivation and low opportunities for advancement	14	23
6.	No personal consideration	15	25
7.	Lack of retirement benefits	19	32
8.	No job satisfaction	12	20
9.	Lack of freedom	19	32
10.	Favoritism	7	12
11.	Concern about future health	11	18
12.	Compulsive behavior	7	2
13.	No proper leaves	17	28
14.	Stingy work	5	8
15.	Sexual Harassment	0	0
16.	Lack of maternity benefits	6	10

The above table shows the response of the respondents to the issues. 65% agreed that they have a poor salary package. 60% said that they have no job security. 37% says that they face an unhealthy work environment and that they have a lot of

stress and pressure. 32% of the respondents agree that they been assigned challenging work. 32% are troubled by the lack of retirement benefits. 32% agrees that they lack sufficient freedom at work. 28% complains that there are no proper leaves. 25% feels the lack of personal consideration. 23% feels that they are demotivated and they have only less chances for getting advanced. 20% have no satisfaction of their job. 18% are concerned about their future health. 12% agrees that management shows the attitude of favouritism towards some. 10% have noticed the lack of maternity care and benefits to the women employees. 8% complains about stingy work and 2% noticed the compulsive behaviour of management while no one has complained about sexual harassment

Effects-Financial and Social Insecurity

Table 8

Opinion on the financial and social effects of private sector employment

Sl.No	Problems	Agree (+1)	Disagree (-1)	Neutral (0)	Total	Mean
1	Low purchasing power	29 (48.4%)	8 (13.3%)	23 (38.3%)	60	0.35
2	Reduced standard of living	29 (48.3%)	16 (26.7%)	15 (25%)	60	0.22
3	Poor work life balance	28 (46.7%)	12 (20%)	20 (33.3%)	60	0.26
4	Rejection	4 (6.7%)	30 (50%)	26 (43.3%)	60	-0.43
5	Low status	13 (21.7%)	28 (46.7%)	19 (31.6%)	60	-0.42
6	Difficulty in meeting expenses	30 (50%)	14 (23.3%)	16 (26.7%)	60	0.27

The above table shows the opinion of the respondents towards the effects of being employed in private sector. The overall opinion is found out by calculating the mean value. Agree is given the value of +1, disagree is given the value of -1 and neutral is valued 0. The sum of the weighted values is divided by 60 to reach the mean value.

- 48.4% of the respondents agreed that they have low purchasing power. 38.3% were neutral to the statement whereas 13.3% disagreed. Hence, the employees generally have low purchasing power. This is denoted by the mean value of 0.35.

- 48.3% of the respondents agreed that they have a reduced standard of living. 26.7% disagreed whereas 15% were neutral to the statement. Hence, the employees generally have a reduced standard of living. This is denoted by the mean value of 0.22.

- 46.7% of the respondents agreed that they have low poor work life balance. 33.3% were neutral to the statement whereas 20% disagreed. Hence, the employees generally have a poor work life balance. This is denoted by the mean value of 0.26.

- 50% of the respondents disagreed that they face rejection. 43.3% were neutral whereas only 6.7% agreed to the statement. Hence, the employees generally do not face rejection by being employed in private sector. This is denoted by the mean value of -0.43.

- 46.7% of the respondents disagreed that they feel a low status. 31.6% were neutral whereas 21.7.7% agreed to the statement. Hence, the employees generally do not feel low status. This is denoted by the mean value of -0.42.

- 50% of the respondents agreed that they have face difficulty in meeting expenses. 26.7% were neutral whereas 23.3% disagreed to the statement. Hence, the employees generally face difficulty in meeting their expenses. This is denoted by the mean value of 0.27.

Suggestions recommended by the employees

Table 9
The suggestions recommended by the employees

Suggestions	Response	Percentage
Attractive salary package	49	82
Involvement of government in paying salary and pensions	37	62
More consideration to working employees	33	55
Appreciate the dedication	34	57
Proper Reinforcement	19	32
Providing the scope for development	24	40
Appropriate work hours	35	58
Proper leaves	29	48
Fix fair wages in each sector by Government	42	70

The above table shows the opinion of the employees towards the suggestions placed. 82% demands an attractive salary package, 70% wants the salary and wages to be fixed by the government, 62% wants the government to add their part to the salaries of private sector. 58% of the respondents want a change in the working hours, 57%

wants the management to appreciate the dedication, 55% wants the management to consider their hard work. 48% wants the restructuring of leaves, 40% wants the management to facilitate their advancement and 32% requires proper motivation and reinforcement

Major Findings

1. All the respondents belong to Ramapuram Grama Panchayat of Kottayam District

2. Majority of the respondents belong to the age group of 20-29

3. More of the respondents work in Private Companies

4. Major portion of the respondents have Post graduation as their Educational Qualification

5. Most of the respondents have 4 members in their family and at least 1 or 2 others are employed in most cases

6. Many respondents have 2,3 or 4 dependents (parents, children, siblings, disabled etc) in their family

7. 60% of the respondents have some other side income generating activities at their home mostly Agriculture related activities

8. Almost 36% of the respondents have an income ranging between Rs. 10001 and Rs. 20000

9. The major issue faced by the respondents are poor salary package and lack of job security. The least affecting factor is the compulsive behavior of management. No one has complained about sexual harassment

10. Majority of the respondents agreed that they are having low purchasing power, low standard of living, poor work life balance and difficulty in meeting their expenses. The respondents are not with the statement that they face rejection and have a low status.

11. The most favorable suggestion placed before the respondents was to satisfy them with an attractive salary package and to fix minimum wages by Government. Only less of them required chances for advancement.

Implications of the Study

- The number of dependents in family is more. It is not possible for the employees to settle all the requirements of the family members with the salary they receive.

- We cannot exclude private sector from the economy. It has many efficiencies and economies. If at least a small help is provided from the part of Government in paying the salaries of Private Sector employees, it would increase the work satisfaction and living condition of the employees.

- Retirement benefits and pensions are to be fixed in such a way that they employees could at least cover up the essential expenditure.

- The employees fear of losing their job. The management generally keeps up an attitude that if the senior hands are fired, they can hire new hands at minimum salary

- Sexual harassment is nonexistent as per the respondents. It is a good indicator of our social development.

- Family is equally important. Steps must be ensured to maintain the work life balance especially for women employees

- It is a positive symbol that only a smaller number of respondents face a rejection from family and society because they are working in private institutions. Not much of the respondents feel that being employed in private sector is an issue of low status.

- Many employees lack motivation and reinforcement at work. The drawback of poor salary package can be overcome at least to some extend by the co-operative behavior of management.

Conclusion

Private Sector institutions including Schools, Colleges, Hospitals, Companies, Banks etc are an inevitable part our economy in this era of Privatisation. The public sector or the government are not able to provide employment opportunities to all the qualified. At the same time, the private sector needs qualified hands to fill their positions. The condition of many of the organised private sector firms and entrepreneurships is not that well to satisfy all the employees with the conditions as in Public Sector. But as the Constitution says, "All are equal in the eyes of law", it is not fair that people doing the same or even more work are provided with less. There should be clear analysis, if the institutions are paying their employees according to

their capability. If not, sufficient measures must be taken. Government grants should be provided if the institutions are not able to pay as much amount at least to meet their necessary expenses. Human resources are an inevitable part of the country. Hence the private sector enterprises should be promoted to be more employee- friendly.

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PROJECT WORK AS A TASK IN THE B.Ed CURRICULUM

Sreena P T*

Abstract

In this paper the investigator explores the practice of project work of B Ed Natural Science Student Teachers under Kannur University as a task and assignment. The study was conducted on a sample of 13 Natural science teacher educators from all the teacher education institutions under Kannur University. A Questionnaire was used to collect data. An informal discussion was conducted with other teacher educators and student teachers in the colleges of teacher education to supplement the information collected through Questionnaire. The data was interpreted using percentage analysis. The result shows that majority of the projects submitted for internal assessment were found to be worthless. Special attention should be given to improve the quality of the project work in the natural science curriculum.

Key Words: *Project work, B.Ed Curriculum, Task, Environment, etc.*

Introduction

A project is an individual or collaborative enterprise that is carefully planned to achieve a particular aim - Oxford Dictionary. Project is any undertaking, carried out individually or collaboratively and possibly involving research or design that is carefully planned to achieve a particular aim. Project are complex tasks based on challenging questions or problem, that involve students in designing, problem solving, decision making or investigative activities, giving students the opportunity to work. It is a task that requires a lot of time and effort. In higher educational institutions, a project work is a research assignment given to a student which requires a larger amount of effort and more independent work than that involved in a normal assignment. To ensure the creation of quality teachers, the NCTE has made some changes in the teacher education curriculum in 2014 laying emphasis on competencies to enable the teachers for handling process oriented classrooms. Different tasks and assignments are included in the syllabus to enable the teacher trainees to meet the

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different competencies in teaching .To acquaint with the nature of science and to equip the student teacher in scientific method an environmental related project is included as a Task and assignments in the revised Natural Science curriculum.

Importance of Project Work in B.Ed Curriculum

Project work plays an important role in the BEd curriculum because it provides opportunities for student teachers to collaborate their learning. It teaches them skills such as problem solving and helps to develop additional skills integral to their future such as critical thinking and time management. Student teachers are expected to engage students in learning content through activities, assignments, experimentation. So it is necessary to get training in scientific method. Project is included in the syllabus to get firsthand experience with various procedures regarding problem solving. Solving highly complex problem requires that students have both fundamental skills and 21st century skills (teamwork, problem solving, research gathering, time management, information synthesizing, utilizing high tech tools)with the combination of skills, students become directors and managers of their learning process, guided & mentored by a skilled teacher (edutopia,PBL,2007). As future teachers project work is meaningful to the B.Ed students. It provides students with an opportunity to get proper training in scientific method so that they can pass these to the upcoming generation for the solution of their immediate local problems.

Why this Environment related Project is incorporated in the curriculum?

Environmental related project is included in the First semester Natural Science of B.Ed curriculum. It has been implemented as a task for the student teachers meant for internal assessment. Environmental related project means the project intended for the environment, by the environment and about the environment. It enables them to increase their professionalism. It is a broader concept. It is an understanding what we have, how to use it wisely, how well it can be managed for sustainable development. Environment includes social, culture, physical, natural aspects of environment.

Environment related Project is included in the curriculum with an objective to assist them to understand ---environment, to understand the various problems related to the environment and how the environment can be protected from various issues. This type of project will widen the thought process of student teachers. By this student teachers can collaborate with governmental and non governmental agencies during data collection and they can understand their procedure and system. It promotes novel ideas among them and enhances scientific temper and attitude. As future teachers the student teachers can understand more about their environment and needs of the environment and what betterment is required in the environment. Every environment related project work influences their lifestyle and they can imbibe various changes in their lifestyles according to their topic relating with aspects in various environment.

Need and Significance of the Study

Project work as a learning experience provides opportunity to the students to explore information or data obtained from various sources using multi dimensional strategies and critically, creatively and scientifically apply it to real life situations. It is a task to be completed within a particular time under the guidance of a teacher and develops critical thinking among the learners

Pengyue Guo et al (2020) conducted a study based on project-based learning (PBL) in higher education and found that PBL is a promising approach that improves student learning in higher education. Mohammed Abdullatif Almulla (2020) studied the effectiveness of the project based learning approach as a way to engage students in learning and found that PBL technique improves student engagement by enabling knowledge and information sharing and discussion. This study also reveals that PBL approach is highly recommended for educational use by students and should be encouraged in universities'. Vitner & S. Rozenes (2009) studied final year projects as a major element in industrial engineering curriculum and found that a project gives the student an opportunity to use and implement methods, techniques and tools that he or she studied during the entire course of studies.

The purpose of this study was to investigate Teacher Educators response regarding the project work in the B Ed Natural Science Curriculum The investigator intended to explore the practice of project work as a task and assignment among the student teachers of Natural science .The present study is entitled as 'Project Work as a Task in the B Ed Curriculum'

Objective of the study

To study the project work of B Ed Natural Science Student Teachers under Kannur University

Methodology

The present study was conducted using a qualitative research method on a sample of 13 Natural science teacher educators from the colleges of teacher education under Kannur University Purposive sampling technique was used for the selection of sample. A Questionnaire was used to collect data through online. An informal discussion was conducted with other teacher educators and student teachers in the colleges of teacher education to supplement the information collected through Questionnaire. This paper presents observations from 13 years of experience during which 125 projects were supervised and evaluated. The collected data was then interpreted using percentage analysis.

Findings and Discussions

In Kannur University, environment related project work is included as a compulsory task in the curriculum for the B.Ed first semester natural science students. Student teachers of all Teacher education institutions have been submitting their projects on time because it is a compulsory component in the curriculum. The University of Kerala, The Mahatma Gandhi University and Calicut University do not offer project work as a task or assignment for B.Ed Natural Science Course. In University of

Kerala every student teacher has to take up a minor project during the course. The task is to be initiated during first phase of school internship and to be completed during second phase and credited in semester IV. The task is to be assessed internally by the supervising teacher and externally by the external practical board during the viva-voce. Kannur University offer only two marks for tasks and assignments which is to be completed in first semester itself due to which   the objectives of project as a task cannot be accomplished. As a result such projects become worthless and insignificant. The response of teacher educators are summarised and presented below

1. 92.31 % opined that the topic for project were selected by the student teachers itself . They were selected topics from Biodiversity, Plastic use and related issues, waste disposal, soil analysis, medicinal plants, and endosulphan related problems. Most of the student teachers prefer survey type study only.

2. 92.31 % responded that the quality of projects work is decreasing because the student teachers are not giving much importance to selection of the project. Student teachers are considering it merely as an internal assessment worth a few marks. They consider this task only as a means to score high internal assessment marks. Students are submitting lacklustre projects just to score internal marks only.

3. 84.61 % of Teacher Educators responded that projects are replica or extension of their projects of U G or PG courses. Every year similar projects are repeated without anyone opting for innovative ideas or projects. Students search for related projects online or repeat certain

projects done previously during their graduation or post graduation.

4. 76.92 % Teacher Educators responded that they always cross check the every details of project work and there are scopes for experimentation in the project. 53.84 % responded that infra structure facilities in their colleges were not enough for accomplishing their project work in science which needs lab work. The absence of a well equipped natural science laboratory in various colleges can also be considered a reason behind the poor quality. If the lab facilities were available then students would not have to depend on other colleges to conduct their testing procedures.

5. 100 % Teacher Educators opined that the student teachers utilises resources like books, internet, library, journals, , primary and secondary sources, environment and their surroundings for their project work

6. 92.31% Teacher Educators opined that submitted projects are very relevant to the various environmental issues. 76.92 % responded that student teachers get training in   scientific method 53.84 % responded project enhance creativity among student teachers , helps the student teachers to improve different skills and improve natural consciousness. and develop scientific attitude

7. Upon verification, it was observed that not much experimental study was involved any of the projects. The student teachers are only attaining a visual image of the project method as is quite evident upon examining their submitted projects.

8. 92.31 % it was observed that the time limit is big hindrance to the student teachers, leaving very less time for students to select a proper project, undertake data collection and interpretation. So they depend on previously done projects or picked up from online.

9. 84.61 % responded that time for evaluating the project is major factor as far as the quality is concerned. 23.08 % recommend that it would be better if the task is been indulged in the fourth semester. 84.61 % observed that there should be alteration in the B.Ed Natural science Task and assignments curriculum.

10. 84.61% observed that the topic selected by the student teachers is centralized to a particular area and there is scope for other type of project in Natural Science curriculum.

Suggestions

Suggestions to improve the quality of the task Environment related project to be ended in First semester with discussion with other teachers and student teachers are listed below

1. This task is assessed as internal assessment as university demands. The weightage of   project should be given more importance and it must be given priority in the First semester mark list.

2. Conduct a workshop and give student teacher a chance to discuss with subject experts. After the workshop they should give a stage for free communications with peers and teachers for their topic selection.

3. Encourage different learning methods that nurture a self directed learning environment. Methods like brainstorming, problem solving, debate, discussion, seminars etc should be encouraged in the classroom.

4. All student teachers should give a chance for presentation of their papers. It is better they would get opportunity for authentic presentation during their practical viva voce.

5. Teacher educators can encourage innovative projects by giving proper feedback by the discussion with experts and community. Encourage their unique skills and interests. Planning of the project must be give priority with feedback in each stage.

6. The teacher educators should give an opportunity for publication of their project papers so that they can familiarize themselves with various journals and publication procedures.

7. Every college should be equip -- full fledged laboratories with requisite instruments and equipments so that it will be helpful for student teachers in their each stage of project.

8. Establish full fledged computer labs in every colleges It is very sad to say most of the B.Ed colleges do not have the facility of computer lab. If it is present, students can update their knowledge which will help their project work

9. Encourage individual projects rather than group project. The individual project will enhance the uniqueness and creativity of individual learners.

10. There should be a mechanism to execute a compulsory project by school children during their teaching practice.

So that student teachers can guide them and refine their ideas they got in first semester

11. Encourage current issues related with environment. So the studies to be encouraged from different aspects of environment. Teacher educators should recommend for novel and creative ideas during topic selection and this would make quality projects.

12. Give an opportunity for self reflection for student teachers so that they can evaluate themselves and proceed their project work with trial and error.

13. Student teachers should give enough time for their project completion. So a period should be scheduled for project work. So that student teachers can utilize that period for project work only.

Conclusion

A project is unique in that it is not a routine operation, but a specific set of operations designed to accomplish a singular goal. The investigator evaluated environment related project of B.Ed natural science curriculum. Various characteristics of this task and issues as well as the drawbacks related with the completion of project works were analysed through document analysis, questionnaire and interview with teacher educators and student teachers Majority of the projects submitted for internal assessment were found to be worthless. Therefore care should be taken to improve the quality of the project work in the natural science curriculum. The curriculum framers had the best intension in adding such a task to the syllabus The Student teachers could understand the power behind the project work and be encouraged

to suggest such project works to their own school students in future. So student teachers, as future teachers they should fire the students with knowledge. The tasks recommended for each semester should be cared and internalised by scientific practice

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A STUDY ON THE INTERDISCIPLINARY AWARENESS AMONG STUDENTS OF STANDARD NINE

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Dr. Lavina Dominic**

Abstract

The present study was introduced to analyse the interdisciplinary awareness among the students of Standard IX, studying in schools following the curriculum designed by the Board of Secondary Education Kerala State. Here the investigators choose interdisciplinary areas like culture, sports, Geography and also some problems with international dimensions. Apart from these areas there are many disciplines which are needed to take into consideration. The population of the study were students of Standard IX, studying in schools following the curriculum designed by the Board of Secondary Education Kerala State. The sample consisted of twelve students of Standard IX of St. Mary's G.H.S, Pala. The present study adopted a questionnaire as the tool for the study. The questionnaire analyses the awareness of students regarding areas of culture, Geography, sports and some problems with international dimensions. Let our children broaden their perspectives and acquire different skills required to face this challenging world. Children should also learn to appreciate the ethical concerns and also to think critically and rationally. It can be attained through generating appropriate interdisciplinary awareness among students through curriculum.

Key Words: *Interdisciplinary Awareness, Student Learning, curriculum, etc*

Introduction

Interdisciplinary study involves the combination of two or more academic disciplines to create a powerful learning experience. Through interdisciplinary approach students learn to embrace creative ideas and challenging situations and it is also necessary to enhance the collaborative skills of students. It is achieved through the interdisciplinary approach in the curriculum as they get an opportunity to collaborate with people who have different perspectives. The benefits of having an interdisciplinary approach in our education are enormous. Several of our educational,

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social, intellectual problems require this kind of approach. Even the errors committed by the academicians can be detected by those people who have interdisciplinary awareness. So it is necessary to have a curriculum or an approach in teaching-learning process where students can learn the connections between the disciplines and their relationship to the real world. Thus students can integrate concepts of various disciplines to form a broad conceptual framework. Such kind of holistic learning is needed in this postmodern society.

An interdisciplinary study is the study where two or more academic disciplines are combined. It can be done through the combination of different perspectives. Our curriculum should have such an interdisciplinary approach where two or more disciplines pool their ideas to modify it to have an integrated approach. For example the subject of acid rain may appear differently when examined by different disciplines like geography, biology, chemistry. It is merely an example. There are various incidents beyond this, which point out the pivotal role of interdisciplinary approach in our curriculum. Beside these, it should be incorporated in pedagogic training to elucidate the methods and strategies of established disciplines or some traditional settings. Thus its main goal is to connect or integrate different schools of thought or technologies. So they can easily apply or adapt the knowledge of one discipline to another discipline. It should not be merely limited to academic settings too. In this context it helps the child to think beyond the boundaries and established curriculum. National Educational Policy 2020 also stresses to development of intellectual, physical, social, moral capacities in an integrated manner.

Need and Significance of the Study

This type of study allows the student to learn by making connections between ideas and concepts across different disciplinary boundaries. Students learning in this way are able to apply the knowledge gained in one discipline to another different discipline as a way to deepen the learning experience. The most effective approach to interdisciplinary study enables students to build their own interdisciplinary pathway by choosing courses which make sense to them. For example, it is not too difficult to find a theme which crosses over disciplinary boundaries in literature, art and history or science and mathematics. Studying topics thematically is one way to bring ideas together resulting in more meaningful learning. This can occur by allowing students to choose their own subjects and their learning is deepened when they reflect on the connections between what they are learning in different disciplines.

Here are some other benefits of studying in this way:

- Students consolidate knowledge from different perspective to acquire knowledge
- Skills like critical thinking and research mind are developed through this
- Various topics can be explored in an in depth manner
- It fosters their creative minds and imagination

So that the researcher decided to conduct the study on interdisciplinary awareness.

Objectives

The study attempts to analyse the interdisciplinary awareness among the

students of St. Mary's G.H.S Pala using the English textbook of standard IX.

- To find the awareness of students of St. Mary's G.H.S Pala with regard to various interdisciplinary areas like culture, sports, Geography and problems with international dimensions

- To analyse the data and propose different methods and remedial measures for making the students to familiarize with the interdisciplinary areas

- To find the areas of interest among the students of standard nine

Methodology

The method adopted in the present study is the Descriptive Survey method. Descriptive survey method is the method of investigation which attempts to describe and interpret what exists at the present in the form of conditions, practices that are held, processes that are going on and trends that are developing. The study was carried out in three phases. The first phase included the selection of the area of the study and the construction of an appropriate tool to be used to measure the selected variable. In the second phase, a sample was selected and data were collected by using the tool. In the third phase, the collected data were analysed by using suitable statistical procedures.

Population of the Study

Population means the totality of objects or individuals regarding the information collected in the research study. A population is any group of individuals who have one or more characteristics in common that are of interest to the researcher. The population is usually large and therefore, usually it is possible to conduct the study on the entire population. The population of the study were students of Standard IX, studying in

schools following the curriculum designed by the Board of Secondary Education Kerala State

Sample of the study

The sample consisted of twelve students of Standard IX of St. Mary's G.H.S, Pala

Tools used for the study

Data collection is an essential part of any descriptive Survey research. The validity of the instrument used to gather the information is crucial to the validity of the conclusions derived from the survey. The present study adopted a questionnaire as the tool for the study. The questionnaire was carefully designed so as to meet the requirements of the objectives of the study .The questionnaire analyses the awareness of students regarding areas of culture, Geography, sports and some current issues

Analysis of the Data

The quantitative data collected through the administration of the tools on the selected sample are raw. These data need to be tabulated, organised, analysed and interpreted for sound conclusions and valid generalisations. Analysis of the data means the categorisation, ordering and summarising the data into intelligible and interpretable forms so that the relation of the research problems can be studied and tested. It involves breaking down existing complex factors into simple parts and putting the parts together in arrangements for the purpose of interpretation

The present study was introduced to analyse the interdisciplinary awareness among the students of Standard IX, studying in schools following the curriculum designed by the Board of Secondary Education Kerala State.

Which Country hosts the largest number of refugees world wide?

12 responses
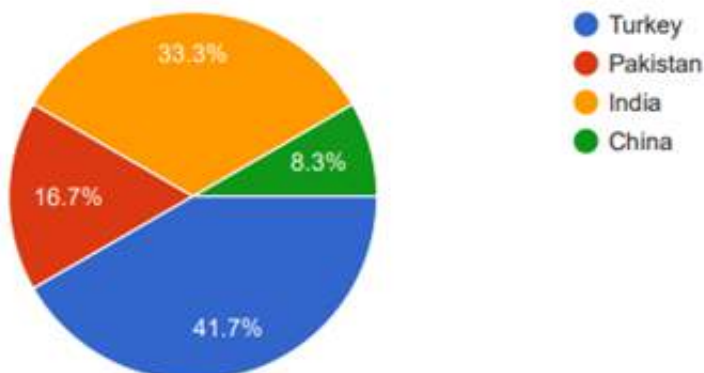
41. 7 % of students responded correctly. It suggests that nearly half of the students have awareness regarding the topic Geography.

2. How many people are forcibly displaced worldwide?

12 responses
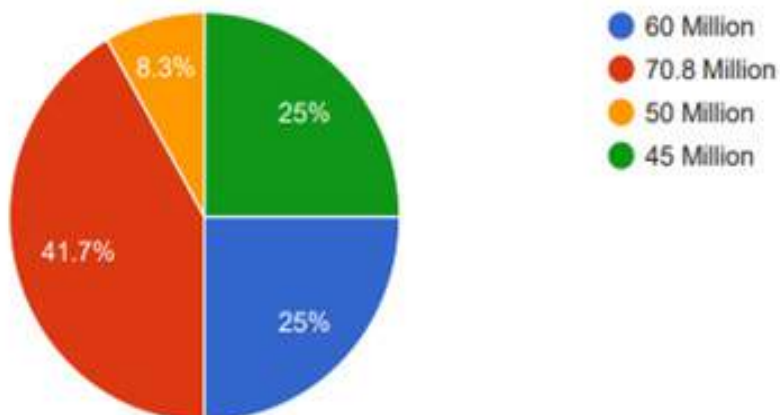
41. 7 % of students responded correctly. It suggests that nearly half of the students have awareness regarding the topic Geography.

3. How many Vedas are there in Hindu Mythology?

12 responses
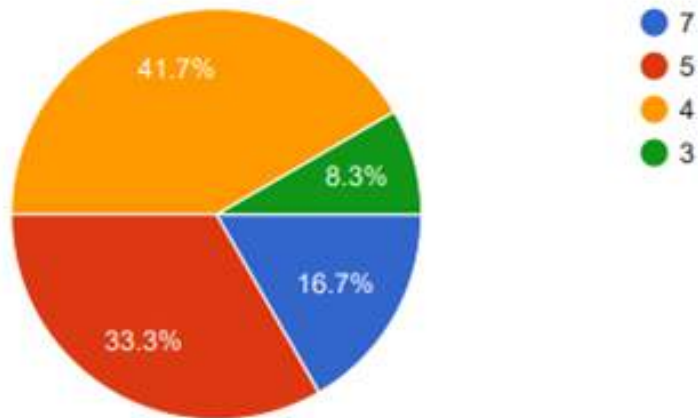
41. 7 % of students responded correctly. It suggests that nearly half of the students have awareness regarding the topic culture.

4.Which is the highest statue in India?

12 responses
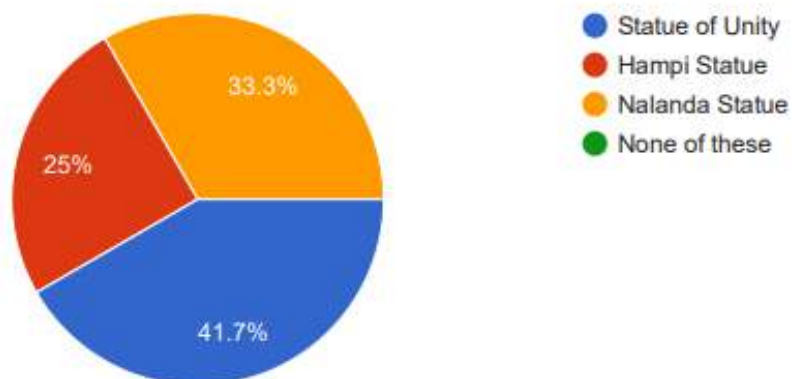
41. 7 % of students responded correctly. It suggests that nearly half of the students have awareness regarding the topic culture.

5. When was World War I ended?

12 responses
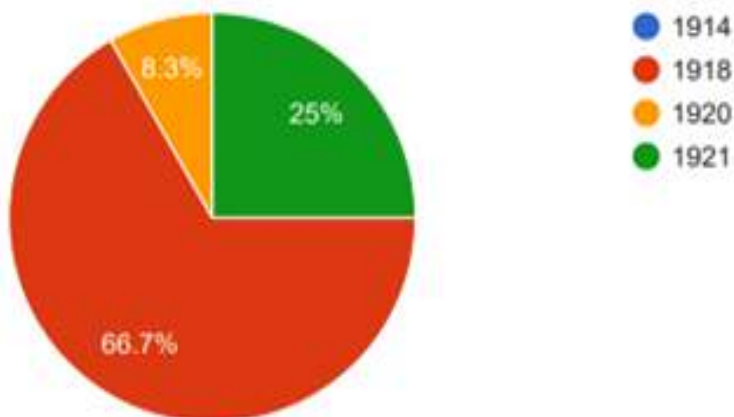
Majority of the students responded it rightly. It suggests they have an awareness regarding the historical background and culture.

## 6.Which of the following is not the mission of India's National Action Plan on Climate Change?

12 responses
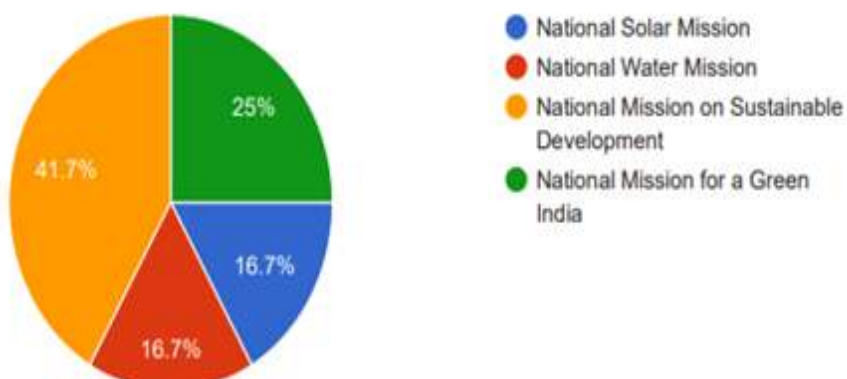
41. 7 % of students responded correctly. It suggests that nearly half of the students have awareness regarding the topic geography or problems of international dimension.

7. Which Ministry has undertaken the National Mission for a "Green India"?

12 responses
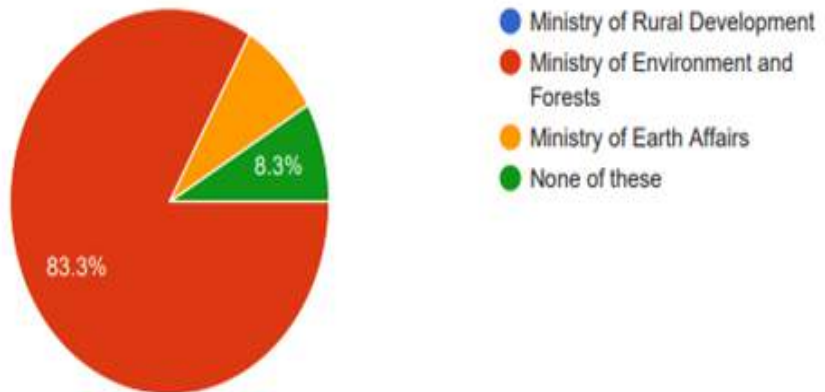
83.3 % of students responded correctly. It indicates the awareness regarding nature

8. Where was the last conference of parties (COP) held?

12 responses
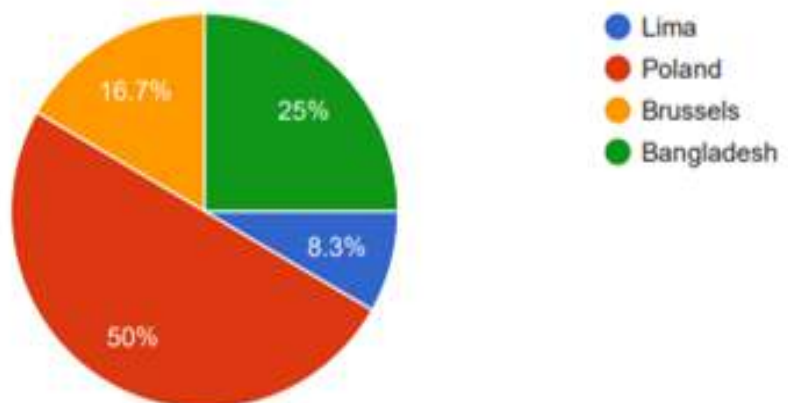
50% of the students responded to the right answer. It indicates their awareness regarding the problems of international dimensions

9. When was India's first National Action Plan on Climate Change (NAPCC) launched?

12 responses
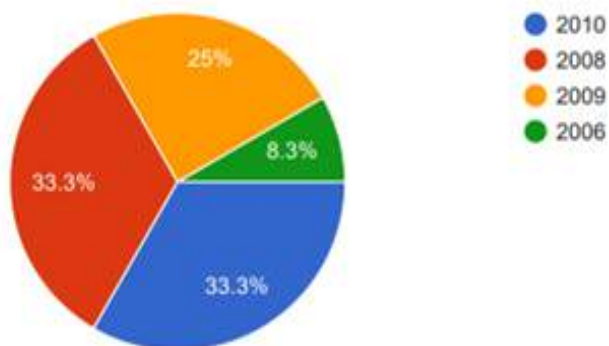
Nearly half of the students responded to the question correctly. It indicates their awareness regarding geography.

10. Which is the theme of world Environment Day 2019?

12 responses
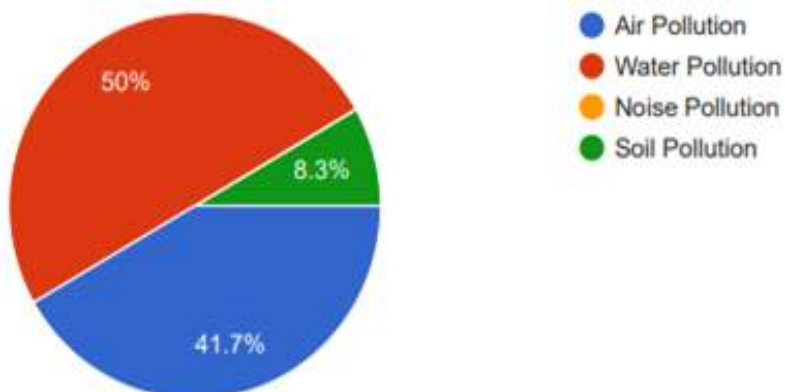
41. 7 % of students responded to the question correctly. It indicates their awareness regarding geography.

11. When was the first Common Wealth Games held?

12 responses
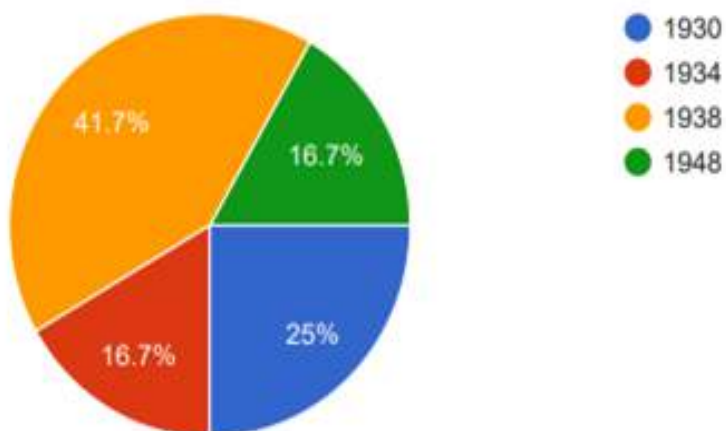
Majority of the students responded incorrectly. It shows their lack of in depth awareness.
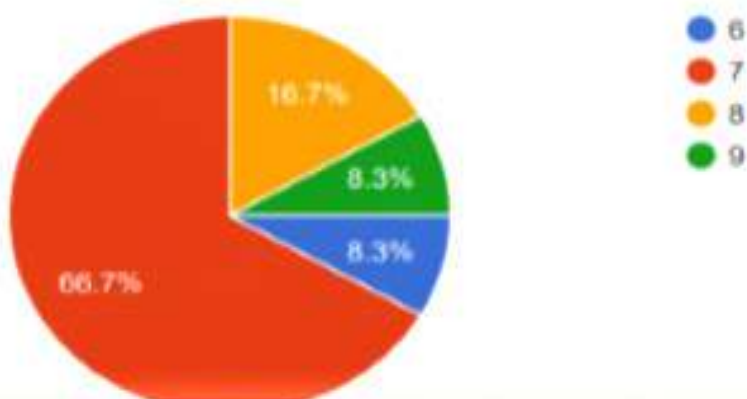
66.7 % of students responded correctly. So majority of the students have an awareness regarding sports

13. Who was the first Test Centurion in Indian Cricket>?

12 responses
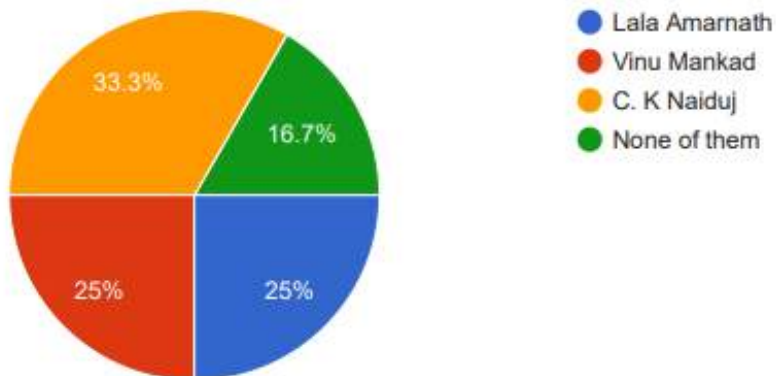
Majority of the students' responses were incorrect. It indicates they lack an in depth knowledge regarding sports.

14. Which was the first country to host Asian Games?

12 responses
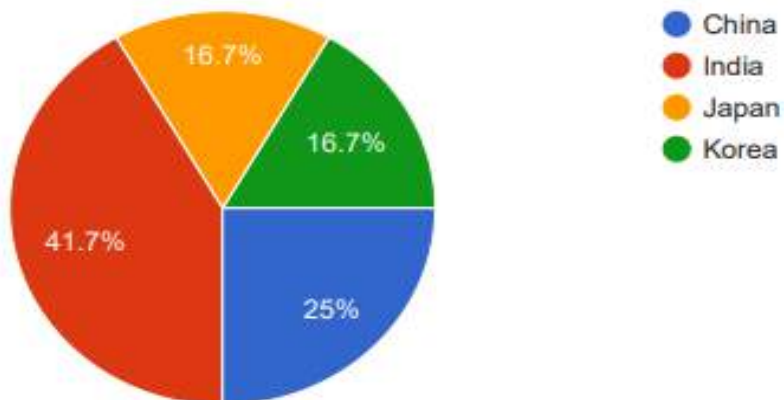
Majority of the students' responses were incorrect. It indicates they lack an in depth knowledge regarding sports.

15. Where did the game of Chess originate?

12 responses
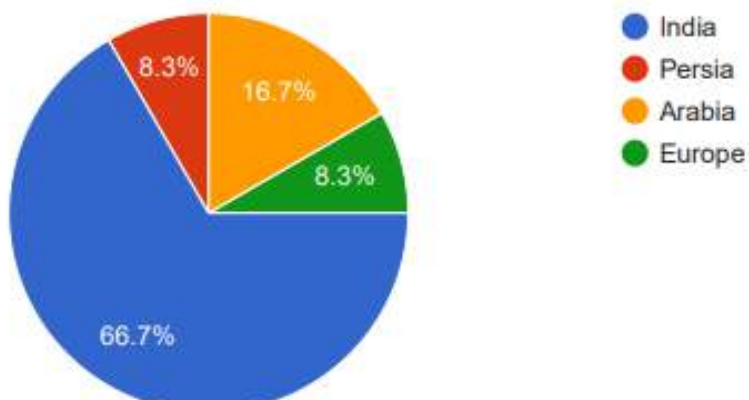
Majority of students responded it correctly. It indicates their basic awareness regarding sports as the question comes under easy level.

Interpretation

The present study reveals interdisciplinary awareness among the students of standard IX in the field of sports, geography, culture, etc. The questions were broadly based on the chapters like Learning the Game, the Problems of international dimensions etc. Climate change is not a Hysteria but it's a fact etc. The common themes were Sports, Culture, and Environment. Majority of the students do not have an in depth understanding on these topics. Instead they have a peripheral awareness on these areas. It is necessary to develop a deep understanding and a positive attitude towards sports and games as a means of national integration and unity. The teachers must help the students to inculcate a positive attitude to life by cultivating an optimistic approach to everything through various activities. According to the questionnaire around 50% of students were having peripheral knowledge regarding sports. They lack an in depth awareness. They were able to answer question related to the chapter and topics but found difficulty in questions which were not directly asked from the text. When it comes to Geography or Environmental studies, majority of students (around 60%) were having a deep understanding. With regard to the cultural awareness less than, 50% of students were having an in depth understanding. So it is the duty of the teacher to arouse curiosity among them to know something more about the topic.

Suggestions

Following are a few guidelines to enhance interdisciplinary awareness among students

To enrich sports knowledge
- The teacher must give background information regarding the history of Sports and then move ahead with present scenarios.
- The teacher can introduce few personalities from sports in the classroom
- Read the Sports page of the Newspaper
- Trying to play the games is another important tip

The teachers can also encourage students to listen to podcast

To enrich historical and cultural awareness
- Give importance to global citizenship training
- Teachers should make the students familiarize with their culture and also inter cultural relationship
- Develop Exploration Stations with Digital Archives like Digital Public Library of America
- Conduct field trips to historical sites

To enrich Geographical awareness and issues with international dimensions
- Tell stories with Geographical maps
- Promote civic engagement.
- Conducting quizzes in classrooms
- Students can explore through field trips and foster their knowledge
- Effective use of geo technologies in teaching and research

Conclusion

Interdisciplinary teaching and learning is integral to the curriculum. So an interdisciplinary approach should be developed in our curriculum. An approach to curriculum integration that generates an understanding of themes and ideas that cut across disciplines and of the connections between different disciplines and their relationship to the real world. It normally emphasizes process and meaning rather than product and content by combining contents, theories, methodologies and perspectives from two or more disciplines. Interdisciplinary education must supplement disciplinary teaching and learning so students can learn how to respond to challenges that transcend disciplines, work in the confluence of multiple disciplines, and develop research trajectories that do not conform to standard disciplinary paths. As per National Education Policy 2020, our Higher Education must focus on holistic development of an individual through interdisciplinary approaches.

This study reveals the interdisciplinary awareness among the students of Standard IX. The researcher reached the conclusion that students have a peripheral understanding of interdisciplinary areas like sports, geography, culture etc

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CHALLENGES OF B ED STUDENT TEACHERS IN ONLINE LEARNING DURING COVID-19 PANDEMIC PERIOD

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Abstract

This paper explores the challenges faced by the student teachers during Covid 19 pandemic period while using online learning for their curricular transaction. An online survey was conducted with a sample of 160 student Teachers selected randomly from different colleges of teacher education under University of Calicut and Kannur University. A questionnaire was used to collect data from the selected sample. An unstructured interview was conducted with teacher educators to supplement the information. It was found that lack of proper digital knowledge ,poor technological skills ,absence of enough practice in online learning both for teacher educators as well as student teachers , low accessibility due to poor internet connectivity, minimum discussion and other interactions during online sessions, lack effective online communication skills, the loss of campus ambience are the major challenges faced by the student teachers. Reforming things with digital technology with participation of all the stakeholders are necessary to achieve this online learning goal in future.

Key Words: *Online Learning, Student teachers, Covid 19 Pandemic, etc.*

Introduction

World countries are witnessing tremendous changes in the technological field and many countries incorporated their technological innovations in various fields including education. Western countries practiced online learning through the effective use of e- learning platforms and involving various stakeholders who are now adapted with these changes. But in India due to many reasons virtual learning is practiced nominally in some institutions of higher learning only.

In Kerala, all the educational institutions from primary level to higher level including college of teacher education were focussed on formal learning strategies

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adopting the traditional practice of face to face classroom interactions. Govt formulated educational programmes and the universities framed the curriculum and syllabus accordingly to suit the needs of the learner in a face to face interaction. Students at all level familiarised to learn in a face to face mode of interaction from childhood and internalised this method and feel suitable for them

Need and Significance of the study

Due to the Covid 19 Pandemic the educational institutions are remaining closed and are facing many difficulties and to confront this situation, higher education department urged the institutions to change the traditional mode of instruction into an online mode. Learners of different age levels are forced to use online mode of learning because there is no other alternative during Covid 19 pandemic. The Govt has also launched channels, portals and apps for promoting the online education. All the educational institutions are forced to adopt these digital technology to fulfil the objectives of education to a certain extent in the stipulated time. Accordingly the colleges of teacher education started using e learning platforms and faced a lot of challenges during the process of curricular transaction. In this context the investigator intends to study challenges faced by the student teachers in online learning

Objective of the study

The present study was conducted with an objective to study the challenges faced by the B Ed   student teachers in online learning during Covid 19 pandemic period.

Methodology

The investigator has followed an online survey method to study the present problem. The sample consists of 160 student Teachers selected randomly from different colleges of teacher education under University of Calicut and Kannur University. The investigator prepared a questionnaire to collect data from the selected sample. An unstructured interview was conducted with teacher educators to supplement the information gathered through the questionnaire. Percent analysis was used for analysing the data.

Results and discussion

The present study has been focussed on the challenges faced by the student teachers during   Covid 19 pandemic period while using online learning for their curricular transaction. The ongoing closure of teacher Education institutions during lockdown period resulting multiple challenges among various stakeholders. Almost all the educational institutions from lower level to higher level forced to adopt the online mode of teaching. Teacher education institutions also adopted online teaching and use digital pedagogy in the curricular transaction. At the beginning of online classes learners as well as teachers faced various problems and difficulties in their classes . But gradually they acquired the technological skills and learn to solve the problems to a certain extent. The student teachers are facing a lot of challenges while undergoing online learning as an alternative to traditional classroom learning

Observations of student teachers regarding the online learning are

1. Almost all Student teachers opined that the use of various online platforms and online applications are increased considerably during the Covid-19 pandemic period.

2. All the student teachers opined that Zoom, Webex Meet, Google Meet, Google Classroom, Microsoft Team, Telegram and Whats App are used by their teachers to teach them during Covid 19 pandemic period.

3. All teacher education institutions in general and the teacher educators in particular adopt the online mode of teaching learning strategies for curricular transaction.

4. 77.5% Student teachers opined that they were used Smart phones to study online but 22.5% Student teachers using their computers and laptops in their online learning.

5. 80 % Student teachers respond that the Virtual platforms are easily accessible to the individual learners from their home or at any places they wish.

6. 95% student teachers responded that at the beginning of the online classes the teachers and the student teachers faces technological difficulties but gradually they try to cope up with the changing demands and manage the situational need effectively with the timely intervention of peers and colleagues .

7. The student teachers opined that towards the end of the academic year ,of the online classes 85% of of the classes are curricular and 15% for extra curricular activities.

Challenges faced by the student teachers while adopting online learning are:

1. 95% student teachers opined that lack of proper knowledge and training from the part of the teacher educators is a serious issue . The sudden shift from offline to online mode makes the teachers difficult to use digital pedagogy in an easier way. Teacher educators lack in essential online qualities and skills to handle online platforms may affect to perform the pedagogic capabilities in a fruitful way .

2. Hundred percent Student teachers opined that there is no proper training was received to the learners about online learning before the teachers started the class. Students from rural areas faced many technical issues because they are not much aware of the digital technology and computer applications

3. 77.5%student teachers opined that low accessibility due to poor connectivity is a major challenge . Many student teachers are not well equipped with high speed internet connection that is essential for online learning. Internet connection with low speed leads to missing the live sessions , unable to download or upload learning materials related to the class during online learning

4. 95% student teachers opined lack of discussion and other interactions , while using e learning platforms they feel the problem of minimum interaction between the teacher educators and student teachers , the slot for discussion is also insufficient.

5. 80 % Student teachers lack effective online communication skills, the student teachers cannot interact with the peers and teachers properly This may be due to lack of computer knowledge ,poor technological skills with various apps and video call, unable to express themselves through live chat, emails or text messages .

6. 45% Student teachers opined that absence of proper learning environment at home The distraction from home environment affects concentration ,inability to understand the virtual classes, and difficulty in doing task and assignments properly using online technology .

7. 90% Student teachers opined that non availability of similar technical devices seems to be a problem to the learners Therefore the teacher educators want to provide different instruction suited to each devices and this become a challenge for them.

8. 95% student teachers opined that they were not able to concentrate in online learning for longer period of time Usually there is no interval between two sessions. This virtual monologue by the teachers also a felt difficulty in online learning .

9. All the student teachers opined there is no campus experience, no opportunity for social experience, sharing and direct peer interaction during online learning The loss of campus ambience seriously affect their study

Suggestions

1. Proper knowledge in computer and its applications are necessary to participate effectively in the online classes. This will help to attend live sessions regularly, use appropriate apps, e platforms ,websites for utilising learning resources ,submitting task and assignments and communicate with peers and teacher educators on time.

2. Teacher educators need to update their digital knowledge of virtual platforms ,e resource utilisation and skills to impart digital pedagogy for enhancing the quality of online teaching .

3. Student teachers find extra time to communicate with the teacher educators in private and clear doubts and seek guidance either through online platforms or personal calls. This will ensure proper communication between the teacher and the learner and definitely help for a better understanding of the subjects

4. Student teachers find difficulty in managing their time with online learning. Practice proper time management will ensure better outcome during virtual learning

5. Solve poor connectivity problem by ensuring high speed internet connection at home and the institution and understand from where they can get technical support and timely help for solving technical issues related to the online learning

6. The student teachers find it difficult to adapt to an online learning soon after traditional classroom face to face learning The student teachers who have been always studying in the traditional classroom mindset are not able to focus on online platforms. Change in the mindset is very important in any educational innovation

7. As in traditional learning the teacher educators should identify the strength and weakness of each learner and give individual attention for their improvement This feedback leads to the self reflection of the learner which will help to the betterment of the learner in practicing online learning

8. Reform all the things with technology that is technology in planning , in teaching, in examination, and in evaluation Full participation of all the stakeholders are required to achieve this goal in future

Conclusion

The sudden change due to Covid 19 Pandemic, the student teachers were not able to adapt to the virtual learning in a simple way. 90 % Student Teachers opined that they are now familiar with digital platforms that can be effectively used in the learning process and able to use various online apps for learning various subjects. Even though the face to face interaction and connection is missing in online learning the students and teachers building their relationship through virtual mode. The connectivity without actual contact gives flexibility to the learners as well as teachers become a global participant in the educational programme.

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IMPORTANCE OF CO-TEACHING IN THE CONTEXT OF ONLINE TEACHING

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Abstract

Teaching and learning processes taking place in the online mode is facing many issues and challenges. In this context everybody is searching for new solutions. A complete solution for this problem is yet to be found. Then we can think about alternative remedies for better performance by teachers. Some of the problems raised during online teaching-learning can be met by using co-teaching as a teaching strategy. Co-Teaching is beneficial to students, teachers and the learning community in the context of online teaching. Here, it is very much planned by the teacher to get the assistance and support of parents or other elders during class time. The parents can act as a co-teacher to manage the learning activities provided by the teacher and also monitor the students from doing other extra activities in which students may involve during class time. When co-teaching is adopted in the online classrooms, teacher planning can be exhaustively done and also alternate role of the teachers need to be blended so that the students should not feel the difference.

Key terms: *Co-teaching, online teaching, effective learning, web tools, etc*

Introduction

Creation of new choices in teaching-learning offer an intensive and long-term teacher-pupil relationship. The support of parents, students, teachers and the wider community to be mobilized to make explicit new strategies in classrooms. New choices offer an intervention programme based on a critical examination of the whole school culture with the aim of creating a socially accepted environment for all members of the school community.

In this context it is believed that students have a right to education that should be appropriate to their skills, aspirations, potentialities and life circumstances. Development of sustaining co-operative partnership in the learning process is the key for the development of positive school communities. It is also believed that provision of high-quality integrated co-operative teaching—learning models-is essential for developing socially useful

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education systems. Each school community needs to determine its own staring point in the process of education. Since schools are generally in the best position they should be allowed to determine their own needs. Education programmes should incorporate a comprehensive structural analysis of power and control. The creation of partnership and the development of a more integrated approach to effective learning through active involvement of students would ensure that the issues are widely owned and accepted within the wider community. Students can and should be involved in the process of identifying the problems and developing need-based solutions. The concept of inclusiveness needs to be adopted. These strategies need to be systematically and continuously evaluated to achieve necessary modifications. It is in this context Co-teaching has been experimented in Chemistry teaching-learning process at higher secondary school level in the state of Kerala.

What is Co-Teaching?

In the rapidly changing world of services and support for students, terminology often becomes an issue. In this context we come across terminologies like collaborative and co-operative teaching and learning, team teaching, inclusion where individuals interact and participate in the teaching learning process. Co-teaching differs from these types in which different orientations towards teaching are blended.

Co-teaching is an instructional approach in teaching where two or more teachers share teaching responsibilities

within a general education classroom. In this process all the teachers are involved in co-teaching, interact with all students at different times using various arrangements of students and group sizes, so that each student's educational potential is recognized. The commitment to students by co-teachers are not independent. Co-Teaching is beneficial to students, teachers and the learning community in the context of online teaching.

Why does Co-teaching during online teaching?

Co-teaching is one way to present the teaching-learning materials through online learning platforms. During online teaching the students are at different points in their devices. When a teacher is trying to transact a concept in a face-to-face classroom situation, it is easy to observe and monitor the whole students in a 'single look'. During online teaching this facility is not available. So, it is very much needed to monitor them from different point of views. Here, it is very much planned by the teacher to get the assistance and support of parents or other elders during class time. The parents can act as a co-teacher to manage the learning activities provided by the teacher and also monitor the students from doing other extra activities in which students may involve during class time.

Another reason is that all the teachers are not experts in using online tools. Many of the best web 2.0 and web 3.0 tools are available and can effectively be used for curriculum transaction. So,

a teacher who is well trained in using these tools can act as a co-teacher in the context of online teaching. If the students are those with special needs, assistive technology needs to be used by the teacher. This can also be made with the help of a co-teacher who is well versed with these technologies. Here both the parents and the co-teacher can take the role of facilitator and scaffolder.

If co-teaching is adopted, all students can receive improved learning experience. Instructional fragmentation can be planned in the lesson plan so that students can benefit the service delivery to the maximum. At the same time, both the teacher and the co-teacher get a better understanding of the curriculum being addressed in the classroom and the expectations for both academic and social behavior.

During online teaching, as we know, a large sum of materials is available in the internet resources and all of them need to be analysed with respect to the curriculum objectives and can be effectively used for teaching-learning activities. Filtering, editing and compilation of these materials for the effective use of them in the classroom requires a lot of time. If co-teaching is planned by the teachers, it will become more fruitful in achieving the curricular objectives.

In this pandemic period, while teachers are struggling with online classes, co-teaching can be considered as one of the most innovative practices in education. Sharing of common curricular objectives in a particular course by different teachers working in the same institution or teachers from a cluster of institutions will be a novel idea because the students from different institutions are getting the expertise of more than one teacher which in turn will help in acquiring expected knowledge, skill and attitude. The reassignment of existing personnel to co-teaching teams results in a knowledge and skill exchange among team members and higher teacher-to-student ratios, outcomes that benefit more students than the individual student in need of intensive instructional support. Skrtic (1991) considered this as a dynamic structure in which complex work is more likely to be accomplished and novel services are more likely to be crafted to meet individual student needs.

Conclusion

When co-teaching is adopted in the online classrooms, teacher planning can be exhaustively done and also alternate role of the teachers need to be blended so that the students should not feel the difference. Singing in the same frequency and pitch is a must for the best feeling of a music. Similarly, during co-teaching both the teachers need to be indistinguishable in their performance. All the strengths of co-teaching can be blended by an effective planning. If it is once done it can be reused in the future academic contexts with minimum modification which in turn will help to reduce human efforts in future. It will also help to maximize the achievement of curricular objectives. It will lead to professional engagement, increase instructional intensity and individualization.

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LIBRARY LITERACY AMONG STUDENT TEACHERS AT SECONDARY LEVEL

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Abstract

Library Literacy is essential for students at all levels of higher education, especially for Student Teachers. We live in a modern world where the information environment is very complex and versatile due to the tremendous growth of information sources. Individuals who are well informed about finding, evaluating, analyzing, integrating, managing, and conveying information to others efficiently and effectively will be more successful in life. The present study was intended for the Library Literacy of secondary level Student Teachers. The sample used for the study was 1115 Secondary Level Student Teachers of Kerala State. The study reveals that most of the Secondary Level Student Teachers of the sample population possess the highest level of Library Literacy.

Keywords: *Library Literacy, Information Literacy, Teacher Education, Student Teachers*

Introduction

The library is a significant part of every educational institution such as schools, colleges and universities. It is open for students and faculty of the particular institute and contains a wide range of resources necessary for the users. Libraries encourage people to develop habits of reading and learning. It increases their thirst for reading and expands knowledge. The library is also essential for any kind of research activities on diverse subjects. Thus, libraries are essential for research activities, information access, knowledge generation, and reading pleasure. Libraries offer a perfect atmosphere for studying and enjoy peaceful reading.

The library plays a central and prominent role in imparting knowledge by providing better services and the accessibility of valuable and authentic resources in a calm environment. The library creates opportunities for developing reading habits among users, supporting faculty and students in the teaching-learning process.

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Need and Significance of the Study

Information is essential for the strength and persistence of human beings. It is always assuring the sustainable growth and development of individuals. The application and effective communication of new knowledge to others have contributed to the evolution of information societies and the financial progress of the people. Library Literacy is the ability to follow systematic search and access to the documents available in the library, knowledge about the sections, classification & cataloguing systems followed by the library, rules and services of the library, confidence in using various information sources both print and digital publications. Library literacy also includes knowing how to physically or electronically locate the books, periodicals, reference materials, databases, catalogues etc. from the library, knowledge about finding and accessing information from each information sources, awareness and familiarity about the referencing procedures and also able to seeking support from a librarian when required. The ability to access, evaluate, and use the right information at the right time effectively and ethically is the cornerstone of the success of every person. So, knowledge about information resources available in the libraries is the essential prerequisite competitive academic world.

Objectives

1. To find out the level of Library Literacy among Student Teachers at Secondary Level
2. To find out whether there is any significant difference in Library Literacy with regard to Gender, Stream of Disciplines, Type of Management and Library Training among Student Teachers at Secondary Level

Hypothesis

1. There exists a significant difference in the Library Literacy with regard to Gender, Streams of Discipline, Type of Management, and Library Training among Student Teachers at Secondary Level.

Methodology

The study follows a descriptive survey method to find out the Library Literacy among Secondary Level Student Teachers at secondary level Student Teachers studying in Government, Aided and Unaided Teacher Education colleges in Kerala State. The investigator selected 1115 samples of Secondary Level Student Teachers in Teacher Education Colleges from different colleges in Kerala State by giving due weightage to Gender, Streams of Discipline and Type of Management.

Tools used for the Study

'Library Literacy Test', a self-constructed tool to measure the Library Literacy among Secondary Level Student Teachers.

Statistical Technique

The statistical techniques employed for the analysis of data were Mean, Median, Frequency Distribution, Skewness, Standard Deviation, Test of significance of the difference (t-test) and Analysis of Variance (ANOVA)

Analysis and Interpretation

Distribution of the Scores on Information Literacy among Student Teachers at Secondary Level

The investigator assessed the Library Literacy of Student Teachers by administering the tool namely Library

Literacy Test. The maximum score that could be obtained was 10. The investigator scored the response sheets of Information Literacy Test. For descriptive analysis the investigator used the descriptive statistics namely Mean, Median, Mode, Standard Deviation and Skewness.

Table 1

Descriptive Analysis of the Scores on Library Literacy among Student Teachers at Secondary Level.

Variable	Number	Mean	Median	Mode	SD	Skewness
Library Literacy	1115	4.87	5.00	6.00	1.74	-0.188

From Table 1, the investigator observes that the Mean of the scores on Library Literacy among Student Teachers is 4.87, Median is 5, Mode is 6 and Standard Deviation is 1.74. The skewness of the scores in Library Literacy is -0.188. It is negatively skewed. So, the investigator concluded that the scores on library literacy show a tendency to cluster at the higher end of the distribution. The investigator also classified the scores into three different levels namely High, Moderate and Low. Table 2 represents the distribution of the scores on Library Literacy among Student Teachers based on high, moderate and low levels.

Table 2

Distribution of the Scores on Library Literacy among Student Teachers at Secondary Level with different levels

Variable	Number	Level of Library Literacy in %					
		High		Moderate		Low	
		No	%	No	%	No	%
Library Literacy		439	39.37	426	38.21	250	22.42

The investigator calculated the mean and standard deviation of the scores on Library Literacy for categorizing the scores on Library Literacy into high, moderate and low levels. Students who obtained the scores above M+1 were categorised as high level, students who secured the scores below M-1 were categorised as low level and students who obtained the scores in between these values were categorized as moderate level. The percentage of student teachers belongs to each group was also taken. From the above table, the investigator observes that 39.37 % of the Student Teachers have high, 38.21 %of them have moderate, and 22.42 % of them have a low level of Library Literacy scores.

Comparison of Library Literacy among Student Teachers at Secondary Level based on Gender, Streams of Discipline, Type of Management and Library Training

The second objective of the study was "to find out whether there is any significant

difference in Information Literacy with regard to Gender, Streams of Discipline, Type of Management and Library Training." Here the investigator tried to find out the significant difference in the Library Literacy with respect to the demographic variables namely Gender, Streams of Discipline, Type of Management and Library Training.

For the analysis the investigator formulated the research hypothesis which states that there exists a significant difference in the Library Literacy and its Dimensions with regard to Gender, Streams of Discipline, Type of Management and Library Training among Student Teachers at Secondary Level. The Means of scores on Library Literacy of student teachers belong to different Gender, Streams of Discipline, Type of Management and Library Training was compared using appropriate statistical techniques.

Comparison of Library Literacy among Student Teachers at Secondary Level based on Gender

The Means of scores on the Library Literacy of male and female Student Teachers at Secondary Level were compared. For the analysis of data, the investigator formulated the following null hypothesis.

Null Hypothesis $H_0$1 (1): There is no significant difference between the Means of Scores on the Library Literacy among the Male and Female Student Teachers at Secondary Level.

The null hypothesis $H_0$1 (1) was tested by using the test of significance of the difference between means for large independent samples. The value of the *t* was set as 1.96 at .05 level of significance with degrees of freedom 1113 (N=1115). The results are presented in the Table 3

Table 3

Results of the Test of Significance of difference between means of scores on Library Literacy among Student Teachers at Secondary Level

Variable	Gender	N	M	SD	*df*	*t* value	*p* value
Library Literacy	Male	126	5.09	1.65	1113	1.46	0.145
	Female	989	4.85	1.75			

From Table 5.12, the investigator observes that the obtained *t* values for Library Literacy ($t_{(1113)}$ =1.46, *p*> .05) was not significant at 0.05 level. From this, it is clear that there is no significant difference between the means of scores of the Library Literacy of Male and Female Student Teachers at Secondary Level. Hence, the null hypothesis, $H_0$1 (1) is accepted for the Library Literacy.

Comparison of Library Literacy among Student Teachers at Secondary Level based on Streams of Discipline

The scores on Library Literacy of Student Teachers belonging to different Streams of Discipline were compared. For analysing the data, the investigator had formulated the null hypothesis as,

Null Hypothesis $H_0$1 (2): There is no significant difference between the Means of Scores on the Library Literacy among

the Science, Arts and Language Student Teachers at Secondary Level.

In order to test the null hypothesis the investigator used One Way ANOVA. The Number, Mean and Standard Deviation of the scores on Library Literacy among Student Teachers with respect to Streams of Discipline and the results of ANOVA are given in the Table 4 and Table 5 respectively.

Table 4

The Variable, Number, Mean and Standard Deviation of the scores on Library Literacy among Science, Arts and Language Student Teachers at Secondary Level

Variable	Streams of Discipline	N	M	SD
	Science	578	5.04	1.71
Library Literacy	Arts	264	4.60	1.59
	Language	273	4.79	1.93

From the table the investigator observes that Science Student Teachers have highest Means of Scores on the total scores Library Literacy.

Table 5

Variable	Streams of Discipline	N	Sources of Variation	SS	df	MS	F	Sig.
	Science	578	Between Groups	37.420	2	18.71		
Library Literacy	Arts	264	Within Groups	3341.00	1112	3.00	6.23*	.002
	Languages	273	Total	3378.42	1114			

*Note: SS- Sum of Squares, MS-Mean Square, * Significant at .05 level of significance*

Table 5 reveals that the obtained F values for Library Literacy ($F_{(2, 1114)}$=6.23, p<.05 is significant at .05 level. Since the obtained F values exceed the critical value 2.99 at .05 level of significance with df 2/1112 the null hypothesis $H_0$1 (2) is not accepted with respect to the Library Literacy. From this, it is inferred that the Means of the scores Library Literacy, Ethical Literacy of Student Teachers at Secondary Level with regard to Streams of Discipline differ significantly.

Comparison of Library Literacy among Student Teachers at Secondary Level based on Type of Management

The scores on Library Literacy of Student Teachers at Secondary Level belong to different Type of Management were compared. For the analysis of data, the investigator formulated the null hypothesis as,

Null Hypothesis $H_0$1 (3): There is no significant difference between the Means of Scores on the Library Literacy of the Government, Aided and Unaided Student Teachers at Secondary Level.

In order to test the null hypothesis, the investigator used one way *ANOVA*. The investigator presents the Number, Mean and Standard Deviation of the scores on Information Literacy and its components with respect to Type of Management in table 6 and the results of ANOVA in the Table 7.

Table 6

The Variable, Number, Mean and Standard Deviation of scores on Information Literacy among Government, Aided and Unaided Student Teachers at Secondary Level

Variable	Type of Management	N	M	SD
	Govt.	215	4.70	1.74
Library Literacy	Aided	479	5.25	1.69
	Unaided	421	4.53	1.72

Note: N-Number of Students, M- Mean, SD- Standard Deviation

From The Table 6 the investigator finds that the Means of Scores on Library Literacy are higher for Student Teachers who belong to Aided Teacher Education Colleges than Student Teachers who belong to Government and Unaided Teacher Education Colleges.

Table 7

Results of the Test of Significance of difference between means of scores on Library Literacy of Student Teachers at Secondary Level based on their Type of Management of the Institution

Variable	Type of Management	Sources of Variation	*SS*	*df*	*MS*	*F*	Sig.
Library Literacy	Govt.	Between Groups	122.785	2	61.392		
	Aided	Within Groups	3255.637	1112	2.928	20.97*	.000
	Unaided	Total	3378.422	1114			

*Note: SS- Sum of Squares, MS- Mean Square *Significant at .05 level of significance*

From Table 7 the investigator observes that the obtained *F* value for Library Literacy ($F_{(2, 1112)}$ =20.97, *p*< .05 is significant at .05 level. Since the obtained *F* values exceed the critical value 2.99 at .05 level of significance with *df* 2/1112, the null hypothesis $H_0 1$ (3) is not accepted with respect to Library Literacy. From this, it is inferred that the Means of scores Library Literacy of Student Teachers at Secondary Level with regard to Type of Management differ significantly.

Comparison of Library Literacy of Student Teachers at Secondary Level based on Library Training

The Means of the scores on the Library Literacy, of those who have attended the Library Literacy Training and those who have not attended the Library Literacy Training were compared. For the analysis of data, the investigator formulated the null hypothesis as,

Null Hypothesis H_01 (4): There is no significant difference between the Means of Scores on the Library Literacy of Student Teachers at Secondary Level those who have attended the Library Training and those who have not attended Library Training.

The null hypothesis H_01 (4) was tested by using the test of significance of the difference between means for large independent samples. The value of the t was set as 2.58 at .01 level of significance with degrees of freedom 1113 (N= 1115). The results are presented in the Table 8

Table 8
Result of the Test of Significance of difference between means of scores on Library Literacy of Student Teachers at Secondary Level based on their Library Training

Variable	Library Training	N	M	SD	*df*	*t* value	*p* value
Library Literacy	Yes	130	5.42	1.43	1113	3.85**	.000
	No	985	4.80	1.77			

*Note: ** Significant at .01 level of significance, N-Number of students, M- Mean, SD-Standard Deviation*

From the table it is clear that the obtained t values for Library Literacy ($t_{(1113)}$ = 8.12, $p<.01$) is significant at .01 level. From this, it is clear that there is significant difference between the Student Teachers those who have attended Library Training and those who have not attended Library Training in their means of scores on Library Literacy. Hence, the null hypothesis H_01 (4) is not accepted with respect to Library Literacy. From this it is inferred that Means of Scores on Library Literacy of Student Teachers at Secondary Level with regard to Information Literacy Training differ significantly.

Findings

1. The study reveals that the majority of the Student Teachers at Secondary Level have highest level of Library Literacy.

2. There exists no significant difference between Secondary Level Male and Female Student Teachers in the scores of Library Literacy.

3. There is significant difference among Secondary Level Science, Arts and Language Student Teachers with respect to scores in the Library Literacy

4. There is significant difference in the scores of the Library Literacy of Secondary Level Student Teachers who belong to Government, Aided and Unaided Teacher Education Colleges.

5. There exists significant difference in the scores of Library Literacy between Student Teachers who have attended Library Training and those who have not attended Training.

The mean values of Library Literacy shows that the scores of those who have attended Library Training are high compared to that who have not attended the Training.

Conclusion

The findings of the study presented above can provide an approximate idea of Library Literacy of the present-day Student Teachers at Secondary Level. The aspects identified by the study reveal that most of the Student Teachers of sample population possess highest level of Library Literacy. It was also found that there is no significant difference in the means of scores on Library Literacy with respect to gender. It also reveals there exists a significant difference in the scores on Library Literacy with respect to Stream of Disciplines, Type of Management and Library Training.

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A STUDY ON E-LEARNING AND ITS IMPACT ON STUDENT LEARNING

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Abstract

This paper studies E-learning and its impact on student learning. An online survey was conducted with a sample of 70 college students selected randomly from Kottayam district. A google form questionnaire was used to collect data from the selected sample. Secondary data was collected from journals, websites...etc to supplement the information. It was found that students were satisfied with the fulfillment of learning needs but assessment of learning skills were poor in E-learning, it lacks direct communication between teachers and students and it affects the mental health of students. So provision of appropriate leisure time, individualized attention, counselling facility, co-curricular activities...etc are required for an E-learning system.

Key Words: *E-Learning, Student learning, College students*

Introduction

E-Learning in India has come with the development of technology. India is one of the nations that is developing at an increasing rate in terms of technology. We have population of more than 1.3 billion, the availability of high-speed internet, gadgets, softwares and smartphones. The Internet has changed the way of life in India as a whole. People like to do e-business, e-shopping, e-learning etc. E-commerce is the most significant online industry, E- learning stand right next to it.

By introducing the digital technology in India, it aimed at transforming our nation and creating opportunities for all citizens through digital India initiative. The venture comprises of various projects in various areas and sectors. As a part of Digital India project, many educational institutions offer

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online courses. E-learning platforms are user friendly in nature it offers wide variety of courses in paid and non paid form. It allows the students to access services from anywhere at any time.

Background of the study

In the case of formal traditional education, the quality of education is the quality of the teachers, teaching material, curriculum and course contents. It is designed and developed by the experts available in a particular academic institution or University. And the teachers are provided with adequate training programmes.

In E-Learning world, the contents of various courses can be prepared by a virtual bank of experts from different universities. The experts from different parts of the world can meet easily through Internet meetings and discussions. The contents created can be stored and be made available to any University anywhere in the world. The second requirement of E-Learning system is the expert teachers. E-education delivers the courses to the students directly at their door step using various techniques like multimedia and virtual reality. The local teachers have to act as facilitators of learning.

E-Learning - an overview

E-Learning means use of electronic device as a medium of learning. A student has access to unlimited topics at their choice and global experts in different subjects. It is something otherwise not affordable or imaginable for many. E- learning programs allow people to learn at their own pace, no age barriers, without inhibitions, and without compromising on their other responsibilities.

The following are the interesting facts about online education in India.

- E-Learning market in India was worth $247 million in 2016, which is expected to increase about $1.96 billion by 2021. That is a compound annual growth rate of 52%.

- The number of users enrolled for various online learning courses is estimated to be 1.6 million in 2016, which is expected to rise about 9.6 million by the end of 2021.

- It is estimated that there is a 175% increase in the cost of classroom education, this gives online education more preferred because it is cost effective.

- Nearly 48% population in India, an age group between 15–40 with higher aspirations but lower income is a good target market for online education. And, the acceptability of online channel is high in the younger groups.

Impact of E-learning

A. Positive Impacts

1. Anywhere, Any Time

Since E-Learning only requires a smart phone/e-device with an internet connection, students can learn anywhere at any time. This flexibility helps everyone to pursue new courses without giving up their jobs. They can learn at in their free time/leisure time. All the E- materials are readily available at student's fingertip.

2. Save Money & Time

E- learning is much more cost effective than completing a regular courses. It is beneficial to accomplish students dream without spending a more on college education. It helps to save time.

3. Learn At Your Own Pace

Everyone learns at a different pace. It helps in overcoming the limitations of traditional education by offering e-materials in advance at convenient time preference.

4. Recognition of Online Degrees

Online degrees are accepted and recognized by many companies and employers around the world. Many of them are promoting their employees to get online education as well.

5. Global Integration

Students from different region can interact each other, share their values, culture…etc

6. No Age Restrictions

Any one at any time is permitted for E-learning.

B. Negative Impacts

1. Chances of Distraction

Students can easily lose track of their studies in E-Learning since there are   no face-to-face communication. So, self motivation is very well important.

1. Lack of Interaction

E-learning lacks interaction between teachers and students. As a result poor communication arises between them.

2. Poor Internet connection

High speed internet facility is required for the smooth conduct of online class. It may not be affordable for everyone.

3. Fraudulent Courses

There are many websites that offer e-Learning platforms in the name of fake universities. Such course certificates will adversely affect your career.

4. Not Suitable for Courses That Require Labs/Workshops

You cannot do a course which requires practical experiments like lab, workshop etc through online platforms.

Need and Significance

Education sector is undergoing through several transformations. One among them is use of electronic devices for learning. Now in this technological era traditional classrooms, books, schools etc are replaced with virtual classrooms. Students are free to choose their own areas of interest to study. It has brought advanced learning materials, innovative syllabus, customized learning styles...etc. It helps the students to concentrate on their interested areas, saves time, cost effective and more productive than the old one. Even though it lacks certain things they are lack of communication between teachers and students, increased health issues among children by using electronic devices for a long period of time, lack of interaction etc .So it is important to study about the impact of E-learning on student learning.

Objectives

1. To Understand the Satisfaction Level of present E-learning system

2. To Assess the E-Learning Needs of students

3. To Assess the limitations of E-Learning

Methodology and Sample

The present study used descriptive survey method to find out the problems in online teaching

• Selection of the variable involved in the study.

• Construction and validation of the tool to measure the selected variable.

- Collection of the data using tools.
- Analysis of the data using statistical procedure like using tables and graphs.
- Interpretations of the findings.

The data for the study was collected from Kottayam district of Kerala. A well structured questionnaire served as the primary source. 70 samples were collected from the college students for the study with the help of convenient sampling method. Secondary data is collected from journals, Internet and Books. The study covers a period 01/03/2021 to 30/04/2021 and the relevant information was obtained.

Tools used in the study

Investigator constructed only one form of instrument (questionnaire) one tool for collecting data. First part of the questionnaire assess the satisfaction level of students on present E-Learning system and the second part assess the learning needs of students and last part covers the problems of E-learning system. 20 questions were raised for the college students. Averages and percentage analysis were used for analyzing the data.

Analysis and Interpretation

Table 1
Gender wise classification

Gender	No. of Students	%
Male	18	26
Female	52	74
Transgender	0	0
Total	70	100

From the table it is clear that 74% of respondents are female and 26% are male. No response received from transgender category.

Table 2
Age wise classification

Age	No. of Students	%
18-20	10	15
21-23	15	21
24-26	36	51
27 and above	9	13
Total	70	100

From the table it is clear that 51% of respondents are in the age group of 24-26. 21% of respondents are in the age group of 21-23. 15% belongs to the 18-20 age group and 13% are from 27 and above.

Table 3
Qualification of respondents

Educational Qualification	No. of students	%
Plus Two	6	9
Degree	19	27
PG	42	60
Others	3	4
Total	70	100

From the table it is clear that 60% of respondents are PG qualified, 27% are graduated, 9% are Plus Two qualified and the remaining 4% belongs to the others category.

Table 4
Satisfaction Level of Students

Satisfaction Level of Students	Yes	No	Total
Fulfillment of learning needs	66(94%)	4(6%)	70
Fulfillment of learning objectives	62(89%)	8(11%)	70
Easiness of E-learning system	60(86%)	10(14%)	70
Flexibility of using E- materials	62(89%)	8(11%)	70
Attractiveness of the E-learning System	55(79%)	15(21%)	70
Efficiency in conducting Test papers	35(50%)	35(50%)	70
Suitability for Science courses	15(21%)	55(79%)	70

From the table it is clear that 94% of respondents are satisfied with the fulfilment of learning needs where only 21% are satisfied with the suitability of E-learning for science courses. 89%are satisfied with the learning objectives of E-learning and flexibility of using E-materials.86% of the respondents are satisfied with the easiness of E-learning system and only 50% are satisfied with the efficiency of conducting online exams.

Table 5
Assessment of Needs

Assessment Needs	Yes	No	Total
Assessment of learning Objectives	38(54%)	32(46%)	70
Assessment of learning skills	28(40%)	42(60%)	70
Choosing of timing preference	38(54%)	32(46%)	70
Choosing of teaching style	299(41%)	41(59%)	70
Assessment of learning habits	36(51%)	34(49%)	70
Evaluation of E-learning	56(80%)	14(20%)	70

From the table it is clear that 80% of the respondents are assessed the evaluation of E-learning system in a well manner. 60% said that assessment of learning skills are poor in E-learning.54% said that assessment of learning objectives are average in e-learning. 59% said that choosing of teaching style is poor in E-learning and timing preferences are average for 54% of respondents.

Table 6
Limitations of E-learning

Limitations of E-learning	Agree	Disagree	Total
No direct communication among students	59(84%)	11(16%)	70
Health and Mental Issues	51(73%)	19(27%)	70
Loss of tradition	37(53%)	33(47%)	70
No compulsion of learning	41(59%)	29(41%)	70
Costs of internet	40(57%)	30(43%)	70
Loneliness, Depression	39(56%)	31(44%)	70
No interaction	54(77%)	16(23%)	70
No direct communication with teacher	63(90%)	7(10%)	70

From the table it is clear that 90% of the respondents are facing the problem of no direct communication with teacher in e-learning where 53% are agreeing with the loss of tradition. 84%argued that there is no direct communication among students and 73% are agreeing with health and mental issues of e-learning.

Major Findings

1. Majority of the respondents are in the age group of 24-26
2. Majority of the respondents are satisfied with the fulfilment of learning needs
3. Most of the people are satisfied with the learning objectives of E-learning and flexibility of using E-materials
4. Majority of the respondents have assessed E-learning system in a well manner
5. Some of them said that the assessment of learning skills are poor in E-learning
6. Majority of the respondents are facing the problem of no direct communication with teacher in e-learning
7. Most of the people argued that there is no direct communication among students and the rise of health issues among students.

Implications

- The Govt. has to take initiatives for the training of teachers in E-Learning
- Ensure enhanced technological support with 24/7 accessibility
- Appointment of counselors at Academic institutions for the mental health of children
- Provision of appropriate leisure time
- Introduction of customized software for Education
- The Govt. should ensure the accessibility of internet everywhere; especially in rural areas.
- Promotion of co-curricular activities
- Individualized attention must be ensured in E-learning.

Conclusion

E-Learning is the use electronic devices in Learning. It has changed aspects of conventional education system and it promoted self learning skills through web based technologies. It made a drastic change in the field of teaching as well as learning. Online education became the complete solution for combating such pandemic as well as natural disasters. Even though E-learning has its own challenges, According to Gandhiji "education is the realization of the best in man-body, soul and spirit". Here in online education, it lacks values of friendship, teacher-student interaction, human values of sharing, caring etc. So proper management, administration and evaluation are required for E-learning system.

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USE OF JOURNALS AMONG RESEARCH SCHOLARS: A CASE STUDY

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Abstract

This study is about the use of journals in research activities which enable the enhancement of quality of higher education. The study investigated the use of journals by researchers in St. Thomas College, Thrissur. Data were collected using the questionnaire and interview method. The results of the study confirm that journals are essential for researchers for conducting their research. 102 questionnaires were distributed among the researchers of St.Thomas College Trissur(Autonomous) and 83 researchers responded to the questionnaire.As the researchers are very busy with their studies it is noticed that they are not sufficiently using the library resources and make use of services provided by the library. Therefore the academic library is expected to function more efficiently by getting down to the researchers in every possible way and provide them right resources and make aware of the services available for them and assist them in their researches that in turn will serve the institution and the scholar community with the fruitful results of their studies.

Key words: *Journals, Research Scholars, St. Thomas College, Trissur and Digital documents.*

Introduction

Students of younger generation depends more on college library to develop their academic knowledge and ideas. In this digital era, research is very essential for the overall improvement of any academic institution. In other words, research is indispensable to develop an overall knowledge-driven growth based on innovation in academic institutions. The basic principle of research is quest for knowledge. The main goal of any college library is the dissemination of needed information from both the

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print and digital documents to their users. College libraries   supports the curricular and co-curricular activities of its parental institution. Journals are the primary sources of information for learning, teaching and especially for research in a higher education institution. Journals enriches the library collection. Journal publications furnishes large collection of scholarly articles. Data presented in journals helps to update users' knowledge in their area of specialization. It will also lead to creation of new knowledge in a research field.

Researchers are re searching the information in their area of study through various primary, secondary and tertiary sources. Previous studies show that, among the above said three types of resources most preferable source is primary resource. Thus, the analysis of usage of journals by research scholars is very essential to serve the information requirements of researchers timely and also this would facilitate the collection development. This study is executed in order to better understand the use of journals of researcher scholars of St. Thomas College, Thrissur.

Significance Relevance & of the study

According to NIRF ranking, St. Thomas College Trissur (Autonomous) was ranked among the best 100 colleges in India, for the three consecutive years (2018,2019 & 2020). During the year 2020, this college was selected as Mentor College under UGC Paramarsh Scheme to mentor unaccredited Higher Education Institutions. The college was awarded FIST 2020 Research Project in March 2021. The College has built up over the years extensive resources necessary to support and accommodate more than 3000 students and twenty-three teaching

Departments that encompassed 160 teachers who taught the undergraduates and helped the postgraduates in their specializations. The College Library houses nearly one lakh of volumes and is one of the largest and oldest collections of books maintained by the Colleges in Kerala.

Courses of research leading to Ph.D. are offered at the Research Centers of the Departments of English, Economics, Commerce, Chemistry, Statistics, Zoology, Botany Mathematics. and Physics.32 research guides are supervising more than 125 research scholars. The college has produced more than twenty PhD Awardees. They are also providing space for collaborative research and consultancy. Preliminary studies have shown that this institution, which has such an academic excellence and promotes research activities, is the most suitable space for this study. It makes sense to study the use of journals among the research scholars of St. Thomas College Trissur to maintain the research standards of research students.

Objectives of the Study

- To assess the use of Print & Electronic journals by the researchers in St. Thomas College,Thrissur.

- To examine the use of the journal before and after becoming a researcher and their frequency of use of journals.

- To analyse awareness of journals among the research scholars

- To analyse the purpose of using journals among the researchers.

- To understand the impact of journals on research work.

- To know the satisfaction level of researchers in the use of journals.

Methodology of the Study

To conduct this study researcher used various methods such as Literature Review, Questionnaire Method and Interview Method.

Population of the study

The population of the study comprises the Researchers of various departments of St. Thomas College, Thrissur. All the researchers had been taken to form the population of the study. The total number of researchers in the college during the period of study is 102. This much questionnaires were distributed among the researchers and 83 researchers responded to the questionnaire. The total percentage of response is 81.37%.

Analysis & Findings

In the analysis part of the study, researcher analyzed the objectives of the study based on collected data. Results of the analysis as shown below.

Table 1
Period of use of journals

Sl.No.	Period	In Print		In Electronic form	
No. of Respondents & Percentage					
1	Less than one year	21	(25.30%)	16	(19.27%)
2	1-2 years	16	(19.27%)	21	(25.30%)
3	2-5 years	25	(30.12%)	30	(36.14%)
4	More than 5 years	13	(15.66%)	14	(16.86%)
5	Do not use	2	(2.40%)	0	

It reveals that 30.12% of researchers have been using print journals for 2-5 years. While 25.30% have been using for less than one year. 19.27% responded that they are using print journals for about 1-2 years. Less number of users about 15.66% have been using print journals for more than 5 years and 2.40% revealed that they do not use print journals.

As per the table, 36.14% of researchers have been using electronic journals for more than 2-5 years. 25.30% responded that they have been using electronic journals for 1-2 years. 19.27% of users are new users using since less than one year. Only 16.86% have been using electronic journals for more than 5 years. 9.63% of respondents did not answer this question.

Table 2
Preference of Format of Journals

Sl. No.	Format of Journals	No. of Respondents	Percentage of Response
1	Print	15	18.07%
2	Electronic	22	26.51%
3	Both	43	51.81%

From the table, it is observed that 51.81% of researchers prefer to use both print and electronic journals, while 26.51% prefer electronic journals, and only 18.07% prefer to use print journals. 3.61% of the respondents did not respond to this question.

Table 3
Frequency of Using Journals

Sl. No.	Duration	In Print		In Electronic Form	
1	Daily	1	(1.20%)	25	(30.12%)
2	Once a week	13	(15.66%)	10	(12.04%)
3	Several times a week	14	(16.86%)	28	(33.73%)
4	Once a month	18	(21.68%)	6	(7.22%)
5	Several times a month	17	(20.48%)	14	(16.86%)
6	Annually	9	(10.84%)	0	

The above table shows the frequency of use of journals by the research scholars .21.68% of researchers stated that they use print journals once in a month. Respondents about 20.48% use several times a month. It is also observed that 16.86% use several times a week, 15.66% use once in a week, 10.84% use annually and 1.20% use them daily. 13.25% of respondents did not indicate how frequently they use print journals.The table also reveals that 33.73% use electronic journals several times a week. It is also evident that a good number of researchers about 30.12% use daily,16.86% use several times a month, 12.04% use once a week. Only a small number of users about 7.22% use once a month.

Table 4
Use of journals by Researchers

Sl. No.	Use of Journals	No. of Respondents	Percentage of Response
1	Before becoming a Researcher	41	49.40%
2	After becoming a Researcher	42	50.60%

From the table, it is visible that 50.60% of respondents started using journals after becoming a researcher and 49.40% started using them before becoming a researcher.

Awareness of availability of journals

Table 5
Awareness of availability of journals

Sl. No.	Parameters	No. of Respondents	Percentage of Response
1	Yes	76	91.57%
2	No	7	8.43%

Table reveals that the majority of researchers representing 91.57% are aware that journals are available in the college library to use. 8.43% of respondents agreed that they are not aware of the availability of journals in their library.

Table 6

Sources of updation of New Journals/Articles

Sl. No.	Update about New Journals/Articles From	No. of Respondents	Percentage of Response
1	Research Supervisor	34	40.96%
2	College Library Website	8	9.64%
3	Colleagues	37	44.58%
4	E-Mail	39	46.99%
5	Library	10	12.05%
6	Internet	58	69.88%

The above table indicates that 69.88% of researchers get updates of new journals/articles via the Internet, while 46.99% of researchers through E-mail alerting services. 44.58% responded that Colleagues are the source of knowledge about new journals/articles. Likewise, 40.96% depend on their Research Supervisor to get updates. Only 12.05% of respondents are seen to be updated about the journals from the library, and 9.64% from the College Library Website. 1.20% of respondents opined that they get updates of new journals/articles from Google Scholar Alert.

Table 7

Purpose of Using Journals

Sl. No.	Purpose	No. of Respondents	% of Response
1	Writing Articles	66	79.52%
2	Updating Subject Knowledge	71	85.54%
3	Literature Survey/Review	73	87.95%
4	Career Development	28	33.73%
5	Teaching	28	33.73%

From the above table it is found that the majority of the respondents i.e. 87.95% use journals for literature survey/review. Good share of researchers i.e. 85.54% use journals for updating subject knowledge and 79.52% use journals for writing articles. Similarly, equal proportion i.e. 33.73% of respondents use for career development and for teaching purposes. 1.20% of respondents stated that they use journals to understand and adopt a new methodology.

Level of Impact Various Features of Journal on Research

Table 8

Attractive Features of Journals

Sl.No.	Features of Journals	No. of Respondents	Percentage of Response
1	Up-to-date Information	55	66.27%
2	Authenticity	45	54.22%
3	References	57	68.67%
4	Subject Specialization	69	83.13%
5	Peer Review	36	43.37%

Above table reveals that 83.13% of respondents expressed that the subject specialization feature attracted them most to use journals; followed by 68.67% found attractive the references in journals, 66.27% stated that the up-to-date information found in journals make them use journals. Similarly, 54.22% opined the authenticity of journals as an attractive feature, and 43.37% of respondents in an opinion that the peer review of journals attracted them to use journals.

Satisfaction Level

The table explains the satisfaction level of researchers about the subject coverage of journals available in the library.

Table 9

Satisfaction with the Subject Coverage of Journals in the Library

Sl. No.	Satisfaction with Subject Coverage of Journals	No. of Respondents	Percentage of Response
1	Fully satisfied	13	15.66%
2	Partially Satisfied	57	68.67%
3	Least Satisfied	7	8.43%
4	Not Satisfied	5	6.02%

As per the table, 15.66% of respondents are fully satisfied with the subject coverage of available journals in the college library, while most of the respondents i.e. 68.67% are partially satisfied. 8.43% are least satisfied and 6.02% are not satisfied with the same. 1.20% of the respondents did not respond to this question.

Conclusion

The study investigated the use of journals by researchers in St. Thomas College, Thrissur. Data were collected using the questionnaire and interview method. The results of the study confirm that journals are essential for researchers for conducting their research. As the main source of up-to-date scientific information, researchers prefer both print and electronic journals to use. The researchers are aware that journals are available as an information source. They get updates of new journals/articles via internet. Most of the researchers are partially satisfied with

subject coverage of journals available in the library. They are moderately satisfied with the subscription level of journals by the library. Thus, the library. need to focus on subscribing or purchasing journals based on the requirements of users according to the budget. Improving the level of services such as current awareness service, selective dissemination of information, will facilitate the library to serve the researchers and enhance the use of journals. As the researchers are very busy with their studies it is noticed that they are not sufficiently using the library resources and make use of services provided by the library.

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INFLUENCE OF SOCIAL MEDIA USE ON STUDENTS' MENTAL HEALTH AND ACADEMIC PERFORMANCE

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Abstract

The modern world, which is also known as the digital era, where social media and social networks strongly influence the children and student community, and such technology, is continuously becoming an everyday part of every individual's life in the society. Social media networking sites like, Facebook, YouTube, Whatsapp Messenger, WeChat, Instagram, QQ, Tumblr, Qzone, TikTok and Twitter are more and commonly in use by students across the world. There is no proper definition of social media, for it is always changing and progressive. Oftentimes researchers define it as a channel of communication or a cluster of social networking sites for sharing information and data. The percentage of people who use the internet and social media excessively increases day by day. Online media for education using to watch news and videos related to subjects are positive; and media online for non-education which is entertainment that is like a video game online brings negative impact on students' academic performance.

Keywords: *Social media use, Mental health and Academic performance*

Introduction

The role of social media among the students has undergone a "drastic change" especially in their character formation, behavioral patterns and good mannerisms. Students gain to access all types of information with ease through the use of cell phones, computers and other gadgets. For research and learning, information search, information management, improving learning motivation, enhancing teaching motivation and communication, social media becomes an important tool in the lives of students and others. It also helps students to obtain the latest information

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quickly and effectively. Social media sites help students to stay connected with their families and friends and enhance social relationships. Social networking platforms become tools for learning and they enable children and students to share creative content, ideas and express their interests and passions with others.

Social Media Networking

Social media networking sites like, Facebook, YouTube, Whatsapp Messenger, We Chat, Instagram, QQ, Tumblr, Qzone, TikTok and Twitter are more and commonly in use by students across the world. As a result of the use of cell phones, IPad, tablets, laptops, computers, smartwatch and other Internet services, a psychosocial behaviour is seen emerging in the children and students' community affecting their behaviour and relationship in the school and college environment and other places. It is observed that extreme use of these networking sites tends to have negative consequences on the students' well being; besides they have sleeping problems, stress, despair, depression and dejection. Such students also exhibit more egoistic tendencies, suicidal tendencies and other disorders (physical, social and emotional impairments) related to personality, including other antisocial behaviours and hostile tendencies. Frequent use of these sites leads to addiction that infuses bad habits and actions, affects character formation and also vulnerability to do criminal actions.

The following behaviours are commonly perceived a few *antisocial Internet behaviors*: 1) illegal activities such as selling and buying duplicate products, 2) offensive pornographic materials, 3) cyber bullying, a harmful disturbance to a person, 4) deprive somebody by deceit or cheat, 5) the use of Internet to do illegal gambling, 6) giving misinformation and rumors, 7) sending fake reviews to reduce the quantity of products and to mitigate the name of branded institutions, shops and restaurants, 8) the use of internet to make irrelevant posts and become more abusive, 9) hackers manipulate the online account, data and others.

In the present digital world, changing faster than ever, *anxiety* is one of the fundamental mental health problems. People worry unnecessarily about the likes and comments of their uploaded pictures and videos. The Hearty Soul (2016) asserts that the longer time you spend on social media the more you are depressed; furthermore, the usage of social networking applications like Facebook and Twitter are less helpful to students to remain more focused on their studies and academic performances. Kaur & Bashir (2015) explored both positive and negative effects of social media on mental health of students: positive effects include socialization, enhanced communication, learning opportunities and access to health information; negative aspects include depression, online harassment, cyber-bullying, undesirable sexual exposure, stress, fatigue, suppression of emotional and decline of intellectual ability.

Loneliness is one of the prime concerns of every individual in society, as it is intimately related to serious health

problems. It can be understood as discrepancy among desired level and practical level of social contacts of an individual's social life. Uncontrolled, unhygienic and compulsive usages of Internet resources enhance emotional loneliness. The Mental Health foundation of the United Kingdom asserts 60% of the young adults admit loneliness despite having all social media applications and facilities to run these applications.

Tiggemann, M., & Slater, A, A. (2017) asserts that social networking sites offer young girls and boys a *'body image concern or feeling'*. Young people view online ideal images of bodies and make comparisons with their own bodies. This can result in low body esteem. They spend a lot of time online searching to see the perfect bodies, especially focusing more on the bodies of celebrities and try themselves to mold and form their bodies to look like them. Oftentimes, if it is unattainable for them to be like those online ideal images, result in depression, body-surveillance and low body-confidence. In this case, they develop a false sense of beauty. There is a rise in the number of young people seeking to obtain cosmetic surgery and the popularity of taking 'selfie'. These negative impacts in the students become a disorder that affects their mental health.

Influence of Social Media

Social media and Internet dependence negatively affects students' academic performance and emotional traits as well. This negative influence is mostly on extreme users of the Internet and not on

all individuals. Nowadays, many school and college students spend much time on social networks, chatting with friends while less time is spending on studies. It leads to distraction and lower performance in terms of academic activities. It is also brought to the light that most of the students who utilize these sites for chatting and downloading purposes only affect their academic performance and success. A great number of students experience negative effects in their study such as poor grammar and spelling, late submission of assignments, less study time and poor academic performance. For instance, recently a teacher expressed in her speech about her own child who has no improvement in his grade, for he is addicted to social networking sites, and is a sad reality. Excessive use of social media by the students hampers students' ability to learn lessons and lose their proper sleep. The lack of sleep affects academic performance and achievements, said Junichi Sato, an educational board official from Tohoku University.

To reduce these risks of having negative influence on social media, proper steps should be taken as information and counseling sessions. It can be structured at schools and colleges for students and parents. Schools and colleges have to provide a social media curriculum that is continuous and appropriate to the age groups. Educating young people about mental health is essential. They must be taught about the significance of maintaining secure social media accounts and how to control themselves by not sharing personal information. Parents and teachers must advise them to have an hour

a day use of their smartphones. A proper awareness movement can be organized to understand the effects of usage of social media on mental health on the younger generation. The social networking sites should be constrained to a certain age limit. Any social media application that has negative effects like discrimination, violence and racism should be dissolved at once completely.

Social media is the effective communicating tool in the educational departments. Social media must help education improvement and students' value formation. One of the aims of education is to bring a change in behaviour in a desirable direction so that one behaves according to the accepted values and norms of the society. All these changes depend on individual differences, the home background, and school setting and college environment. Education is not only a tool for imparting knowledge but also a channel through which the individual is led to intellectual, spiritual, psychological, emotional, environmental and physical development. Holistic approaches of educating students aid their mental health wellness. Social media sites must be used for their holistic formation. Much of the success of every educational system relies on the holistic competence of teachers and their proper knowledge on social media. Teachers play multiple pivotal roles in the development of students' moral standards, acquisition of values, good character and a well-rounded personality.

Conclusion

Social media handled by the educators and teachers are the primary deliverers of educational services. They are in the most strategic position to bring favorable changes among the students and the youth by molding them to be better persons and desirable members of the society. These changes do not happen in isolation but are fruits of their interactive relationship with their students and using social media to stimulate collaboration, knowledge and thinking skills. The use of the Internet and social media beyond the time will not be a hint of academic achievement. The overuse of social media with an extrovert personality can lead to poor academic achievements. Online media use gives a positive and negative influence on students' performance.

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COLONIALISM, CIVILIZING MISSION AND GROWTH OF AGRICULTURE SCIENCE IN THE PRINCELY STATE OF COCHIN

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Abstract

The colonial period witnessed many new changes in agriculture. Growth and spread of agriculture science was one among that. By establishing various institutions Farms,Nurseries, Agriculture School etc., the Colonial State initiated programmes to disseminate Agriculture Science. Being part of a Colonial system Princely Cochin was also not free from this. The twentieth century witnessed the emergence of Agriculture Science in Cochin had far reaching consequences in agriculture sector of Cochin.

Key words: *Colonialism, domination, modernization, agriculture science, civilizing mission, Institutionalization, Scientific Colonialism, traditional knowledge, indigenous knowledge, marginalization, institutionalized knowledge, Colonial Science*

Introduction

Dissemination of scientific knowledge was a part of the Colonial agenda of civilizing the colonies. Science was an organic part of colonial enterprise. (Petitjean, 2005) The spread of Western Science was an essential feature of Colonialism everywhere and the use of Science was a planned strategy of Colonialism to establish power and domination. The interdependence between colonization and science was particularly visible in the concept of the "Civilizing Mission". Science was deemed altruistic, and put at the core of this mission.

(Petitjean, 2005)Colonialism always had a deep intention in establishing the fact that the scientific empirical knowledge as the universal knowledge. The history of Colonialism shows that, the Colonial powers were successful in achieving this intention. The agriculture sector also afflicted in the march of Science during Colonialism.

The development of Agricultural Science and its institutionalization was an important feature of Colonialism. The main objective behind this strategy was to establish Colonial domination over

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the agrarian community and agricultural practices and resources. This paper mainly focuses on the measures and policies adopted by the Colonial Government in Cochin for the growth and spread of agricultural Science and its consequences.

Growth of agricultural Science in Princely Cochin

It was during the twentieth century, Princely Cochin witnessed growth of Agricultural Science as a new field of education. Even though the most predominant way of sustenance of the majority of the subjects was agriculture, the government of Cochin turned their attention towards agriculture only in the beginning of the twentieth century. In the Princely State of Cochin, the modernization of agriculture started during the reign of Maharaja Sir Sri Rama Varma (1895-1914). In his autobiography he wrote; "In Cochin, as elsewhere in the world, the farmer was a conservative individual who did not welcome innovations until their usefulness could be fully demonstrated. The problem to be solved was two-fold; one had to find out the defects of the existing system of agriculture and then to provide remedies by which cost could be reduced and yield increased. Government had to undertake the work of pioneering, of experiment with scientific methods of cultivation, new crops and manure and then persuade the ryots to adopt them." (Rejikumar, 2010) The Cochin ryot was a practical agriculturist with primitive and non-progressive methods. (Achyutha Menon, 1911) Therefore, the Cochin farmer needed an orientation in scientific ways of agriculture. (Pratheep,

2017)The establishment of the Agriculture Department in the year 1908 can be considered as the first step of modernization of agriculture in the State. (J.Rejikumar, 2010). Under the supervision of this agricultural Department, the Government initiated different programmes to develop agricultural Science and its dissemination among the agrarian community.

Experimental farming was the most important feature in the development of Agricultural Science in Cochin. In order to encourage the growth of agricultural science the Government initiated institutional establishments in the State paved way for the institutionalization of Agricultural Science. The most important institutional establishments related with Agricultural Science were Central Farm, Coconut Station, Agricultural School, Agricultural farm and Horticultural School.

The establishment of Central Agricultural Farm at Ollukara in 1917 was an important land mark in the growth of Agricultural Science in the Princely Cochin. A fully equipped laboratory was constructed in the central farm in 1931 and different sections were opened like Chemical and Mycological and Entomological sections. A chemistry Assistant was appointed in this laboratory in 1932. Researches on different kinds of seeds to ascertain their plant food and constituents, breedings, collection and preservation of important crop pests etc., were carried out in this laboratory. Experiments in Orchards was an important feature of Central farm. By 1940s the Central Farm was expanded to 418.01 acres. "Grow more Food" Campaign was

initiated by the Central Farm in 1940s with a view to safe guard against any food shortage. Experiments were conducted on plant breeding, control of plant pests and diseases, the manorial experiments in paddy cultivation and arecanuts, crop rotation, dry cultivation of bananas and sugar canes etc.,

The opening of Coconut Station was another important event related to the institutionalization of Agricultural Science. As coconut was an important crop in Cochin, the opening of Coconut station received due attention. Various experiments were tried here like trials with different manures, local and imported, spacing experimental plots to determine the number of trees that could stand economically in an acre were organized.

An Experimental and Demonstration Farm was started in the vicinity of Trichur. Five Farms were started in the year 1913 in different parts of the State. (Krishna Menon, 1932) All local conditions of agriculture were thoroughly studied and experimented in the farms. (Pratheep, 2017). In the 1928 an agricultural School was established in the Princely Cochin and in 1931 a model agricultural farm had begun near Hill Palace Thripunithura to train the public about the science of agriculture with a view to disseminate modern scientific knowledge on agriculture (Menon, 1933). The constitution of Seed and Manure Depots is a land mark in the agricultural history of Cochin. By 1928, three such depots were opened in various parts of the State. By 1941, three Horticulture Schools were there in the Princely Cochin. They

were at Thrissur, Hill Palace and one at Ollukara attached with central farm.

These institutions not only produced scientific knowledge on agriculture but also imparted the knowledge among the agrarian community. The farms and nurseries organized demonstrations for the farmers on new techniques and methods on scientific farming. The agricultural schools conducted courses for public on scientific agriculture and gave training for them. Examinations were conducted on the end of each course and issued certificate. Agriculture included as a subject in Schools to inculcate interest in scientific agriculture among the students. The Horticultural schools organized competitions for Schools students in Gardening. The preparation and publication of a book on the science of agriculture in Malayalam Language named as *krishipadapusthakam can be consider a*s a step to popularize the scientific knowledge in the Princely State of Cochin. It was prepared by O Raman Menon Head Master, *krishi School,* Hill Palace Thrippunithura. The first publication of this book was on 1932 and the second on 1936. (Menon, 1933)

Exhibitions were also organized by the Agriculture Department to disseminate Agriculture Science. A series of State Exhibitions were organized from 1908 to 1915 and then thought that rural shows would be more valuable in educating the masses and from 1916 to 1921 rural exhibitions were organized. From 1921 to 1928 a number of village shows were conducted under the auspicious of Panchayats, Co-operative Societies and

other localbodies to educate the agrarian community. (Krishna Menon, 1932) In 1933 the agricultural Department organized exhibitions like The All-India Swadeshi Exhibition, The Cattle Show and Exhibition at Perumpilavu and the Rural Exhibitions at Amballur and Palluruthy received high appreciation from the public.

Thus, through institutionalization, Experiments, implementation of various programmes, demonstrations and training modern agriculture science developed and spread though out the State. To a certain extent, the adoption of modern agriculture Science helped to improve the agriculture production. However, the adoption of Agriculture Science not only helped to improve the production but also had some impact over the agrarian organization of Cochin as whole.

Conclusion and evaluation

Spread of agricultural Science had far reaching consequences on agriculture sector of the Princely State of Cochin. The first and foremost consequence of the growth of Agricultural Science was it spread a scientific spirit among the agrarian community of the Princely Cochin. The agrarian community initially skeptical about whether to accept the agricultural Science gradually embraced it. .

Secondly, in the agricultural schools, farms and nurseries, worked the officials who got trained in colonial style begun to conduct experiments in seeds, manuring etc, paved way for emergence of a parallel system in which people other than cultivators started to involve in the

agriculture activities. Gradually, these officials began to control the cultivators and their agriculture activities. These institutional bodies became the decision making body.

Thirdly, before the growth and spread of agricultural Science the agricultural knowledge production occurred in the agrarian fields now changed to farms and labs. The colonial agricultural institutions became the centers of knowledge production and institutionalized and scripted knowledge began to consider as recognized knowledge. This subsequently led to the marginalization of traditional knowledge and techniques existed in Cochin. The validity of indigenous knowledge was challenged. Thus, there were a big divide occurred in between Colonial Scientific knowledge and indigenous knowledge.

Thus Colonial agricultural Science eventually established their domination over agrarian community and agricultural practices and techniques. The establishment of domination over agricultural sector of Cochin using Science under the 'The Civilizing Mission' tactfully implemented by the Colonial Government. The institutions of Agriculture Science stands as a clear evidence of Scientific Colonialism

To conclude, growth and spread of agricultural Science was a complicated process which not only consist of merely establishing Schools and farms but also includes conducting experiments and implementation of different programmes and imparting the knowledge to the local agrarian community. It finally resulted in changing the perspective of the agrarian

community about the traditional agrarian system. It was also resulted in moulding the agrarian community and agrarian system to cater the needs and expectations of the Colonial System

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BEFRIENDING TECHNOLOGY – A NEED OF THE TIME OF DIGITALIZATION: GUIDELINES FOR STUDENTS, PARENTS AND EDUCATORS

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Abstract

The Digitalization has become part and parcel of human existence. A considerable percentage of the people, as soon as they get up, rush to the digital world forgetting all other engagements. The same effect is seen in the educational scenario also. The Digitalization has changed the educational system. Students started saying that "the school is in the net". There are a number of merits and demerits in the educational sector. While positively promoting the positives of digitalization, we must be aware of the demerits and disadvantages of this digital technology. Proper precautions must me observed by the students, parents and teachers in order to promote the digital usage positively. This article aims at the proper and prudential use of internet and technology mainly in the educational sector.

Key Words: *Digitalization, Technology, Digital Shift, Personalized Learning, Sharing Economy, Flaming, Harassment, Denigration, Impersonation, Outing and Trickery, Cyber Stalking Exclusion/Ostracism, Happy Slapping, Copyright Infringement, Substance Misuse, gamification, etc.*

Introduction

We are moving through a world which is digitally being improved and this factor is beyond out imagination. Digitalization generally refers to enabling or improving processes by leveraging digital technologies and digitized data. It also means the integration of digital technologies into everyday life by the things that can be digitized. When we come concretely to the field of education, it refers to the use of computers, smart mobile devices, the Internet, software applications, and other types of digital technology in the teaching and learning process of teachers, students, parents of the students and all those who are connected with the field of education of all ages. The digital content of different courses and study materials become very common in the present day. Online tests, online universities, e-books, and edutainment are

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just a few examples of digitalization in education today.

Edutainment (it is a word made from the combination of two English words such as education and entertainment) is a term introduced by Walt Disney in the year 1954 in the *True Life Adventures* series to mean the education designed through entertainment. Most often it includes content intended to teach but has incidental or optional entertainment value. It has been used by various countries to disseminate information in classrooms and via television, radio, and other media to influence viewers" opinions and behaviors. (Following the term "edutainment" new words like "Edutainer" "busitainment" etc are originated).

1. The Digital Shift from Traditionalism

Before reaching to the digitalization period, or for the better understanding of this period which is typically called digital era, we see certain considerable changed in the world history which can me mentioned as five;

1.1. The Shift from Printing World to Digital World

One of the drastic changes that the world witnessed in the field of communication was the invention of printing press. In Germany, around 1440, goldsmith Johannes Gutenberg invented the printing press, which started the printing revolution. His two inventions, the hand mould and the printing press, together drastically reduced the cost of printing books and other documents in Europe, particularly for shorter print runs. The rapid economic and socio- cultural development of late medieval society in Europe created favorable intellectual and technological conditions for Gutenberg"s improved version of the printing press: the entrepreneurial spirit of emerging capitalism increasingly made its impact on medieval modes of production, fostering economic thinking and improving the efficiency of traditional work- processes. The sharp rise of medieval learning and literacy amongst the middle class led to an increased demand for books which the time-consuming hand-copying method fell far short of accommodating. Very soon the technology of printing press was expanded to the other parts of the world. There are a number of considerable changes in the printing technology from the very beginning of its introduction, but the factor that changed the face of printing technology is the digitalization of media.

1.2. The Shift from Physical World to Digital World

The Physical world has been replaced with the digital scenarios and this factor had been brought to forefront because of the COVID-19 pandemic. "Work from Home" has become a fashion and practice" of the time. The digital evolution of the work environments and tools have brought undeniable vantages and new perspectives in the field of computer, emails, cloud and now internet of things, that is bringing together "physical behavior" and digital applications.   The physical habits and interaction are usually opposed to digital

ones. Digital tools and devices are often announced as substitutes for traditional tools habits and practices. The digital devices like Smartpen, Note taking and Task Management Tool etc have become the daily friends of ordinary man. These kinds of interactions between the physical and digital world might be the future of working, or maybe a transition phase to the full digital era of tomorrow.

1.3. The Shift from Tradition to technology

The traditional education system as well as all the world systems has been changed. Any individual who wants to take their right place in this world, education has become their rite of passage. Even though traditional education has its history etched within four walls of a classroom, it has now expanded to all corners of the world. Now in the 21st century, we cannot imagine a scenario where education and technology are two separate entities. Technology has touched every aspect of human life, including education.

1.4. The Shift from Community to Individualism

Because the digitalization, the communitarian dimension of all activities to a great extent, have been replaced. People started working individually at home. This is a great shift that we notice these days. This shift in the work is being transmitted to all human endeavours. Even the families become the so individualistic. Individual concerns have started overpowering the cognitive, social, political and commercial scenarios.

5. The Shift from Individual to Known and Unknown Groups

There are a number of groups where the real sharing of knowledge and fellowship are maintained. The groups where the people of same interest come together and share their feelings, exchange their knowledge, enrich each other and grow to their fullness. There are also groups in which people engage themselves for nothing. So we must be prudent in selecting our groups. We must conscientize our students and children about the same process of prudence.

2. Merits of Digitalization in Education

We will notice a number of benefits in the educational sector mainly because of digitalization. There are a number of positive aspects that can be seen objectively. In the field of education, we need to answer two questions every day such as what we learn and how we learn. The soul intention of education as it is mentioned by the great leaders is the individual development for the building up of the nation. So the digitalization also must be seen in such a dimension. Let us try to see some of the merits of digitalization in the field of education.

2.1. Personalized Teaching and Learning Process

In the digital learning, educators and educated have the freedom to design and select the curriculum on the basis of their time, place, ability and availability and so also for students. The teachers have the freedom to customize the curriculum based on individual learning speed and capability.

The teachers can have the personal concerns and the students have their personal freedom in the selection of the subjects according to their taste and preference. Since there is freedom from the part of both the teachers and students, the educational and formative system can have better performance and results.

2.2. Abundance of Information for Students and Educators

There are a number of information sources around us like books, magazines, scholars and teachers etc, but Google has become our first and immediate reference. The world of internet is exploding with paid or free Informations. The number of Google searches must open our eyes to the eagerness of the people to search for anything and everything on the internet. Google searches are over 63,000 per second and 3.8 million per minute. Digital learning model gives us the ability to access and learn from it at our convenience. So unavailability of relevant information is no longer an excuse in avoiding learning and mastering the subjects.

Digital learning benefits the educators also. The teachers can enhance their teaching skills for the needs of the modern age. They can also forma technically qualified future generation adapting the need of the time. The feedbacks, evaluations and assessments are also made easier in digital platforms.

2.3. Easiness of Sharing Economy and improved Learning Methods

Living culture of Sharing Economy platforms have made online content sharing with just a click. The sharing can be made to different digital platforms with is a short span of time beyond time and space. So the communication of messages and digital contents become so easy and immediate in and through different platforms. There are Google Docs and sheets and cloud facilities for sharing matters. Since there is easy sharing there will always be better learning outcomes as well as enhanced collaboration skills.

We are very familiar with the saying, "Tell me and I forget, Teach me and I remember, Involve me and I learn". Here the students and not in favour of the traditional methods of having textbooks and one instructor for learning in the traditional way where the students have limited choices and selections. In the digital mode of learning the students will have wider range of choices. There is also unlimited availability of images video content, gamification, interactive sessions, and virtual reality. Gamification is adding game mechanics into nongame environments, like a website, online community, learning management system or business' intranet to increase participation. The goal of gamification is to engage with consumers, employees and partners to inspire collaborate, share and interact. Virtual Reality (VR) refers to a computer-generated simulation in which a person can interact within an artificial three-dimensional environment using electronic devices fitted with sensors. In this simulated artificial environment, the user is able to have a realistic-feeling experience.

2.4. Digitalization Develops Accountability among Students

Generally, it is said that the transparency of the students is increased because of the digitalization and the use of digital platforms. Just as the content of the users can be viewed from different angles, the assessment of each student becomes also becomes more transparent and informative. There also options for self assessment and the students themselves can assess and find solution for many of their doubts. Online learning is self directed and better results are attained. Critics say that since the gathering of materials are done by the students themselves and the assessment also is done by them, their critical thinking also is increased manifold.

2.5. Information Technology Resources and its Multiple Uses

The internet provides the most number of opportunities in the acquisition and exchange of knowledge. Just as the resources are unlimited so also is the sharing. There are a number of digital tool kits or platforms like, Google Sites, Google Docs, Google Reader, Twitter, Skype, Wikiespaces, Slideshare, Dropbox, Jing, Diigo, Delicious, Avathar, Facebook, Firefox etc. All, these are the platforms where people can share their ideas and enrich themselves in the ideas.

III. Demerits of Degitalization in Education

Fortunately there are a number of merits for the online education and digitalization. At the same time we must be careful about different areas of internet with a lot of pitfalls. The excessive use of the Internet makes them less interested in their studies. The parents do not know what their children do on the Internet so the youngsters are fearless and they are free in visiting any site without knowing its bad effects. Usually they get involved in hacking and other evil activities, which are called cybercrime. The excessive use of the Internet harms youth‶s academic and social activities. Everyone is becoming more stressful, depressed and confused. So that they even forget the social values and norms. Now let us try to see the main misuses of internet and digital net works

3.1. Misuse of Technology and Personal Humiliation

The digital platform becomes a place of misuse and humiliation. There are a number of such platforms.

a. Cyber bullying (Online bullying): It is a form of bullying or harassment using electronic means. Cyber bullying and cyber harassment are also known as online bullying. Flaming, Harassment, Denigration (Untrue information), Impersonation- (A person pretends to be another person), Outing and Trickery-(Sharing personal information), Exclusion/Ostracism (Being excluded), Happy Slapping (New method of cyber bullying).

b. Copyright infringement, Copyright infringement is the use of works protected by copyright law without permission for a usage where such permission is required.

c. Cyber stalking: Cyber stalking is the use of the Internet or other electronic means to harass an individual, group, or organization. It may include false accusations, defamation, slander etc

3.2. Technology Addiction

Technology addiction or Tech dependency can be defined as frequent and obsessive technology-related behavior increasingly practiced despite negative consequences to the user of the technology. It can also mean an over-dependence on technology. Tech dependence can lead to teen consequences that span from mild annoyance when away from technology to feelings of isolation, extreme anxiety, and depression

3.3. Substance Misuse

Technology impacts the pleasure systems of the brain in ways similar to substances. It provides the brain with some of the same dopamine rewards that alcohol, drugs, and other high- risk behaviors might. It can be a boredom buster, a social lubricant, and an escape from reality. Video and computer games, smart phones and tablets, social media and the Internet provide a variety of access points that can promote dependence on technology and negative consequences.

3.4. Fomo

FOMO (Fear of Missing Out) Youth/ Teens increasingly feel the need to stay connected to the Internet, so they are not the last to know of a news story or social happening. Some use the Internet-based social media platform as a chosen method

to alleviate their anxiety or depression. (EG;- *Have you ever noticed a compulsion to repeatedly check your mobile email even if there is nothing urgent pending*)

3.5. Other Misuses of Internet and Digitalization

There are again a number of misuses of Internet. We are not able to find out all the misuses, but we try for whatever is possible. Neurochemical Imbalances in the Brain, Gaming Disorder & Mental Health Conditions, Invasion of Privacy, Befriending of Inappropriate Intentions, (Strange friendship on face book), Internet Addiction and Psychological Dependency Social Networking Addiction (Facebook, Wattsapp, Twitter, LinkedIn, Telegram, Myspace) etc are also misuses.

Precautions over Degitalization in Education

The Internet can be a wonderful option for kids, adults and men of all ages. While being aware of the positives, we must be aware of that the online access very often comes with risks, like inappropriate content, cyber bullying, and online predators. They might prod the child to exchange personal information like address and phone number or such kind of activities. So the students must be properly warned to save themselves from all types of such activities. Proper careful measures must be observed in the use of digital tools and facilities. Experts suggest the following factors as remedies for the cyber issues. Prudent and balanced use in the use of internet, Healthy offline intervals (it means to avoid the continuous use of internet, whether it is for the creative

and useful purpose) and Stress management skills and their enhancement in order to refresh the mind and body.

The continuous use of internet will automatically lead the people to "away from society" attitude that would gradually lead the people to loneliness and psychological isolation. This will slowly lead the people to depression. In order to overcome this situation, people must be very careful to be proactive to the social identity development in the real world. Many people have started practicing the slogan "Rest is for rest and not for NET", "Sleeping and Resting, No devise in the bedroom". Kerala is the top state in India considering the percentage of internet users with 54% of its population. Insufficient sleep affects nearly 60% of the total population and almost 75% of the student Community. The National Sleep Foundation of India warns the less sleepers will be victims of microsleep throughout the day or brief moments of sleep that happen when people are normally awake that would lead simply to dangers. Studies say that the use of such devices can be intensified with the popularity of cell phones, tablets, and e-readers.

Conclusion

The question we face regarding the time whether it is "the Best Time or Worse Time". According to Nick Van Dam advisor to Mc Kinsey, Deloitte, "This is the BEST TIME for people with right education and talents. This is also the WORST TIME in the history for people with ordinary education and skills". Let us make this time "THE BEST TIME" through proper education and the proper use of talents.

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