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# Voice of Research

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## EDITORIAL

Along with the poverty, illiteracy, racism, casteism, provincialism, capitalism, unemployment and corruption the pandemic posed the severe threat which forced us to think, assess and evaluate our progress, preparation and readiness with respect to the medical and health infrastructure, mental health, education, economy, employment, inflation etc. After more than 15 months of false imprisonment and that too not only because of pandemic but more because of the threat of the poor medical and health infrastructure now each one is atiptoe. The steep down wards graph of the economy and the increasing unemployment, questions the development and its sustainability. With increased costs of fuel, vegetables, oils and food grains which doesn't even seem to stop in near future, life has turned tough but yet human is no less. He stands up, faces upright and moves stealthily with the idea of survival and sustainability. Though the situation is not good but yet Voice of Research has the privilege of the strong support of the researchers. The current issue with the papers related to problem-based learning instruction, writing skills, task based programme, national education policy, oxygen of publicity, 'HO' tribes, food hygiene, free services, financial frauds and cyber laws presents the society with potential researchers as the strong backbone.

To add to the science of knowledge in education, philosophy and psychology Stella & Imelda studies effect of problem-based learning instruction; Darji focusses on developing writing skills; Shukla evaluates effectiveness of a task based programme; whereas Mondal presents reflections of national education policy. To add to the knowledge of management, social science and humanities Lizhe reflects on media, terrorism and oxygen of publicity; Dubey & Soy elaborates on 'HO' tribes; Dubey & Rekha Rani studies food hygiene knowledge and practice; Shrivastava explains 'free' services on the net as a way to move from barter to money whereas Ghosh analyses financial frauds and cyber laws.

With this issue, I take this opportunity to pay tribute to all those great unknown and unsung heroes of the society who took this pandemic threat to the society as an opportunity of service to the society and not business. We thank and appreciate all such real life heroes who added to the lessons of humanity and depicted their social and moral richness as well the value, ethics and cultural richness of their society. No doubt that these members of the society created a history otherwise it takes no time to turn a history. I am sure this issue will enlighten the potential researchers and the society as well it will help us all assess our societal development.

With the hope of best for mankind,

Avdhesh Jha  
Chief Editor  
Voice of Research

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EFFECT OF PROBLEM-BASED LEARNING  
INSTRUCTION ON SECONDARY SCHOOL PHYSICS  
STUDENTS IN UNDERSTANDING OF  
ELECTROMAGNETIC WAVES

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**Abstract**

*The study of electromagnetic waves helps physics students acquire knowledge which is relevant to solving problems in their daily life. Helping students maximize knowledge acquisition has become key in science education research. The aim of this study was to analyze the effect of Problem-Based Learning Instruction on physics students' understanding of electromagnetic waves. A quasi-experimental, non-equivalent pretest-posttest control group design was used in this study with PBL instruction as the intervention. This study involved 419 students from 16 public and private secondary schools in Mitooma district-South Western Uganda. Descriptive statistics, paired and independent samples t tests were used in data analysis. Findings from the study indicated that PBL did improve significantly students' understanding of electromagnetic waves more than traditional methods with those exposed to both pretest and posttest scoring significantly more than those exposed only to the posttest. However, students still exhibited difficulties such as arranging the electromagnetic spectrum in order of either increasing or decreasing wavelength/frequency. We recommend that school officials devise means of supplementing book libraries with internet connected computers to help students visualize the nature of electromagnetic waves to enhance their understanding of intended concepts.*

**Keywords:** *understanding, electromagnetic waves, physics' students, Problem-Based Learning instruction*

*State of literature: Much as there are research studies in science (physics) education that test the effectiveness of Problem-Based Learning instruction, very few exist that analyze its role in enhancing students' understanding of electromagnetic waves.*

*Contribution to literature: The study compares the change in the scores on the electromagnetic waves between physics students instructed using Problem-Based Learning and those instructed using traditional methods. The study further identifies students' difficulties with electromagnetic waves.*

*The role of Science, Technology, Engineering and Mathematics (STEM) in general and Physics in particular is key in achieving sustainable development in any modern world (Uwamahoro, Ndiokubwayo, Ralph, Ndayambaje, 2021).*

## ***PROBLEM-BASED LEARNING INSTRUCTION***

The Ugandan Government through the Ministry of Education and sports adopted a Competency Based Curriculum (CBC) for lower secondary schools in 2020 with the aim of developing among learners employable skills that are competitive in the job market (National Curriculum Development Centre, 2020). Among science subjects, physics is considered by students as the most difficult despite its numerous applications in telecommunications, energy, architecture, engineering, electricity production and transmission, construction, and transport (Duncan & Kennett, 2014; Ling, Sanny, & Moebis, 2018); being a source of employment for people who are in related occupations such as teachers, scholars, and other researchers; a base for other academic disciplines such as biology, and chemistry; and its ability to facilitate students in developing logical skills needed for problem solving in various dimensions of life they encounter (Eijkelhof & Kortland, 1998).

Students tend to have difficulty dealing with various concepts of physics including electromagnetic waves - waves produced by the motion of electrically charged particles and can travel through empty space as well as through air and other substances (Özdemir & Kargi, 2011). Inability of students to correctly deal with these concepts has been linked by previous researchers to the teaching methods employed which mostly involve teachers lecturing in front of students with material mainly derived from textbooks (Dori & Belcher, 2005). These methods diminish students' opportunity to develop free exchange of ideas and do not foster active learning (Dori & Belcher, 2005). A study by Hake (1998) indicated that involving students in interactive engagement strategies improves their conceptual understanding. As pointed out by Wittmann (1998), having an insight into student understanding of concepts taught in the classroom provides a ground to create curriculum materials that are more effective in improving a student's actual understanding. Therefore, driven by the need to change the prevalent passive teaching mode and to involve students in active learning, Problem-Based Learning (PBL) instruction becomes a prerequisite method for this cause.

### **Problem Statement**

The science curricula for secondary schools globally not only targets the understanding of scientific contents, laws, theories, methods and procedures used by scientists understanding of scientific contents, laws, theories, methods and procedures used by scientists, but also the understanding of how scientific knowledge is developed and used (Ryder et al., 1999). However, reports on national examinations in Uganda have identified lack of this understanding majorly among physics students, pointing out various misconceptions with electromagnetic wave concepts despite their importance in health and technological developments (Uganda National Examination Board, 2016; 2017). These reports further identify that students generally dodge questions on waves and those who attempt them fail. Previous researchers such as

## ***PROBLEM-BASED LEARNING INSTRUCTION***

Tongchai et al. (2008) and national examiners have associated this problem with teachers' failure to employ methodologies that promote activities in which students develop understanding of these scientific ideas. As a result, students may tend to drop science subjects as they go to higher levels contributing to lack of skilled labor among Science, Technology, Engineering and Mathematics (STEM) fields. In response, the Government of Uganda in January 2020 adopted a competence-based curriculum (CBC) to enhance students' skills, knowledge and development of self confidence in problem solving. As a move to improve students' learning outcomes, this study seeks to assess the effectiveness of Problem-Based Learning (PBL) as a CBC pedagogy in enhancing students' understanding of wave concepts in physics among secondary schools in Western Uganda.

### **Aim of the study**

This study aimed at analyzing the effect of Problem-Based Learning instruction on physics students' understanding of electromagnetic waves.

**Specific objectives:** Students' understanding of electromagnetic waves was assessed using two objectives: To compare the change in scores on the electromagnetic wave conceptual survey between physics students instructed using Problem-Based Learning and those instructed using traditional methods; To analyze students' difficulties with electromagnetic wave concepts.

**Research questions:** Is there a difference in the change in scores on the electromagnetic wave conceptual survey between physics students instructed using Problem-Based Learning and those instructed using traditional methods? What are the students' difficulties with electromagnetic waves?

**Hypothesis:** There is no statistical significant difference between the change in scores on the electromagnetic wave conceptual survey between physics students instructed using Problem-Based Learning and those instructed using traditional methods; There is no statistical evidence of students' difficulties with electromagnetic wave concepts.

### **Review of Literature**

**Students' Difficulties with Electromagnetic Wave Concepts:** Students globally perceive the study of waves as difficult, abstract, uninteresting, and as a discipline suitable only for exceptionally talented and gifted learners (Erinosho, 2013). In the study conducted by Tabor-Morris et al. (2017), teachers at secondary level pointed out that students mis-identify radio waves as longitudinal sound waves instead of transverse electromagnetic waves. Student interpretations do not focus exclusively on the event nature of wave phenomena but instead give an object-like description (Wittmann, 2002). Richardson (2004) discovered that many students tend to concentrate on problem-solving strategies without minding about being attentive to the underlying concepts; instead of endeavoring to construct conceptual understanding of waves in physics in order to solve wordy problems, students

## ***PROBLEM-BASED LEARNING INSTRUCTION***

use formula-centered translation strategies. If students' difficulties are not addressed in early enough, they can persist, and become worse, when the topic appears again in a more advanced course (Ryan, Wilcox & Pollock, 2018).

**Traditional Methods of Teaching:** Presently, the classroom mode of instruction followed by teachers is considered a critical parameter in influencing learning outcomes (Isac et al., 2015). Teachers' choice of classroom methods is usually based on the kind of teaching and learning they experienced as school students, the methods promoted during teacher training, those specified in the school curriculum, from fellow teachers and from learning theories (Westbrook et al., 2013); the appropriateness of these methods depends on the goal, students' backgrounds and needs, available materials, and the teacher's personality, strengths, and style (Jacobsen et al., 2009).

Traditionally, teacher-centred methods commonly referred to as the conventional instruction have been highly employed where the teacher retains full control of the classroom and its activities (Mpho, 2018) and students remain passive recipients of knowledge (Karamustafaoglu, 2009). Example of conventional instruction according to Hill (2002) include direct instruction/chalk and talk, which describes a variety of whole class expository teaching techniques. Teachers who employ this approach concentrate on the content of teaching and on what they do in teaching by focusing on how to organize, structure and present the course content in a way that is easier for the students to understand (Sari et al., 2006). Direct instruction takes the form of lectures and demonstrations. Expository techniques in this approach emphasize building on students' prior knowledge and having them assimilate information by listening (Hill, 2002). Richardson (2004) found out that in most cases, teachers tend to use traditional lecture method which overemphasizes problem-solving over conceptual understanding. With this approach, many students according to Mioković et al. (2012) may be able to apply the appropriate formula when answering questions as a result of memorization, but are fond to lack understanding of the basic principles. More so, if the teacher dominates during the teaching and learning process, then student are more likely to lose sight of their major goals as compared to when they are constructing their own knowledge (Mpho, 2018)

However, recent curriculum reforms are advocating for an incline from conventional instruction approaches to active learning/learner-centred approaches that encourage students to participate during learning (Westbrook et al., 2013; Lewin, 1992). Students in this approach get actively engaged in activities that encompass analysis, synthesis and evaluation besides developing skills, values and attitudes (Karamustafaoglu, 2009). Active learning deals with learning activities in which students are given considerable autonomy and control of the direction of learning activities including experimentation and problem solving instruction (Jacobsen et al., 2009).

### **Problem Based Learning Instruction**

The education System nowadays focuses on training learners in such a way as to possess skills that enable them to work in various situations. Education philosophers such as pragmatists propose that humans learn through a process of learning by solving real problems which they face in their day to day life (Richardson, 2003). Based on these philosophies, problem based learning was developed from the constructivism school of thought where learners work on their own to generate new knowledge and understanding (Awan, Hussain & Anwar, 2017).

According to Allchin (2013), Problem-Based Learning instruction is a teaching method where students engage in solving real life problems. PBL engages students in intriguing real and relevant intellectual inquiry and allows them to learn from these life situations (Fogarty, 1997). In PBL, students start by solving problems and actively get involved in learning as they develop new knowledge within the context in which it is to be used (Chin & Chia, 2004). They work in groups and are expected to work collaboratively to initially identify or create a problem as presented in the situations or contexts and subsequently propose solutions to the problem using any and all synchronous and asynchronous tools available (Savin-baden, 2007). The role of teacher in in PBL is to facilitate the process of problem solving (Chin & Chia, 2004) by monitoring discussion and intervening when appropriate, asking questions that probe accuracy, relevance, and depth of information and analyses, raising new issues for consideration, and fostering students participation (Allen et al., 2011). PBL promotes the development of critical and reflective thinking about the process itself as well as emotional aspects such as curiosity (Sadeh & Zion, 2009). Thus, PBL is taken as an effective methodology in the teaching of waves since it may enhance emotional domain of students' learning process, improve their performance and foster a better knowledge retention (Allen et al., 2011). Additionally, students who learn under PBL instruction are able to share their opinion with others, use different approaches to analyze situations and explore ways of solving problems (Orozco & Yangco, 2016). They are also able to reflect explicitly on their experience and thereby deepen their understanding of scientific practices (Allchin, 2013).

### **Methodology**

**Study setting and design:** The study was carried out in secondary schools in Mitooma district (0.61930S, 30.02030E) -South-western Uganda with Mbarara as the regional city. The study was carried out from December 2020 to February 2021 among grade 13 physics students. It employed a quantitative quasi-experimental research design. It was quasi-experimental due to the fact that conducting true experiments on human beings is not possible. The study was non randomized pretest-posttest control group design.

## ***PROBLEM-BASED LEARNING INSTRUCTION***

### **Sampling strategy**

This study was conducted from October 2020 to February 2021. Among the Standard Operating Procedures to curb down the spread of Covid-19, all candidate classes were made boarding. More to that, apart from two secondary schools which are single-girls, the rest of the secondary schools in Mitooma district are mixed (both girls and boy). Therefore, simple random sampling was employed to select the participating schools. Intact classes were used as they existed in the schools.

### **Training of physics teachers in PBL process**

Physics teachers from the selected schools first attended a six-hour two day professional training in PBL facilitated by the authors. Table 1 gives the training program. By the end of the training, the participants were able to draft some problems on the concepts of electromagnetic waves using online resources and text books.

**Table 1 - The Two-day Schedule for the Physics Teachers' Training in PBL**

Time (Hours)	Activity	Facilitator	Supporting materials
<b>Day 1</b>			
8:00-8:30	Arrival and registration	Research assistant	Registration Forms
8:30-9:00	Individual introduction	All members	Attendance sheets
9:00-9:30	Opening remarks (sharing training objectives)	Training leader	Power point slides
9:30-10:00	Pre-test	All Participants	Survey forms
10:00-10:30	Commercial Break	All members	
10:30-11:30	Origin of PBL	Training Leader	Power point slides
11:30-12:30	Importance of PBL in Teaching and Learning	Training Leader	Power point slides
12:30-13:00	Open discussion	All members	Flip charts
13:00-14:00	Lunch Break	All members	
14:00-15:00	Formulating a PBL question	Training Leader	Power point slides
15:00-16:00	Class-activity - on Formulating PBL questions	Facilitated groups and SESEMAT trainer	Flip charts
16:00-16:30	Summary of the day's activities and closure	Training leader	Power point slides
<b>Day 2</b>			
8:00-8:30	Arrival and registration	Research assistant	Registration forms
8:300-9:30	Steps followed in present a PBL lesson	Training Leader	Power point slides
9:30-10:00	Class activity- drafting PBL lessons	Participants and SESEMAT trainer	Flip charts
10:00-10:30	Commercial break	All members	
10:30-13:00	Group presentations on PBL lessons	Group secretaries	Flip charts
13:00-14:00	Lunch break	All members	
14:30-15:00	Assessing a PBL lesson	Training Leader	Power point slides
15:00-15:30	Open discussion	Participants	Flip charts
15:30-16:00	Summary of the day's activities	Training leader	Power point slides
16:00-16:30	Post-test and closure	Participants and Training leader	Survey forms

### **Data collection**

The process of data collection followed Solomon Four-Group Design (Creswell, 2014). An electromagnetic Waves Conceptual Survey composed of problems on light as an electromagnetic wave was designed basing on that used by Tabor-Morris et al. (2017) in their study entitled “Radio Wave Errors: Students Mistaking Radio Transverse Electromagnetic Light Waves as Longitudinal Waves” was used for this study. This survey was a pretest-posttest multiple choice with PBL as the intervention and it was distributed with the help of the schools’ physics teachers. It contained items similar to those often tested on electromagnetic waves by the Uganda National Examination Board (UNEB). To ensure validity, the survey items were presented to two research experts for their independent views on each item. The number of items considered valid by both experts ( $n=15$ ) was divided by the total number of items on the survey ( $N=19$ ) and it yielded a validity index of 0.79 hence considering the items valid. For reliability, the survey was pilot-tested. For internal consistency, Cronbach's Alpha Coefficient Based on Standardized Items was computed and obtained as 0.71.

In addition, to determine if there was a difference between the test re-test scores obtained in the pilot study, the scores were subjected to a paired t test and the relationship between them was found to be non-significant ( $p=0.154$ ) at 95% Confidence Interval (CI) of the Difference. Therefore, the instrument was considered reliable for data collection.

### **Intervention**

Participants in the experimental group were instructed in the concept of ‘light as an electromagnetic wave’ using PBL as the intervention with teachers basically guiding students into using computer simulations, charts and experiments to understand the concepts and solve the pre-given problems that had been prepared by teachers after the PBL training. The students under PBL were required to first workout the problems in groups of 5 to 6 students before converging as a class to make group presentations. Teachers in the control group (who had not been trained in PBL) basically were dictating notes with little explanation to students. Teachers in the control group hardly involved students but referred them to past papers for self-trial questions. From the teachers’ schemes of work, the concepts of electromagnetic waves had been allocated 6 hours (2 hours per week). Before instruction took place, participants from experimental and control groups (based on schools) were randomly subdivided each into two groups in which one of the groups was given the pre-test. After instruction, all participants were given a post-test.

### **Data Analysis**

The responses of the participants were first coded and then fed into the computer using the Statistical package for Social Scientists (SPSS) software version 20.0. Skewness and Kurtosis were computed to check for homogeneity

## PROBLEM-BASED LEARNING INSTRUCTION

and normality of the results. Analysis of the change in students' scores on the survey was done using the Paired- and Independent-Samples T tests. To determine students' difficulties with electromagnetic waves, the difficulty index (P) was computed from dividing the number of students who answered a single question correctly by the total number of students who attempted the question was used. Usually,  $P$  should be in the range of  $0.2 \leq P \leq 0.8$ . If it is more than 0.8, the item is considered to be too easy for discriminating between students, and if it is less than 0.2, the item is taken to be too difficult (Ding, 2006). In this study, the values of  $P$  were averaged to obtain the mean difficulty index ( $\bar{P}$ ) which shows how well a particular group of students understands a given concept.

**Ethical consideration:** Ethical clearance was first obtained from University of Rwanda ethical clearance committee and then authorisation to conduct research in secondary schools in Uganda was obtained from the permanent secretary-Ministry of Education and Sports, Uganda. Informed consent was obtained from participants who were assured of confidentiality and anonymity of their responses.

### Presentation and Discussion of Results

This section presents and discusses the results of the study in relation to the objections under investigation. In the first case, the results were investigated for homogeneity and normality as presented in Tables 2 and 3.

**Table 2 : Levene's test of homogeneity of Variances using One way ANOVA**

Groups	Score	Levene Statistic	df <sub>1</sub>	df <sub>2</sub>	p
Experimental versus Control	Pretest	0.594	1	239	0.442

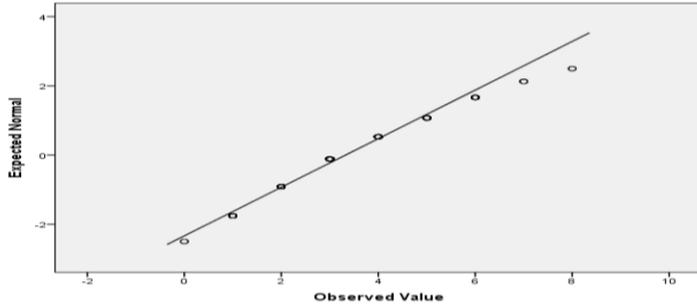
From Table 2, homogeneity between the experimental and control groups was such that for the pretest scores, the values for Levene Statistic  $df_1$ ,  $df_2$ , and  $p$  were 0.594, 1, 239, and 0.442. Therefore, it can be concluded that the groups used in the study were homogenous ( $p > 0.05$ ) hence comparable.

**Table 3 : Normality of both pretest and posttest scores**

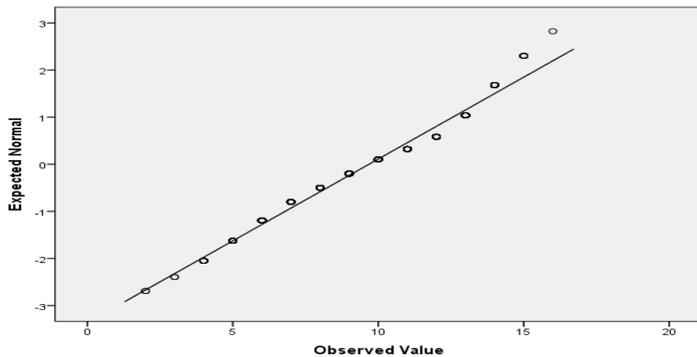
Test	Mean	Std. Error	Median	Mode	Variance	Std. Deviation	Interquartile Range	Skewness	Std. Error	Kurtosis	Std. Error	Z score on Skewness	Z score on Kurtosis
Pretest	3.33	0.092	3	3	2.027	1.424	2	0.545	0.157	0.321	0.314	3.471	1.022
Posttest	9.68	0.141	10	13	8.290	8.29	5	-0.17	0.119	-0.86	0.238	-1.429	-3.613

From Table 3, the Mean, Median, Skewness and Kurtosis were 3.33, 3, 0.545, and 0.321 in the pretest scores; 9.68, 10, -0.17, and -0.86 in the posttest scores respectively. The Z score on Kurtosis in the pretest was 1.022 and in the posttest, Skewness and Kurtosis were -0.17 and -0.86 respectively. More so, Q-Q plots for pretest and post test scores were also plotted as shown in Figures 1 and 2.

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**Figure 1 : Normal Q-Q Plot of Total Score in Pretest**



**Figure 2 : Normal Q-Q Plot of Total Score in Posttest**

Since the values of the mean and median in both pretest and posttest in Table 2 were approximately equal, the values of Skewness and Kurtosis were below 2 and 4 respectively, the pretest Z score on Kurtosis was in the range of  $\pm 3.29$ , and the points on the Q-Q Plots in Figures 1 and 2 for both pretest and posttest were close to a straight line, the data was considered to some extent normal and hence capable of further statistical analysis.

In addition, participants’ bio-data was checked using Pearson Correlation ( $r$ ) and the 2-tailed significant value ( $p$ ) to see if it influenced the study findings as presented in Table 4.

**Table 4 : Influence of participants' bio-data on study findings**

Score	Gender of students		Age of student in years		Subject combination		Status of school		Ownership of the school	
	$p$	$r$	$p$	$r$	$p$	$r$	$p$	$r$	$p$	$r$
Pretest	0.001	0.988	-0.130	0.055	0.083	0.199	0.017	0.795	-0.005	0.944
Posttest	-0.007	0.892	-0.054	0.271	-0.045	0.357	0.165	0.061	0.044	0.364

From Table 4, the value of  $r$  and  $p$  were in the range of -0.130 to 0.083 and 0.055 to 0.988 in the pretest; -0.054 to 0.165, and 0.061 to 0.892 in the posttest. Much as Table 4 indicates that there was a relationship between

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participants bio data and scores on the survey, the influence was non-significant as the  $p$  value in all cases was greater than 0.05.

Change in the scores on the electromagnetic wave conceptual survey between students instructed using PBL and those instructed using traditional methods To determine whether PBL instruction caused a more significant change in physics students' scores on the electromagnetic wave conceptual survey compared to the traditional methods, the paired samples t-test and MANOVA (Wilks' Lambda  $T$ ) were used on participants who did both pretest and the posttest. In confirmation of the tests, the effect size-Cohen's  $D$  and Partial Eta Squared were also determined and the outcome is presented in Tables 5 and 6. The parameters used are such that  $M_1$  and  $M_2$  represent the mean scores in the pretest and posttest,  $M$  the paired mean difference,  $\delta$  the paired standard deviation,  $e$  the paired standard error mean,  $t$  the t values,  $df$  the degrees of freedom, and  $p$  the 2-tailed significant values.

**Table 5 : Paired Samples T-Test and effect size for the scores on the electromagnetic wave conceptual survey between students instructed using PBL and those instructed using traditional methods**

Group	Mean		Paired Differences					$t$	$df$	$p$	Cohen's $D$
	$M_2$	$M_1$	$M$	$\delta$	$e$	95% CI of the Difference					
						Lower	Upper				
Experimental	10.5	3.29	7.214	2.295	0.217	6.784	7.644	33.261	111	0.00	3.14
Control	9.72	3.36	6.357	3.464	0.305	5.753	6.96	20.844	128	0.00	1.83

From Table 5, the outcome of the paired samples test between posttest and pretest scores was such that for experimental group,  $M = 7.214$ ,  $t(111) = 33.261$ ,  $p = 0.000$ , Cohen's  $D = 3.14$ ; while for the control groups,  $M = 6.357$ ,  $t(128) = 20.844$ ,  $p = 0.000$  and Cohen's  $D = 1.83$  respectively.

**Table 6 : Summary of MANCOVA comparing the change in the scores on the electromagnetic wave conceptual survey between students instructed using PBL and those instructed using traditional methods**

Group	Wilks' $T$	F	Hypothesis $df$	Error $df$	$p$	Partial Eta Squared ( $\eta^2$ )
Experimental	0.040	1289.081	2	108	0.000	0.960
Control	0.061	983.948	2	127	0.000	0.939

Results in Table 6 showed that there were significant differences between the pre-test and posttest scores in both the experimental (Hotelling's  $T = 0.040$ ,  $F(2,108) = 1289.081$ ,  $p = 0.000$ ,  $\eta^2 = 0.960$ ) and control groups (Hotelling's  $T = 0.061$ ,  $F(2,127) = 983.948$ ,  $p = 0.000$ ,  $\eta^2 = 0.939$ ).

**Table 7 : Independent Samples T-Test for post-test scores**

Group	Experimental group				T-Test for Equality of Means		
	$N$	$M$	$\delta$	$e$	$t$	$df$	$p$
Experimental	209	10.3	2.594	0.179	4.472	408.25	0.000
Control	210	9.07	3.021	0.208			
Given both pretest and posttest	239	10.09	2.795	0.181	3.362	377.352	0.001
Given only posttest	180	9.14	2.908	0.217			

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Considering Table 7,  $t(408.25) = 4.472$ ,  $p = 0.000$  between experimental and control groups, while between those given both pretest and posttest and those given only posttest,  $t(377.352) = 3.362$  and  $p = 0.001$ .

**Table 8 : Summary of ONE WAY ANOVA comparing difference in scores of physics students on the electromagnetic wave conceptual survey**

Group	Sum of Squares	df	Mean Square	F	p
Experimental versus control	158.471	1	158.471	19.985	0.000
Given both pretest and posttest versus given only posttest	92.463	1	92.463	11.432	0.001

When the post-test scores for both experimental and control groups were compared (Table 8), they yielded a  $p$  value of 0.000. On the other hand, the difference between the posttest scores for participants who were exposed to both pre-test and post-test and those exposed only to the post-test test gave a  $p$  value of 0.001.

From Table 8, there was a statistical difference in the posttest scores experimental and control groups ( $p=0.000$ ); additionally, the difference was also statistically significant for participants exposed to both pretest and posttest and those exposed only to the posttest test; and the difference in the scores was also significant ( $p=0.001$ ) since the  $p$  values were less than 0.05.

### Physics students' difficulties with electromagnetic wave concepts

In the post-test, the highest, the lowest, the mean, median and modal scores for experimental group were 16, 5, 10.52, 10, 10 for those who participated in both pretest and posttest, and 13, 2, 10.05, 10, 9 for those who did only the posttest; and for the control were 15, 2, 9.72, 9, 1310 for those who participated in both pretest and posttest, and 13, 4, 8.02, 7, 6 for those who did only the post-test. The Percentage number of participants that obtained particular scores on the post-test is presented in Table 9.

**Table 9: Percentage of participants that obtained particular scores on the posttest**

Score /19	Experimental group		Control	
	Given both pre-test and post-test	Given only post-test	Given both pre-test and post-test	Given only post-test
2	0.0	2.0	1.6	0.0
3	0.0	6.1	1.6	0.0
4	0.0	9.1	3.1	2.5
5	0.9	7.1	3.1	9.9
6	1.8	4.0	5.4	21.0
7	7.3	12.1	12.4	17.3
8	10.0	11.1	8.5	12.3
9	13.6	11.1	15.5	14.8
10	18.2	12.1	5.4	3.7
11	10.0	12.1	5.4	2.5
12	15.5	12.1	9.3	8.6
13	15.5	1.0	20.9	7.4
14	5.5	0.0	4.7	0.0
15	0.9	0.0	3.1	0.0
16	0.9	0.0	0.0	0.0

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From Table 10, the average difficulty index on the pre-test was 0.19 and on the post-test was 0.51. It is observed that the pre-test was very difficult for the participants ( $I=0.19$ ) while after applying the intervention (PBL), the participants performed fair on the post-test ( $I=0.51$ ). In the post-test, the most difficulty items ( $I<0.5$ ) were 3, 11, 13, 16, 18 and 19.

**Table 10: Percentage number of students giving a particular response and the difficulty index per item (correct responses are bolded)**

Item	A		B		C		D		E		Difficulty index (I)	
	Pretest	posttest	pretest	posttest								
1	39.3	17.2	23	13.6	11.3	56.6	26.4	12.6			0.11	0.57
2	29.7	60.4	26.4	15.3	43.9	24.3					0.30	0.60
3	10.5	46.1	18.8	14.3	26.8	14.3	23.8	15.3	20.1	10	0.11	0.46
4	9.2	8.6	25.9	57.8	23.0	14.6	21.8	10.7	20.1	8.4	0.26	0.58
5	20.5	11.2	23.4	10.7	17.2	13.1	18.0	54.2	20.9	10.7	0.18	0.54
6	13.6	14.6	6.9	50.8	17.9	19.6	18.6	15.0			0.69	0.51
7	28.9	13.8	30.5	19.8	28.5	14.6	12.1	51.8			0.12	0.52
8	18.4	11.0	28.0	13.8	15.1	8.6	15.5	53.2	23.0	13.4	0.16	0.53
9	18.8	11.9	37.7	16.9	13.4	51.8	10.9	8.4	19.2	11.0	0.13	0.52
10	34.7	16.5	26.4	13.4	17.6	53.7	21.3	16.5			0.18	0.54
11	20.1	12.9	30.5	16.9	11.3	47.3	38.1	22.9			0.11	0.47
12	27.2	15.5	23.8	50.8	31.0	21.2	18.0	12.4			0.24	0.51
13	27.2	20.0	18.4	47.3	23.0	14.6	31.4	18.1			0.18	0.47
14	18.0	15.0	18.8	13.8	36.4	50.8	26.8	20.3			0.36	0.51
15	23.4	14.1	40.2	28.6	13.8	42.0	22.6	15.3			0.14	0.42
16	18.8	46.1	22.2	17.7	27.6	16.9	31.4	19.3			0.19	0.46
17	22.6	11.7	18.8	54.9	36.8	18.4	21.8	15.0			0.19	0.55
18	27.6	17.7	23.0	15.0	36	18.1	13.4	49.2			0.13	0.49
19	18.4	12.9	32.2	16.5	35.1	23.4	14.2	47.3			0.14	0.47
Average											0.19	0.51

### **Discussion of Results**

The major aim of PBL is to enable students to independently think and solve real life problems. This study thus aimed at analysing the effect of Problem-Based Learning instruction (PBL) instruction on secondary school physics students' understanding of electromagnetic waves. This was investigated based on two research questions: 1) Is there a difference in the change in scores on the electromagnetic wave conceptual survey between physics students instructed using Problem-Based Learning and those instructed using traditional methods? 2) What are the students' difficulties with electromagnetic waves?

Addressing question 1: the findings in Tables 5 and 6 show that there was a statistical significant change in physics students' scores on the electromagnetic waves survey before and after instruction. The findings further show that change in scores among participants in the experimental and control groups

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was also statistically different as the mean scores and the standard deviations in the posttest were significantly different with better performance realized among the experimental (those instructed using PBL) than in the control (those instructed using traditional methods) group since the  $p$  value was less than 0.05 and the mean score for the experimental group was higher than that of the control group. The difference in scores between those exposed to both pretest and posttest and those exposed to only posttest was also statistically significant (Tables 7 and 8).

These findings of this study agree with those of Bilgin, Şenocak and Sözbilir (2009) who found out that there was a statistically significant difference between the conceptual success rates of pre-service teachers after being instructed under PBL. More to that, applying Problem-Based Learning instruction as observed by Gallardo Pérez et al. (2020) leads to better educational yields than traditional teaching and allows students to integrate the knowledge into their own to be able to solve existing problems. Allchin (2013) concluded that PBL generally impacts more positively on students' understanding of the nature of waves more than the conventional methods. Relating to findings about participants who had been exposed to pretest tending to score more on the posttest than those exposed to only posttest, Tongchai et al. (2011) noted that students' understanding depends directly on their previous level of engagement with a particular concept.

Considering question 2: from Table 10 basing on the column for difficulty index on the post-test, it is observed that generally, students find electromagnetic wave concepts difficult ( $I < 0.8$  for all items). For example, in item 3, most students were not aware that electromagnetic waves have no mass, instead they were giving alternatives such as they have no wavelength/energy/frequency/velocity. In high school classes, teachers are expected to proclaim to learners that all electromagnetic waves are massless. In item 11, they could hardly differentiate between infra-red and ultra-violet radiation based on wavelength, instead, they were referring to other properties such as Color/Speed in vacuum. For item 13, many students showed lack of knowledge of heat rays being also referred to as infrared radiations. They were mistaking them to be either gamma rays or radio waves. Referring to item 15, students could hardly identify the range of frequencies our eyes are sensitive. Answering of this question seemed to be based on guess work. In items 16 and 19, students had difficulty aligning electromagnetic waves in order of either increasing frequency or wavelength. In item 18, they could not easily identify the electromagnetic waves that can be seen as visible light.

From these findings, it was observed that generally students have misconceptions and difficulties regarding electromagnetic waves. The low scores obtained as in this study by students may be related to the fact that the content of electromagnetic waves had just been covered hence students had

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not yet conceptualized it as pointed out by Tabor-Morris et al., (2017). However, Mioković, Varvodić and Radolić (2012) pointed out that students at all levels tend to have low conceptual understanding of wave the phenomena. Unver and Ozkarabacak (2018) in their study showed that participants generally confuse electromagnetic waves with sound waves, signal, power of attraction, and frequency concepts.

### **Conclusions**

Instruction of waves relies heavily on the method of instruction used. Based on the study findings, it can be concluded that PBL is an effective method for instruction of electromagnetic waves since it significantly increases students' scores more compared to traditional methods. More to that, prior exposure of students to concepts using pre-test increases their conceptual understanding as observed in the findings. However, students generally face difficulties in dealing with and interpreting electromagnetic wave concepts. Therefore, the null hypotheses that there is no statistical significant difference between scores of experimental and control groups before and after instruction; and that there is no statistical evidence of students' difficulties with electromagnetic wave concepts were both rejected

### **Recommendations**

From the findings of our study, we suggest that: teachers should put emphasis on major terms in waves such as 'frequency', 'wavelength', 'increasing', 'decreasing' so that students can be able to understand and differentiate them. students be frequently presented with problems to keep them active. School management should endeavour to support teachers and students under PBL with internet connected computers to help them easily research on complex concepts.

### **References**

- Aka, E. I., Güven, E., & Aydoğdu, M. (2010). Effect of problem solving method on science process skills and academic achievement. *Journal of Turkish Science Education*, 7(4), 13-25. <http://tused.org/index.php/tused/article/view/533/459>
- Allchin, D. (2013). Problem- and Case-Based Learning in Science : An Introduction to Distinctions, Values, and Outcomes. *CBE-Life Sciences Education*, 12, 364–372. <https://doi.org/10.1187/cbe.12-11-0190>
- Allen, D. E., Donham, R. S., & Bernhardt, S. A. (2011). Problem-based learning. New directions for teaching and learning. *Wiley Periodicals, Inc.*, 128. <https://doi.org/10.1002/tl.465>
- Bilgin, I., Şenocak, E., & Sözbilir, M. (2009). The effects of problem-based learning instruction on university students' performance of conceptual and quantitative problems in gas concepts. *Eurasia Journal of Mathematics, Science and Technology Education*, 5(2), 153–164. <https://doi.org/10.12973/ejmste/75267>

## **PROBLEM-BASED LEARNING INSTRUCTION**

- Chin, C., & Chia, L. G. (2004). Problem-based learning: Using students' questions to drive knowledge construction. *Wiley InterScience*, 88(5), 707–727. <https://doi.org/10.1002/sce.10144>
- Dori, Y. J., & Belcher, J. (2005). How does technology-enabled active learning affect undergraduate students' understanding of electromagnetism concepts?. *The journal of the learning sciences*, 14(2), 243-279. [https://doi.org/10.1207/s15327809jls1402\\_3](https://doi.org/10.1207/s15327809jls1402_3)
- Duncan, T., & Kennett, H. (2014). *Physics* (3rd ed.). Hodder Education. <https://ismailabdi.files.wordpress.com/2016/12/cambridge-igcse-physics-3rd-edition-by-tom-duncan-and-heather-kennett.pdf>
- Eijkelhof, H. M. ., & Kortland, J. (1998). *Broadening the Aims of Physics Education*. Falmer Press. <https://natuurkundedidactiek.nl/wp-content/uploads/sites/224/2018/09/hbnd-w-01-03-ART-4-Eijkelhof-Kortland-plon.pdf>
- Erinosh, S. Y. (2013). *How Do Students Perceive the Difficulty of Physics in Secondary School? An Exploratory Study in Nigeria*. <https://infonomics-society.org/wp-content/uploads/ijcdse/published-papers/special-issue-volume-3-2013/How-Do-Students-Perceive-the-Difficulty-of-Physics-in-Secondary-School.pdf>
- Fogarty, R. (1997). *Problem-based learning and other curriculum models for the multiple intelligences classroom*. IRI/Skylight Training and Publishing, Inc., 2626 South Clearbrook Drive, Arlington Heights, IL 60005. ISBN-1-57517-067-1
- Gallardo Pérez, H. J., Vergel Ortega, M., & Rojas Suárez, J. P. (2020). Teaching the wave concept through problem-based learning. *Journal of Physics: Conference Series* 1672 012017, 1672(1). <https://doi.org/10.1088/1742-6596/1672/1/012017>
- Hake, R. R. (1998). Interactive-engagement versus traditional methods\_ A six-thousand-student survey of mechanics test data for introductory physics courses. *American Journal of Physics*, 66(1). Doi: 10.1119/1.18809
- Hill, L. (2002). Teaching Methodology. In *Professional Development Strand*. Australian Agency for International Development (AusAID). <https://www.education.gov.pg/TISER/documents/pastep/pd-tm-7-2-general-teaching-methods-student.pdf>
- Isac, M. M., Dinis da Costa, P., Araújo, L., Calvo, E. S., & Albergaria-almeida, P. (2015). *Teaching Practices in Primary and Secondary Schools in Europe : Insights from Large-Scale Assessments in Education*. <https://doi.org/10.2788/383588>
- Jacobsen, D. A., Eggen, P., & Kauchak, D. (2009). *Methods for Teaching* (P. Darcy Betts (ed.); 8th ed.). Pearson Education, Inc. [www.pearsonhighered.com](http://www.pearsonhighered.com).
- Karamustafaoglu, O. (2009). Active learning strategies in physics teaching. *Energy Education Science and Technology Part B: Social and Educational Studies*,

## PROBLEM-BASED LEARNING INSTRUCTION

- 1(1), 27–50. <https://files.eric.ed.gov/fulltext/ED504252.pdf>
- Mioković, Ž., Varvodić, S., & Radolić, V. (2012). Undergraduate Engineering Students' Conceptual and Procedural Knowledge of Wave Phenomena. *International Journal of Electrical and Computer Engineering Systems*, 3(1). <https://core.ac.uk/download/pdf/14452588.pdf>
- Mpho, O. (2018). *Teacher centered dominated approaches : Their implications for today ' s inclusive classrooms*. 10(February), 11–21. <https://doi.org/10.5897/IJPC2016.0393>
- Özdemir, F., & Kargı, A. (2011). Electromagnetic Waves and Human Health. In V. Prof. Zhurbenko (Ed.), *Electromagnetic Waves*. In Tech. <https://www.intechopen.com/books/electromagnetic-waves/electromagnetic-waves-and-human-health>
- Richardson, J. (2005). Concept inventories: Tools for uncovering STEM students' misconceptions. *Invention and impact: Building excellence in undergraduate science, technology, engineering and mathematics (STEM) education*, 19-25.
- Richardson, L. (2003). Writing: A method of inquiry. In *books.google.com*. [https://books.google.com/books?hl=en&lr=&id=8aXWAQAAQBAJ&oi=fnd&pg=PA379&dq=Richardson,+L.+\(2003\).+Writing:+A+method+of+inquiry.+Turning+points+in+qualitative+research+pdf+&ots=lgblPL2GNHt&sig=K8YhXuk9qlbj23eUphL9Jd9AS7U](https://books.google.com/books?hl=en&lr=&id=8aXWAQAAQBAJ&oi=fnd&pg=PA379&dq=Richardson,+L.+(2003).+Writing:+A+method+of+inquiry.+Turning+points+in+qualitative+research+pdf+&ots=lgblPL2GNHt&sig=K8YhXuk9qlbj23eUphL9Jd9AS7U)
- Ryan, Q. X., Wilcox, B. R., & Pollock, S. J. (2018). Student difficulties with boundary conditions in the context of electromagnetic waves. *Physical Review Physics Education Research*, 14(2), 20126. <https://doi.org/10.1103/PhysRevPhysEducRes.14.020126>
- Ryder, J., Leach, J., & Driver, R. (1999). Undergraduate science students' images of science. *Journal of Research in Science Teaching*, 36(2), 201–219. [https://doi.org/10.1002/\(SICI\)1098-2736\(199902\)36:2<201::AID-TEA6>3.0.CO;2-H](https://doi.org/10.1002/(SICI)1098-2736(199902)36:2<201::AID-TEA6>3.0.CO;2-H)
- Sadeh, I., & Zion, M. (2009). The development of dynamic inquiry performances within an open inquiry setting: A comparison to guided inquiry setting. *Journal of Research in Science Teaching*, 46(10), 1137–1160. <https://doi.org/10.1002/tea.20310>
- Sari, L., Keith, T., Anne, N., & Paul, A. (2006). How approaches to teaching are affected by discipline and teaching context. *Studies in Higher Education*, 31(3), 285–298. <https://doi.org/10.1080/03075070600680539>
- Savin-baden, M. (2007). *Facilitating Problem-Based Learning*. The Society for Research into Higher Education & Open University Press. [https://books.google.co.uk/books?hl=en&lr=&id=nypEBgAAQBAJ&oi=fnd&pg=PP1&dq=Facilitating+Problem-Based+Learning&ots=NQrR2GDpHF&sig=eJ1oXAeu-pSbst7Abr2kbZz6xzo&redir\\_esc=y#v=onepage&q=Facilitating%20Pro](https://books.google.co.uk/books?hl=en&lr=&id=nypEBgAAQBAJ&oi=fnd&pg=PP1&dq=Facilitating+Problem-Based+Learning&ots=NQrR2GDpHF&sig=eJ1oXAeu-pSbst7Abr2kbZz6xzo&redir_esc=y#v=onepage&q=Facilitating%20Pro)

## PROBLEM-BASED LEARNING INSTRUCTION

blem-Based%20Learning&f=false

- Tabor-Morris, A. E., Briles, T. M., & Schiele, R. (2017). Radio Wave Errors : Students Mistaking Radio Transverse Electromagnetic Light Waves as Longitudinal Sound Waves. *International Journal of Learning, Teaching and Educational Research*, 16(8), 37–50. [https://www.researchgate.net/publication/319318964\\_Radio\\_Wave\\_Errors\\_Students\\_Mistaking\\_Radio\\_Transverse\\_Electromagnetic\\_Light\\_Waves\\_as\\_Longitudinal\\_Sound\\_Waves](https://www.researchgate.net/publication/319318964_Radio_Wave_Errors_Students_Mistaking_Radio_Transverse_Electromagnetic_Light_Waves_as_Longitudinal_Sound_Waves)
- Tongchai, A., Sharma, M., Johnston, I., & Arayathanitkul, K. (2012, September). Students' conceptual knowledge of mechanical waves across different backgrounds and cultures. In Proceedings of The Australian Conference on Science and Mathematics Education (formerly UniServe Science Conference). <https://core.ac.uk/download/pdf/229409717.pdf>
- Uganda National Examination Board. (2017). *Report on Work of Candidates UACE 2016*. <https://ereg.uneb.ac.ug/files/UACE2016RPTONWORKOFCANDIDATES.pdf>
- Unver, A. O., & Ozkarabacak, N. F. (2018). Exploration of Electromagnetic Waves with Investigative and Inquiry- Based Activities. *ICRES 2018: International Conference on Research in Education and Science*, 10, 130–136. <https://dergipark.org.tr/en/download/article-file/534845>
- Uwamahoro, J., Ndiokubwayo, K., Ralph, M., & Ndayambaje, I. (2021). Physics Students' Conceptual Understanding of Geometric Optics: Revisited Analysis. *Journal of Science Education and Technology*. <https://doi.org/10.1007/s10956-021-09913-4>
- Westbrook, J., Durrani, N., Brown, R., Orr, D., Pryor, J., Boddy, J., & Salvi, F. (2013). Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries. In *Centre for International Education*. <http://r4d.dfid.gov.uk/andtheEPPI-Centrewebsite:http://eppi.ioe.ac.uk/>
- Wittmann, M. C. (1998). Making sense of how students come to an understanding of physics: An example from mechanical waves (Doctoral dissertation, research directed by Dept. of Physics, University of Maryland, College Park, Md.). [https://www.physics.umd.edu/perg/dissertations/Wittmann/1\\_openingpages.pdf](https://www.physics.umd.edu/perg/dissertations/Wittmann/1_openingpages.pdf)
- Wittmann, M. C. (2002). The Object Coordination Class Applied to Wavepulses : Analysing Student Reasoning in Wave Physics. *International Journal of Science Education*, 24(1), 97–118. <https://doi.org/10.1080/09500690110066944>

DEVELOPING WRITING SKILLS AT UPPER PRIMARY  
LEVEL: AN EXPERIMENT

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**Abstract**

*There is a dire need to develop expressional skills in English right from the primary section in India. There are mainly four language skills i.e. Listening, Speaking, Reading and Writing. Listening and Reading are known as receptive skills where as Writing and Speaking are known as productive or expressional skills. Speaking and Writing are easily noticeable. Talking about writing in compare to speaking is more official and serious. It is rightly said, the more practice you do the better result you get. Keeping this in mind, the researcher tried to carry out a research on developing writing skills among the upper primary students. Second language learners of two schools affiliated to Gujarat State Education Board were selected randomly for the study. The study was both qualitative and quantitative in nature. The research was true experiment. Out of these two, one school was kept as control and the other school was kept as experimental. The students of control group were not given any treatment as they studied such contents from their regular school teacher. The pre test was administered to equal the groups. The students were made to study through activity based sessions. The finding of the study was the activity package was useful in developing writing skills among the students of experimental group. Students developed the understanding of basic format and terminologies of developing writing skills. The students also developed various styles of writing. The programme was equally effective on both male and female students of experimental group. The students became responsible and systematic while preparing any type of draft.*

**Keywords:** *Writing skills, activity package*

The importance of English as a means of international communication is recognized by all. The language skills listening, speaking, reading and writing are required to learn a language. Writing a business letter or a report in a foreign language is not easy. Writing follows thinking and people usually think in their first language. Careful preparation is needed to write well. First one should ask a number of important questions which help one to plan what one is going to write and will help one to write more effectively. Writing skill is a specific ability which helps writers put their thoughts into words in a meaningful form and to mentally interact with the message. Writing skill helps the learner gaining independence, comprehensibility, fluency and creatively in writing. Writing is neither an easy nor a spontaneous mental effort. Writing involves encoding of a message of some kind. This is how people translate thoughts into language. Comprehensibility skills for writing include understanding that writing is communicating messages or information. Writers express their ideas and communicate to readers who are not physically present.

This makes writing more challenging. Characteristics of effective writing are: Correctness, Organization of idea, Comprehensibility

According to White, (1986; 10) “Writing is a process of expressing the ideas, information, knowledge, experience and understand the writing to acquire the knowledge or some information to share and learn”.

“Writing” is a process of using symbols (letters of the alphabet, punctuation and space) to communicate thought and ideas in a readable form.

Among these four skills writing or written expression is an important skill in English.

When people write, they use graphic symbols i.e., letters or combinations of letters which relate to the sounds people make when they speak. Writing is clearly much more than the production of graphic symbols. These are to be arranged according to certain conventions, to form words, and words have to be arranged to form meaningful sentences. However people do not write just one sentence arranged in a particular order and linked together in certain ways. The sequence may be short perhaps only two or three sentences but because of the way the sentences have been put in order and linked together, they form a coherent whole.

### **Rationale of the Study**

The importance of English language in India was realized by many intellectuals before and after independence. All education commission and committees and the policy makers of education emphasized importance of the teaching of English in India. The report of the Indian Education Commission (1964-66) stated that a working knowledge of English will be a valuable asset for all students and reasonable proficiency in the language will be necessary for those who proceed to university. English language enjoys its status as an international language of trade and commerce, science and technology, literature and library. English is seen as a world language, as a source language, as a language for higher learning. The researcher himself belongs to English background as he has done B.Ed. in English. Being a teacher of English for some years he has come across problems of students in writing. Many students can read and speak but one not able to arrange their ideas in systematic way and express them correctly. That is why the researcher has selected the topic so that a programme can be developed to improve the writing skills of the students. The researcher has also observed that students though able to read and speak are not able to write correctly. Often they use wrong punctuation mark, write incorrect spellings make incorrect sentence construction. They are not able to express their thoughts systematically in an organized manner. Writing is a language skill which requires perfection, so much hard work and practice is required. Teachers should use some techniques to develop writing skill.

The written language is a kind of notation of sounds, pauses, inflection, stress, tones, gesture and facial expression which ‘transmit’ meaning, in speech. The

skill of writing is known as comprehensive skill. Writing is believed as a core of all subjects and a powerful medium of expression. Writing is a very powerful discipline. The demand for writing is growing in the workplace and a lot of universities say that “people, who write well, think well.” The skills of writing help students to develop their critical thinking and critical reading too.

In our society, being able to write is also considered a major part of communicative competences as reading. We expect students to learn to write letter and reports, write up science experiments, records observations and perhaps write poetry and stories. Thus they become able to contribute to transmission of culture by written words. The written words have a great deal of power in a literate society. Writing gives us pleasure and information and serve as host of other functions. Writing may serve the child’s emerging individually as no other kind at study can, in no other medium can be examine so carefully his development ideas and values, recognize so clearly his kinship with joys and pains of the human condition or gain so much insight into his own mind and heart and those of his fellows. One traditional way has been through the teaching of grammar.

The ultimate aim of teaching writing is to enable the child to express his thought and ideas correctly in logical sequences. He should be able to present his emotional feeling accurately and judiciously, either orally or in writing. At the same time, the presentation may be effective and precise. What we expect our children to do is that they should not find a least difficulty in communication their ideas in the society in which they live. The logical arrangement of the ideas regarding a particular topics, the vivid description of a certain object and prompt conversation, conveying a message, specifically, ventilation one’s personal opinion about a particular things, are some of the aspects of composition. It means the art of putting thoughts into words. In this way teaching of writing skills is very important at Upper Primary Level so that the students can express their ideas and thoughts in written language.

The present study focuses on the development of writing skill in English, and the investigator is of the opinion that it is going to be helpful to the learners individually where he/she can try to write in English. The teachers of English, too can get a clear idea regarding – what is writing? And how can a teacher play an important role? So, it will be directly helpful to the teachers, too. The investigator himself has seen the condition of writing among the students of different schools. The way the teachers teach writing skill to the students and want the same in their answers, creates a problem for writing. In fact, they are not given even opportunities to write their own, moreover, they have to behave as trained parrot. It is for these reasons the investigator selected this topic.

The investigator himself has found that the students are facing problems while writing in English. The students used to translate their mother tongue into

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English. Even they don't have enough vocabulary in English language which stops them to write in English. For developing their writing skills they need more practice of writing. And it is teachers' duty to provide them enough opportunity and interesting task which leads them to write English. The investigator has found that compared to English Medium students, the students of Gujarati Medium are poor in speaking as well as writing English. The reason of it may be that the students of English Medium are getting opportunity to write in English in almost all the subjects while the students of Gujarati Medium are getting chance only in English subject.

### Objectives

To prepare a programme to develop writing skills of the students; To study the effectiveness of task based learning programme among the students of experimental group and control group of upper primary level; To study gender differences with references to their enhancement of writing skill; To study the students' expressions for the enhancement of the writing skill; To records the students' performance for effective suggestion through control group discussion and observation; To construct and validate the test on writing skills

### Variables of the Study

Independent variable: Writing skills, Secondary Independent variable: Gender (Boys and Girls), Dependent variable: Activity Package

Control variable: 8<sup>th</sup> standard students, Second Language learners and selected items on Writing Skills Test.

Hypotheses: Ho1. There is no significant difference between the mean scores of the post test of Experimental group and control group in Writing Skills.

Ho2. There is no significant difference between the mean scores of boys and girls of Experimental group in writing skills.

### Research Methodology

Type and Method of Research: It was a qualitative and quantitative type of study and an experimental research study.

Population and Sample: The population of the study comprised of 8<sup>th</sup> Standard Upper primary level students of Anand district, Gujarat in the year 2019-2020.

The researcher used random sampling technique to select the sample of the study. The students of standard 8<sup>th</sup> of Santram Vidya Mandir, Karamsad and Sardar Vallabhbbhai Patel School, Karamsad of academic year 2019-20 comprised the sample of 80 students.

Table 1 : Sample of the study

School	Boys	Girls	Total
Santram Vidya Mandir, Karamsad	19	21	40
Sardar Vallabhbbhai Patel School, Karamsad	22	18	40
Total	41	39	80

### Research Design

Best J.W. and Kahn J.V. (2004) The researcher took two group pre test programme post test design for the study. In which a pre- test was

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administered to both experimental and control group. The researcher designed Activity based Programme keeping in mind the pre test score. The course was implemented to the experimental group only. After a week time of the administration of the programme again, the researcher administered the post test to both control and experimental group.

### Procedure of the Research

The researcher prepared the strips of various Gujarati medium schools of Anand and randomly two strips are taken up for the selection of the sample. The researcher visited the schools and implemented the pre test keeping in mind the selected components of writing skills of second language to the students of both the schools. Out of these two schools one was kept as experimental and the other was kept control. The students of experimental school was given the treatment of Activity based Programme on writing skills whereas the control group was not given this treatment. The post test was administered to both the groups. There were 10 activities kept in the programme. The design of the test was as under.

The English Competency Test includes various types of objective and comprehensive type of test items. The design of the test can be explained through the following table.

**Table 2 : Design of the Test**

Types of Test Items	Writing Points	Marks
Objective and Comprehensive	<ul style="list-style-type: none"><li>• Dialogue writing</li><li>• Story Writing</li><li>• Jumbled Sentences</li><li>• Correct the Paragraph</li><li>• Letter Writing</li><li>• Picture Description</li><li>• Report Writing</li><li>• Story Description</li><li>• Process description</li><li>• Famous Personality Description</li></ul>	50

### Tools of Data Collection

Writing Skills Test was constructed to evaluate the English writing skill of the students; Activity Package on Writing Skills: It was constructed to develop English Writing Skill of the students; Feedback Form: It was conducted to know students' expressions and opinions on the research activities and researcher's classroom intervention.

### Data Analysis and Interpretation

The researcher analysed data quantitatively and qualitatively using percentage analysis, t test and content analysis techniques. The following are the details of quantitative data analysis and interpretation.

**H<sub>01</sub>.** There is no significant difference between the mean scores of the post test of Experimental group and control group in Writing Skills.

**Table 3 : Writing Skills of Experimental and Control Group**

Group	No. of students	Mean	SD	SEm	df	t value	t value and significance level
Experimental	40	38.5	5.77	1.26	78	17.14	1.99 significant at 0.05 level
Control	40	16.9	5.60				2.64 significant at 0.01 level

**\*Significant at 0.01 level**

The computed t-value i.e. 17.14 is greater than the table t-value 2.64 at 0.01 level of significance for 78 degree of freedom.

So, the null hypothesis that there is no significant difference between the mean scores of the post test of Experimental group and control group in English writing skills through Activity package is rejected.

It means, there is significant difference in the mean achievement score of post test writing skills learning through activity package and conventional mode.

**Ho2.** There is no significant difference between the mean scores of boys and girls of Experimental group in writing skills.

**Table 4 Writing Skills of Boys and Girls of Experimental Group**

Group	No. of students	Mean	SD	SEm	Df	R	t value	t value and significance level
Girls	21	26.33	6.21					2.02 significant at 0.05 level
Boys	19	27.27	6.84	5.30	38	0.22	0.177	2.71 significant at 0.01 level

**\*Significant at 0.05 level**

The computed t-value i.e. 0.177 is less than the table t-value 2.71 at 0.05 level of significance for 38 degree of freedom

So, the null hypothesis that there is no significant difference between the mean scores of boys and girls of Experimental group in English writing competency through Writing Skills Test is not rejected. It means, there is no significant difference in the mean achievement scores of girls and boys learning through Writing Skills Test.

It can be observed from the result that mean achievement score of girls learning through Writing Skills Test is equal to the mean achievement score of the boys which indicates that the Package is equally effective in developing English Writing Competency among the boys and girls.

**Findings of the study**

A Writing Skills Test was effective in developing English Language Competency among the students than the conventional mode of teaching English Language; A Writing Skills Test was effective in developing English Language Competency among the boys than the conventional mode of teaching English language among the boys; A Writing Skills Test was effective in developing English Language Competency among the girls than the conventional mode of teaching English language among the girls; A Writing Skills Test made an equal effect in developing writing skills Competency among the boys and girls of experimental group; Students reflected that the intervention of researchers’ classroom teaching was effective, innovative and fruitful in developing English writing competency; On the basis of the general observation, the students participated enthusiastically in the activities and developed their English writing competency; Students could communicate in

brief effectively through the use of relevant forms, words and sentences; Students developed their confidence, fluency, knowledge of functional vocabulary and sentence patterns; Students could develop their understanding to various writing points and its practical usage in writing; Students could reflect over their doubts, weaknesses and solved them through drilling, practice and repetition.

### **Implications for the Study**

The Writing Skills Test could be implemented at all the levels of levels depending upon learning styles and interest of the learners in learning English Writing; Various activities included in the Writing Skills Test such as performing roles of different personalities in simulation and role play have really helped the students to develop their confidence and language as well; The cue cards, passing the parcel, authentic materials, animation, word treasure and simulation kind of writing games were effective in developing English writing skills; The effective planning and execution of various writing activities definitely leads to the positive learning among the students; Use of authentic materials and objects enable the learners to develop their language and make the practical use of language; The literary activities like letters, stories, report writing helps the learners to be serious at the use of global language in the day to day writing; The standards English at the spoken language must be used by the teachers and students in their routine language. As a result, the students of the English language learners will enhance accuracy and fluency at the global language; The constrictive feedbacks on the students' learning and participation help the students to be sensitive at the English language; Trial and error theory works so effectively for the ESL learners learning the writing skills.

### **Conclusion**

Thus this study demonstrated that interesting, joyful tasks can boost up the confidence level of the students and make them write effectively, correctly and systematically. Through activity based participatory programme, learners learn to use correct words, punctuation, and spelling and express their ideas in simple and lucid manner. The students enjoyed the implementation of the writing skills test. In short, it was observed at the end of the year students enhanced English writing skills. To conclude, the effective application of any activity for the learners brings deliberate impact among the learners' behaviour.

### **Bibliography**

- Best J.W. and Kahn J.V. (2004), "*Research In Education*", Prentice-Hall of India Private Limited, New Delhi-110 001
- Krishnaswamy, N. and Krishnaswamy, L. (2007). *Teaching English: Approaches, Methods and Techniques*. New Delhi: Macmillan India Ltd.
- NCERT (2000). *National Curriculum framework*. New Delhi: NCERT
- Nunan, D. (1989). *Designing Tasks for the Communicative Classroom*. Cambridge: Cambridge University Press.

**EFFECTIVENESS OF A TASK BASED PROGRAMME TO  
TEACH ORGANISATION OF COMMERCE AND  
MANAGEMENT AT HIGHER SECONDARY LEVEL**

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**Abstract**

*The present study aims at reconnoitring a Task Based Programme to Teach Organisation of Commerce and Management at Higher Secondary Level. It tries to focus on using a Task Based Programme to enhance skills related to trade and commerce among higher secondary students. Activities keep students' alert, enthusiastic and focused. The researcher has explained how to relate Task Based Programme in Teaching Organisation of Commerce and Management on students of Higher Secondary Level. In today's modern yet competitive century, our classrooms are very much varied in nature. To cater students need, educators' have to make use of ground-breaking ways in their teaching learning process. This is in accordance with pragmatist John Dewey's principle of 'Learning by doing' (1894) and Project method. In his four essays collectively entitled "Thought and its Subject-Matter" he opined that learning by doing help all types of children to understand the content in a constructivist manner. Teachers can make their classroom teaching student centric through a Task Based Programme to teach Organisation of Commerce and Management at Higher Secondary Level.*

**Keywords:** *Task based programme, learning, confidence, leadership, commerce and hands on experience*

According to Gandhi, By education I mean an all-round drawing out of the best in the child and man; body, mind and spirit. The terminology- 'Commerce' has been into practice in every walks of our lives since from decades ago. The present curriculum under 10+2+3 education system has rightly focused on Continuous & Comprehensive Evaluation (CCE) by including several activities not only of curricular nature but also co-curricular and extra-curricular in nature. To teach a subject- Organisation of Commerce and Management (OCM) at the Higher Secondary Level (HSC) focuses upon sharpening the innate skills and to develop a new ones in the commerce arena. It aims at enabling the learner to acquire the basic commercial knowledge, skills, values and attitudes that are required to understand the business environment and the commercial language.

**Task Based Programme**

Task is a piece of work which involves students in manipulating, producing or interacting with one and another, while their attention is mainly on meaning rather than form.

If we look into the earlier times, we will find that, most activities related to teaching was entirely done either through verbal communication between the educator and learner or through written communication by using printed material. But in the existing world, learners learn facts, skills and attitudes from both audio and visual resources such as pictures, televisions, recorded words, programmed lesson and other media. Patterns of interaction in classroom vary from place to place, influenced by local educational norms, and also from time to time, as methodological fashions come and go. The level and age of the class also makes difference; the purpose of the current learning activity is another influence on interaction patterns (Lynch & Maclean, 2000)[6].

According to the views of great Psychologists like- Jean Piaget, Vygotsky and Jerome Bruner, children are instinctively programmed to learn. They are in a continual cycle of discovery, forming hypotheses, testing those hypotheses and discovering concepts and skills. This can be possible through engaging students in 'Task' as it improve their skills and intellectual abilities. It helps in the development of cognitive, affective and psychomotor domain of the students [Vygotsky, L.S. (1978),23,3,34-31]

Tasks given in the group help students not only to share their awareness and ideas with their classmates but, they will also get accustomed with the ideas of other classmates in a group, which is an indispensable part of life skills. Moreover, they also learn social skills such as helping and supporting each other, cooperation, coordination, taking turns and so on. A task sharpens students' capacity to properly comprehend the content taught in the classroom. Further, task-based learning enhances the language proficiency of the learners (Lochana and Deb (2006)[24]).

Narita (2008)[33] conducted a research in an elementary school in Japan where English was taught as a foreign language. The students were assigned with activities in which they were exposed to realistic communicative situations such as shopping tasks and interview tasks. The results showed that the students were highly motivated and had a strong desire to continue to study English in future after completing the tasks.

Thus, if a programme is developed using several tasks, it will enable students to play an active part in the learning process.

### **Teaching Organisation of Commerce and Management through Task Based Programme at Higher Secondary Level**

Commerce and Management are the core components of Commerce arena. Many a times learning this subject becomes difficult if it is not made interesting while teaching. If the educator adopts inventive ways of teaching such subject, then it will reduce the proportion of disinterest among students towards this subject. To make the subject interesting in the classroom, several innovative pedagogies can be used by the teacher. Jeon and Hahn (2006)

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interviewed Korean secondary school teachers and found that the teachers felt a task-based approach motivated students and was appropriate for group work. A task based teaching is one such way to make teaching learning process an interactive and joyful one. An educator can make use of following task while teaching the subject:

### **Task-1: Flashcards**

Procedure: First of all the researcher will divide the entire class into 2 different groups- G-1 and G-2.

Then Each group will be provided a bunch of 5 flashcards which will have some information. Students of both the groups will have to analyse, understand and determine the type of activity. That means they have to brainstorm over the information & will have to identify whether it's an economic or non economic activity?

Discussion Questions: (Identify whether it's an economic or non economic activity.)

Mr. XYZ donated the sum of Rs. 2,00,000/- in a 'Fani' flood at Odisha; 2. A gold chain was bought by your father for your sister; 3. A Mercedes car was gifted to you by your elder brother; 4. Mr. Harish gave Rs. 1000/- to Mr. Ramesh for purchasing a box of Kashmiri apples; 5. The cashier Shahir received an amount of Rs. 1,00,000/- to get it deposited into his account. He received it from Mr. Dipen for selling him his luxurious bike.

Expected Outcomes: Students will be able to share their views about the given topic; Students will be able to identify the difference between different economic and non economic activities.

### **Task 2: Post It Parade**

Procedure: Students will be provided with a question or prompt for which; they need to generate ideas, solutions, etc. related to the topic; Now the researcher will give each student a few post-its, and will tell them to write out 1 idea per post-it; Students then post the post-its on the chalkboard or bulletin wall in the class; Depending upon the question or prompt, it will help them to place the post-its in areas to group them by topic (Business and its major features).

Discussion Question (such as): Suppose you have exported a box of classic style outfits (which costs Rs. 15,00,000/-) to some couture fashion show at a price of Rs. 20,00,000/- but before reaching to its destination an earthquake took place which spoiled all your dresses. Now will you still consider it as a business activity? & what will you do in such situation?

Expected Outcomes: Students will be able to share their views about the given topic; Students will be able to define the term- Business; Students will be able to identify and add up several major characteristics of Business-as one Type of Economic Activity.

### **Task 3: Buzz Groups**

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**Procedure:** The researcher will break class into small groups. Each group discusses the topic or question on their own for a few minutes to generate points of difference, arguments, answers, or ideas. Once time is up each small group will share one idea, answer, or argument with the class and the essential ideas or points of differences will be written down on the black-board.

**Discussion Questions:** In any business, goods and services are supplied in exchange of what? Suppose you have a dream of becoming a renowned chartered accountant of India? Which economic activity will you name it as: Business, Profession or Employment?

**Expected Outcomes:** Students will be able to share their views about the given topic; Students will be able to define several given terms; Students will be able to identify and add up distinguishing features of Business, Profession and Employment.

### **Task-4: Minute Paper Reflections (Individual Task)**

**Procedure:** Researcher will provide students with one question for brief reflection; Researcher will emphasize that responses would be concise; Students will then write and submit their answers; As needed, researcher will take follow up on comments. She will also make sure to summarize and respond to any important questions or doubts that students have in their mind (e.g. concepts that did not seem clear to students)

**Discussion Questions:** Elucidate in your own thoughts- What do you meant by- 'Trade, Commerce and Industry?'

**Expected Outcomes:** These task of spontaneous writing will promote confidence among student to write quickly; Each student will be able to share his/her views on the given topic; Students will be able to define several given terms in their own words.

### **Task-5: Cards with Pictures**

**Procedure:** The researcher will divide the classroom into some groups. Each group having 5 students. The researcher will give pictorial card to different groups. The group will have to understand and analyse the pictures or scenario given in the card. Then after, the students will have to answer the asked queries

Card 1.: For e.g., Pictures of banking, transportation.

Card 2.: For e.g., Pictures of communication, warehousing and agents.

Card 3.: For e.g., Pictures of insurance, types of it, etc...

**Expected Outcomes:** Students will be able to derive the important points that are given in the chapter itself; Through this task, students will develop critical thinking skills; Students will develop decision making skill as the task will help them to generate their own creative ideas and understandings.

### **Task-6: Quescussion (By students) + Showing Pictures**

**Procedure:** Quescussion is discussion through raising questions in the live classroom; The researcher will start the Quescussion by asking a question

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related to the discussion topic, and writing it on the board. For example, 'India was called as Sone ki Chidya'? Why? Students may only respond or add to the discussion in the form of more questions. Each question is written down on the board. This discussion model is very informal and participants should take turns shouting out questions as they think of them. There are three rules: (1) Only questions are allowed. (2) If someone makes a statement everyone yells "statement!" and (3) Two other people must speak before a participant can participate again. Following Quescussion, the class can then focus on one or two of the key questions raised in greater depth. And thereby, the researcher will introduce and explain the term Primary industry, Secondary and Tertiary form of Industry.

### **Meaning of different types of industry:**

The researcher will explain then -1. Primary Industry- Primary industries are fundamental industries connected with sea, land and air. Production activity is relied upon nature. Activities such as Agriculture, animal husbandry and poultry farming are connected with land, fisheries with land and hence, are the examples of primary industries. The researcher will show pictures of all these activities. Similarly, other types of industry will be explained by the researcher to the students in the classroom.

**Expected Outcomes:** Students will be able to derive the important points that are given in the chapter itself; Through this task, students will develop critical thinking skills; Students will develop decision making skill as the task will help them to generate their own innovative thoughts and ideas.

### **Task-7: Use of Flashcards (pair work), Use of Pictures.**

**Procedure:** The researcher will give to the students flashcards (with pasted pictures) such as:

1). When a student 'A' is expressing and conveying his ideas to the group of his classmates about 'Globalisation' through a 'conference call' what is the process said to be? (Picture will be pasted herewith) :  
(Answer will be - 'Communication Process'.)

Researcher will form a pair of students and will also give a time period of 5 minutes to discuss in pairs, and then she will explain the topic by asking questions about different steps in the communication process. Based on the flashcards and given pictures, they will be required to answer what do they understand by the given information in it, and then it will be followed by the researcher - students discussion session.

**Expected Outcomes:** Students will be able to share their views about the given topic; Students will be able to identify the difference between different steps in the process of communication.

**Task-8: Debate:** Let students debate in pairs. Students must defend the opposite side of their personal opinion. It encourages them to step away from their own beliefs and teaches them to look through a different colored glass for once in a while. For example, topic for the debate is-‘**E-Banking: A Need of an Hour.**’ One half of the class takes one position, the other half takes the other position. Students line up and face each other. Each student may only speak once.

#### **Evaluation of Learners’ Progress**

Tools enable the teacher to interact with the students and get their responses. There are a plethora of available evaluation techniques to appraise learners’ achievement. The Commerce educator must be a careful observer of each student’s development and progression. Learner’s performance about learning ‘Organisation of Commerce and Management’ through a task based programme can be evaluated using: Achievement test (i.e., Pre-test, Post-test); Reaction Scale; Feed Back Form

Each evaluation result provides a check on the others and makes for a more comprehensive program of assessment.

#### **Impact of a Task-Based Programme to Teach Organisation of Commerce and Management at Higher Secondary Level**

When the teacher adopts novel ways of teaching such subject, then it will lessen the proportion of disinterest among students towards this subject. To make the subject interesting in the classroom, different techniques of teaching can be used by the teacher. A task-based teaching is one such way to make teaching learning process an interactive and delightful one. By learning through a task-based programme, students will develop social skills among them; they will be able to express their views before others fearlessly and they will have strong retention capacity for the learned topics.

One has rightly said that- the learning that takes place in the presence of an active mindset, personal presence will earn positive result in the overall growth and development of students; and this can be possible by teaching the subject through a task-based programme.

#### **Conclusion**

As we are moving towards new-new innovations in the 21<sup>st</sup> century, citizens of nation need to be skilful. This can be possible if an educator makes use of ground-breaking pedagogy. A task-based programme helps students’ to learn the content in a focused manner. Commerce and Management are the core component of Commerce discipline. Teaching Commerce and Management at the higher secondary level aims to enable learner to acquire and understand the basic commercial knowledge, skills, values and attitudes required for the business environment and commercial language. Learning this subject becomes difficult if it is not made interesting while teaching. Furthermore, the learning that takes place in the presence of an active mind-set, personal

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presence will earn positive result in the overall growth and development of students. Through a Task-Based Programme, students will have 'hands-on' experience when they will do activities assigned to them and hence, they will have clarity of concepts that are taught in the classroom of 21<sup>st</sup> Century.

### **References**

- Brookfield, S.D., & Preskill, S. (1999). *Discussion as a Way of Teaching: Tools and Techniques for Democratic Classrooms*. San Francisco: Jossey-Bass Publishers.
- Best J.W. and Kahn J.V. (2004), *Research In Education*, Prentice-Hall of India Private Limited, New Delhi-110 001
- Baruah, T. C. (1984). *The English teacher hand book*. New Delhi: Sterling publishers Pvt.Ltd.
- Jeon, I., & Hahn, J. (2006). Exploring EFL teachers' perceptions of task-based language teaching: A case study of Korean secondary school classroom practice. *Asian EFL Journal*, 8(1), 1–27
- Lynch, T., and Maclean, J. (2000). Exploring the Benefits of Task Repetition and Recycling for Classroom Language Learning. *Language Teaching Research*, 4, 221-250.
- Lochana, M & Deb, G 2006, 'Task-based Teaching: Learning English without Tears', *The Asian EFL Journal Quarterly*, vol. 8, no. 3, pp. 140- 164.
- Narita, K. (2008). *Communicative Aspects of Task Supported English Language Teaching at the Elementary School Level*. Hirosaki University. MA Thesis. Retrieved, December 2008, from [http://repository. U. Hirosaki-u.ac.jp/displace/bitstream/1](http://repository.u.hirosaki-u.ac.jp/displace/bitstream/1).
- Vygotsky, L.S. (1978), Interaction between learning and development. *Readings on the development of children*, 23, 3, 34-41.
- Vygotsky, L.S (1980). *Mind in Society: The Development of Higher Psychological Processes*. Harvard University Press.

REFLECTIONS OF  
NATIONAL EDUCATION POLICY, 2020

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**Abstract**

*Education brands a cultural conglomeration. A decent culture of society makes a different trajectory that directs the right path to humanity. Humanity considers the dual roles of humans. The first role deals with the physical aspects and other pacts with the cultural phenomena. The proximity of physical needs and cultural desires of a human make a society a modest one. But then again, a society conjointly plays as the agent of the biological world and as the unit geological realm that composes a competent social capital. A good social capital allows other species and nature as the fellow being of us. A proper education system can do perform an immense role to fulfil the said goal of mankind. India has made an education policy to meet humanity and dispose of the difficulties of society. The article seeks to understand how is the New Education Policy leads the nation in the right direction to cope with the limitations. It has gone through qualitative research methods.*

**Keywords:** Education, Cultural Conglomeration, Humanity, Biological World, Geological Realm, New Education Policy, Qualitative Research Methods.

**“Education is the manifestation of perfection already in men.”<sup>1</sup>**

**(Swami Vivekananda)**

Education is one of the primary needs of humans that makes a species into a civilized one. Food, shelter, and clothes are the basic requirements of humans but education opens up the cultural aspects of the humans that brand different from other species. Cultural affinity<sup>2</sup> shapes a civilization as good and prosperous. Civilization grows through a cultural complexion. A cultural conglomeration reaches an apex point by the proper education. Education does not mean only a conventional form of learning and teaching process where the prescribed curriculum transforms a child into a good one. Rather it should manifest once inherent capabilities through the conscious building process. We believe in the notion that every human being has the best qualities to manifest but we do not practice enough to make the inherent qualities into the best result of humanity. Humanity is the thing that indicates the humans have played two major roles in life: a) as the agent of social being and b) as the unit of the geological realm. As a social being, he performs a socio-politico-economic role to better livelihood and in the second portion, he will play to take care of the natural world for present good and future better. And the dual role conjointly brands the educational affinity of an individual that makes a good trajectory for mankind.

The best thing of the education system is clarity about a thing. Clarity generates self-confidence. Self-confidence is the instrument through which an individual copes with the difficult condition of livelihood and dispose of it. Clarity secures the high conscious level of an individual. Conscious people understand as regards how a situation is and which medium will help to cope with the troublesome environment. At this juncture, we have to go through the proper education system. Because proper education only the way to make the condition of the right direction to go the realm of humanity. Humanity teaches us, humans take care of not only ourselves but also all the living creatures and inert matters. A great culture always considers room for an entire being. Because we all the product of a single soul. Everybody is our relative and our duty to go for the betterment of all the relatives. Our blue planet<sup>3</sup> has been suffering for many an exertion of humans and erodes her. Our education system will cope with such cultural dimensions that create an eroding environment of the humans where they build up a great social capital. A healthy social capital produces good social order and good social order brands a society's moral. A moral society bears decent cultural behavior and decent cultural behavior commits humans upright. So, we need a virtuous education system for our societal benefits.

We do firmly believe that being an education process can be formal or informal. It does not matter as regards which form will be beneficial for the child and its better development. Because primarily the education system was developed from nature where the human was assumed and confirmed that nature is the best teacher to educate them properly. The education system is composed cultural complexion of society. A cultural complexion made civilization different. When the civilization was evolved through the gathering process then the war between different civilizations was started. A victorious civilization dominates others through the cultural and military power potentials. It needed orders. The orders were made up of cultural conglomerations. The cultural conglomerations were the result of the acquired education of a multitude. A multitude transformed into a civilized entity through the acquired education. But by the time, the formal education process became necessarily needed. And at the same time, all the formal systems of mankind had essentially been desired for established domination over others. The new world order<sup>4</sup> has been made. The new world order anticipates one world, one culture. Then humanity has spoiled. The spoiled humanity destroyed the social capital. And destroyed social capital doomed our blue planet. India has the potential to lead the world in the right way where humanity will be the absolute goal. For these very causes, we will importance of the proper education system and in which way we will go for our said goal.

#### **The National Education Policy (NEP)<sup>5</sup>**

India has composed an education policy that helps to manifest one's latent inherent properties and leads to certain positive directions. In the demon of

COVID-19 situation, the union administration of India has stamped on the Draft Resolution (DR) about the education issues that have passed as the National Education Policy (NEP) of the nation on July 29, 2020. The new education policy will make a sea change in the education policies in India, the union power holder assume. Two education policies had been drafted and implemented in 1968 and 1986 respectively after carved India as a new nation. The New Education Policy is far different from the earlier one in terms of qualitative and quantitative scales. The New Education Policy commits to direct many a fruitful way for our educational benefits. It is to be very early to mention that how far the New Education Policy (NEP) will be succeeded. But then again, there are three basic points of educational issues that have been explored from the New Education Policy (NEP). These issues are a) to proceed with the opportunity-building process in the education system of India; b) to introduce a strong evaluation system for all of the stakeholders, and c) to make a synthesis between objective knowledge and subjective cognition acquiring process. Now, we have to see as regards how the New Education Policy (NEP) will meet, and dispose of these three issues.

### **Some Observation**

Education is one of the primary needs of an individual that makes a man civilized. A civilized person brands decent culture. A decent culture argues for the humanity. We have little progress in the education system. Because our endeavor of school enrollment of the pupils has been spoiled due to a lack of material and other facilities. There are so many materials and amenities that are essential to the well-run of an education system. At this juncture, here we want to talk about the online facilities of the students as one of the main tools of the education system in India. The entire civilization confines in a little periphery due to the pandemic condition. They go through the different phases like home isolation, physical distance, lockdown, night curfew, new normal, etc. The Indians are going through the same condition that makes our life doom. The demon conditions bring a negative mindset of the multitude that composes frustration and despondency. The proximity of frustration and despondency conjointly absorb all the physical and mental potentials of humans. A proper and positive lesson can be medicine to redress the problems and cope with the demon condition. The New Education Policy (NEP) can be showing the positive way to go where the light will enlighten us.

Here we have to go through some observations that reflect the present teaching-learning scenario at the demon situation. The first observation is all about the online facilities of the Indian pupils. The student progressions are falling in difficult condition. Because there is little opportunity for physical contact between teacher-student. The physical contacts of students with the teachers are one of the best methods in teaching-learning progressions. COVID situation spoils the opportunity rather only online education systems are the only option

that we have adopted. Now we have the only way to run our education system that is online modes. The least number of Indian pupils have an opportunity to access the online modes of education. A study observed that there are a more or less seventy-five percent of students have no access to the teaching-learning processes in India due to they have no online facilities. At this juncture, here a question will be important as regards when a maximum number of students have no access to the teaching-learning processes because of their no online facilities then, as to how the opportunity-building process in the education system of India will be made. Is India will be able to make a room for the students in terms of online facilities? If the answer is positive, then it is good, but it does not, then the entire possibilities of opportunity-building procedure in India will fall in the dubious condition.

The second observation is related to the evaluation procedures of the education system in India. It is said that no education system successfully run, without a strong evaluation process. In the recent past, we have observed that the evaluation procedures have been neglected heavily resulting in the future of the students are in doomed. Many a time, we have perused pretext for devaluation. Because many a commentator consider the proper practice of the evaluation procedures is one of the causes behind the school dropouts of the students. To us, it is just a pretext and does not have ample value in the education system. If so, then we will have perused the alternative way to protect the school dropouts of the students. But in no way to ignore the evaluation procedures in the teaching and learning process. We would like to observe how the New Education Policy (NEP) will keep the pace of strong evaluation procedures and take a massive role to restore it in the coming days. Because, if we disdain the evaluation processes in the education system, then our entire endeavors will in vain. Here we mention that all the stakeholders of the education system will go through strong evaluation processes, and it will be arranged at regular intervals. Many a time, we perceive as regards when the teacher's activities are scrutinized in terms of the teaching-learning process, then strong agitation has been organized against the scrutiny. It should be changed.

The New Education Policy (NEP) makes it clear that the objective and informative types of knowledge gaining process will have to appreciate in the education system of India. The policy suggests the volume of the syllabus will reduce because the heavy curriculum creates an obstacle to the pupils in knowledge gaining processes as a whole. For these reasons, the policy gives importance to adopt informative and objective types of teaching and learning processes. We have no objection to the informative or objective knowledge gaining education system, but if the subjective or intuitive knowledge gaining process ignore, then we will lodge a strong protest against the current education policies. Because no knowledge gaining or learning process does not complete without one process. In that case, synthesis is very essential for gaining a piece

of proper knowledge. So, we want to build a bridge between the objective and subjective knowledge gaining processes that will have to better for pupils. Now we would like to see as regards how the New Education Policy (NEP) will cope with the situation. If it does not pay the proper importance to the synthesis of the subjective-objective knowledge gaining process, then the future of the students will fall in hard condition.

**Some Significant Points**

The New Education Policy (NEP) has brought comprehensive issues of the Indian education system. We hope the policy will important to the man-making procedures because without man-making procedures no establishment can do produces better results. The entire world has faced tremendous ideological deviation that is resulting in the way of frustration. We have no alternative way to go except gathering material things. Humans have engaged in the exertion of accomplishments in the name of physical developments. Only material benefits and physical pleasure is our desired goal. By hook or crook, we have to go through the horrendous exertion of physical deed resulting in a way of jealousy, envy and violence have yielded. The New Education Policy (NEP) will practice the best things that will compose goodwill and a better world. Humans will exercise humanity. Humanity is composed of two ideological things: go for humans and respect all the living creatures and inert matters. The New Education Policy (NEP) will give importance to the desire issues that will make a different trajectory of welfare. If our education policy has not been changed the motion of sustained human's desires then all the endeavors will fall into a destructive condition. We wish it will go for a better nation, a better nation exercises decent cultural behavior, and a decent cultural behavior will go for humanity.

Here we will go for some important matters of the New Education Policy (NEP). these significant issues that have been extracted from the New Education Policy (NEP) are:

- a) the New Education Policy (NEP) has importance to the foundational phases of the students. Perhaps, it is a very essential part of the New Education Policy (NEP). For the reason that as to when once gets a strong foundation in any sector, then the future result yields the good. The New Education Policy (NEP) is manifesting that the pupils will spend three years before the class One and it will be started from the age of three. The foundational courses will be remained up to eight years. During this time, they will be oriented through the value of education and the rich cultural heritage of India, and it should have well for them.
- b) Another issue that has related to the enrollment process which is very important to the students of the nation. A country should assure 100% school enrollment though we the Indian could not be secured the school enrollment maximum after the seven decades of our independence. The New Education

Policy (NEP) makes it clear that the nation will build a roadmap for the school enrollment of the students in the maximum number by 2035. The dropout students should be enrolled in the school again, and it should be granted by the State. The New Education Policy (NEP) also revealed that some policies will be taken for the dropout students, and they take care of the same.

c) The New Education Policy (NEP) has importance to the Ph.D. works in the education system from the college level. The policy is very much enthusiastic and welcoming. To us, this policy is very essential in the education system because it leads the pupils to fundamental research works. The students have engaged in the project works at the school level but, due to lack of proper opportunities and proper guidance, the endeavor have spoiled. We should take care of the school level project works properly. The New Education Policy gives an opportunity to college level students to go with the research works. Now, they can enjoy the research works seriously at the college-level with the help of school experience. The project works will be played as the foundation stones of the Ph.D. works, and they have trained in the school level in terms of doing project works.

### **The Concluding Words**

The New Education Policy (NEP) has taken some revolutionary steps and enthusiastic measures in our education sectors. It has cleared that some observations of the new policies are doubtful for the betterment of the pupils that have been mentioned and analyzed above. The policies will have to be implemented, and they will go far from the current situation of the education system in the coming days. Only then it will understand regards how does the New Education Policy (NEP) fruitful to our education systems in particular and humanity in general. But then again, one thing that is very crucial and important is Social trust<sup>6</sup>. Social trust has to essential for implementing the policies successfully. Because without Social trust no policies will be implemented effectively. If we do not build Social trust, then the entire endeavor will reveal a negative result. For this very cause, we should have to duty to build up Social trust in implementing the education policies in our country.

### **Notes and References**

Go through the Vivekananda, S. (2000). *Collective Works of Swami Vivekananda* (Total 9+1 Volumes) Kolkata: Advaita Ashrama.

“...Cultural affinity will depict how people can have a natural preference for a culture and how we can use this to our advantage in the public relations... Cultural affinity comes into play almost every time people are to make a decision.” See “Cultural Affinity as A Public Relations Theory” <https://sites.psu.edu>, accessed at 12.09 on April 25. 2021.

The Blue planet stands for The Earth.

To us the notion of new world order is very undemocratic and inhumane.

## *NATIONAL EDUCATION POLICY*

“The National Education Policy 2020 (NEP 2020) outlines the vision of India's new education system. ... The policy is a comprehensive framework for elementary education to higher education as well as vocational training in both rural and urban India.” Go through the <https://en.wikipedia.org>, where accessed at 12:48 on April 25, 2021.

“Social trust is one of the most important elements of the contemporary life. Trust has many different meanings with more diverse significances. Sometimes, trust indicates of some aspects of social life, and often reveals some parts of personal life. Some researchers consider trust as such an important element that suggest the survival of the human societies and groups is contingent upon it.” Go through the “A Study of the Types of Social Trust and the Elements Influencing It: The Case of the Iranian Northern Town of Sari” By Aboalghasem Heidarabadi, <https://www.researchgate.net/publication> , where accessed at 12:33 on April 24, 2021.

MEDIA, TERRORISTS AND OXYGEN OF PUBLICITY

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Abstract

*Since the attacks of September 11, 2001, terrorism becomes increasingly intense, and the security of international society and people are under the growing threat. In the meantime, the media rapidly develop, especially in the field of new media. A mutually utilize relationship between media and terrorism formed gradually. On the one hand, terrorism needs the media to propagate their ideas; on the other hand, the media desire to help in competition for ratings, revenue and prestige by reports of vast source of sensational, visually compelling news stories. The relationship between terrorism, insurgency and the media has long applied politicians, commentators and academics, some of them argued that the media may encourage terrorist activities, however this view was fought against by other people who stand in opposite position (Cottle, 2006, p.157). This article will explore the relationship between terrorism and media, in particular as the speedy growth of new media, the interrelation between terrorism and media has become more and more inseparable.*

**Keywords:** media, terrorists, publicity, oxygen, terrorism

As a manifestation of human conflict, terrorism has a long history. ‘Terrorism’ first appeared in the 18th century, and it was originally used to describe the actions of the Jacobin Club during the ‘Reign of Terror’ during the French Revolution (Furstenberg, 2007). The most genuine of international terrorism formed in the Second World War until the late 1960s during this period completed (Chaliand, 2007, p. 227). After the 1990s, the global terrorist activities began to significantly increase. Major events after the September 11 attacks in 2001 include the 2005 London bombings and the 2011 Norway attacks.

There is always a wide debate on the definition of terrorism, because various countries and government use different definitions of terrorism in their national legislation. In addition, that the term "terrorism" is charged politically and emotionally lead to the international community has not been formulated a universally definition. In November 2004, a United Nations Secretary General report described terrorism as any act ‘intended to cause death or serious bodily harm to civilians or non-combatants with the purpose of intimidating a population or compelling a government or an international organization to do or abstain from doing any act’ (United Nations, 2005).

The media develop speedily while the development of terrorism. Arguably, the media played an unconscious role in promoting the development process of the terrorist activities. In other words, the media unwittingly become the links

and tools in spread process of terrorism, and even play the role of advocator of terrorism.

From the point of view of terrorism, the ultimate aim to bombings and hostage-taking through the modern media is that to threat, influence and persuasion audience who concerned about development and outcome of terrorist activities. Exploring the relationship between terrorism and the mass media, the most useful method is to try to recognise the terrorist view of communications (Wilkinson, 1997). Terrorism is a kind of political propaganda, and is a strong expression as well, because the terrorists and their political opinion defenders constantly use sophisticated skills to deceive the media gatekeeper, and attract attention to themselves with a number of terrorist actions and seditious words. For instance, members of the Italian Red Brigades always arrange their criminal actions on Wednesday or Saturday, due to these two days known as the preferred dissemination Day, so that Thursday or Sunday newspaper will be thicker result from their murderous behaviour. Moreover, Wilkinson (1997) claimed that the propaganda channels involve newspapers and magazines would become an important part of terrorist activities when terrorist leaders establish support infrastructures for terrorism overseas.

From media's perspective, in order to attract the audience's attention and boost ratings or the rate of circulation, the media are also enthusiastic about reporting the incidents masterminded by terrorist. They are not often content with the length of time or the media coverage of terrorist activities, but make every attempt to grab the headline news and exclusive coverage. Especially after the event of 9/11, terrorism incidents become the object which the news media chase around, and every terrorist incident will become headline coverage. In addition to the pursuit of profit, terrorist activities also provide more special news sources for the media. Due to the special influence of terrorist incidents, as well as particular concern of people on terrorist incidents, terrorist activities involuntarily turn to be the materials of news coverage, and furthermore, in which the media accentuate position and role.

Regarding the news media play a negative role in combating terrorism, many people have criticized it. For example, during the troubles in Northern Ireland, when the car-bombings and assassinations spilled over to mainland Britain, Former British Prime Minister, Margaret Thatcher blamed the media give the terrorists with the 'oxygen of publicity'. Paul Wilkinson, a well-known scholar in the field, point out the free media in open society are particularly vulnerable manipulated by terrorist organizations, and it is clear that the terrorism and the media often have a mutual tendency to provide nutrients (Venkatraman, 2004). With the development of society, the relationship between terrorism and the media emerge new features. That is terrorists have a presence online, in other words, the interrelation between terrorism and the Internet are closer than

past, because communication is the core of terrorism (Schmid and de Graaf). There are two dissimilar potential threats online: cyberterrorism and the use of the Internet as a communication medium (Seib& Janbek, 2011).

Seib (2011) defined that 'Cyberterrorism is the use of the Internet harmfully and directly to bring about harm to persons or property, including attacks on Web sites. Cyberterrorism can do this by introducing a virus, altering information online, crashing a Web site, and by inserting a political message in a site belonging to another, among other methods.'

Another more important online terrorism that is the Internet is used as a communication medium by terrorism. According to Seib and Janbek (2011), 'the number of terrorist websites was estimated at a dozen in 1997, 4,350 by early 2005, 94,800 by 2006, and over 6,000 by 2008.' Currently, most terrorist groups are believed to use Internet. Terrorism has established a virtual world early 1990s and they stay here, and this virtual world is increasingly maturing and safe (Seib and Janbek, 2011). Seib and Janbek (2011) indicated that Al Qaeda has accepted the Internet as the best medium for communicating each other to scattered audiences. The websites related the Al-Qaeda have made a great contribution for Laden and his Al-Qaeda, because many Muslims in as many places as possible are instigated to jihad (Scheuer, 2004). With the wide application of new media within terrorist organization, Al-Qaeda's Internet operations steadily became more sophisticated and secure. Terrorists initially convey information by e-mail. According to a 2004 report by the U.S. Justice and the Treasury Departments, the traditional espionage communication technique of the terrorists was altered for online use. Meanwhile, as a similarly useful tool, the discussion board can link to different websites and post announcements. It is scarcely imaginable that Al Qaeda has set up an online library of training materials, which can teach its readers how to make ricin poison, how to make a bomb from commercial chemicals, and other useful advice. The Saudi-based online magazine Muaskar al-Battar told potential recruits, 'Oh, Mujahid brother, in order to join the great training camps you don't have to travel to other lands. Alone in your home or with a group of your brothers you too can begin to execute the training program.' These determinations of training can not only reach various people quickly, but can also avoid the dangers of soldiers congregate at a mosque or other dangerous places. In addition E-mail service and online library, online video also play an important role in the virtual world of terroristic organization. Such as the Al Qaeda-affiliated Global Islamic Media Front, this is one of the online video providers. There are many high quality online video about how to plan a roadside assassination, how to fire a rocket-propelled grenade and how to use a surface-to-air missile, and provide other tactics. Moreover, Conway (2012) demonstrates that Mobile Internet access is swiftly becoming simple, especially amongst young people, who like surfer Internet using mobile devices. For

these young people, the Internet is often their first port of seeking information on topics with which they have no acquaintance with.

Terrorists are aware of this trend and attempt to publicise terrorism by the use not just of dedicated websites, but also through pushing out their content across the social network such as Facebook and Twitter, video sharing sites such as YouTube. Arquilla(2008) has stated that Al Qaeda is grateful for that 'both time and space have in many ways been conquered by the Internet,' and Bruce Hoffman(2008) also commented that the Internet provides Al Qaeda a 'virtual sanctuary', because it is 'the ideal medium for terrorism today: anonymous but pervasive.'

To better understand the interrelation between terrorism and new media, this stage will analyse selected questions. First, who is the disseminator of terrorist information? No matter what form of media as medium, terrorism information is from the terroristic organization, however, a few researchers claim that some terrorism information is used by government to change social discourse, because the changing social discourse is central to the process by which social problems are constructed (Best, 1999, cited in Altheide, 2006). Second, what is the message? Terroristic Organizations share their history and origin by media with their audiences. Due to Islamic organizations are usually a hybrid of religion and politics, they normally illustrate interpretation of Islam through media. Third, who are the audiences? Seib& Janbek (2011) argue that the language of communication is an indicator of the intended message target. Terrorist Web sites are available in different languages; therefore, it is clear that terroristic organizations are targeting audiences beyond their host nation's language. Last, how and through what channels is the information communicated and with what effect? The purpose of terrorist activities is to have an impact. In fact, their behaviour is only a lever, the motive and purposes are what they want to convey to the world. They depend on the media exposure to translate terrorist activities into political capital in order to express their specific political or ideological appeal. Furthermore, media is not only provide a channel with which terrorist groups learn from each other, but also become a barometer of terrorists adjust strategy. The most dangerous characteristic of contemporary terrorism is that it can be easily emulated. As the media coverage terrorist activities around the world, different parts of the terrorists learn from other terrorists' advanced experience, and then formulate their own scheme of terrorist actions based on a careful analysis of other terrorist actions. For example, after event of 9/11, the U.S. launched comprehensive anti-terror operations, but terrorists quickly adjust their strategies of struggle, and various members of the Afghan are transferred to the Middle East. In general, terrorism disseminates information regarding their mission and beliefs through variform media, and attempt to Shape international public opinion by influencing judgement of journalists.

To sum up, although the media is not the main reason for expansion of terrorism, the media unconsciously promote terrorist activities, especially in recent years, new media has grown into a fuel to promote terrorism. On the other hand, terrorist activities utilise the media to expand their publicity, thereby forming an asymmetric interaction between terrorism and media. Terrorism have proliferate result in anti-terrorist actions are more intense, and the media is thereby more indispensable. The inescapable fact is that the dissemination of anti-terrorist means that the concern about terrorism. Specifically, from anti-terrorist's perspective, they expect to defend of the legitimacy and legality of their actions through the media, and from the point of view of terrorism, they likewise expect through the media to publicise their purpose to the audience. That is to say, both terrorism and anti-terrorism utilise the media for their respective interests. It is arguable that the terrorism and the media have formed the relationship of mutual utilisation of the relationship for their respective purposes, particularly in the era of mass media. However, the purpose of researching terrorism and media mutual influence is to alert the media should select and process skilfully while report terrorist incidents. It is emphasised that the media is innocent, because the media is unconscious to help terrorism. More important is that media should not be required to stop concentrating on terrorism due to the media helps the terrorism unconsciously. Not only is media relied on by terrorism, but also anti-terrorism is dependent on the media.

### **Bibliography**

- Chaliand, G. (2007). *The History of Terrorism: From Antiquity to al Qaeda*. Berkeley: University of California Press.
- Conway, M. (2012). *From al-Zarqawi to al-Awlaki: The Emergence of the Internet as a New Form of Violent Radical Milieu*. (posted to ISODARCO website). Available: <http://www.isodarco.it/courses/andalo12/doc> [2012, Jan. 10].
- Furstenberg, F. (2007, Oct 28,). "Bush's Dangerous Liaisons". *The New York Times*. Retrieved May 4, 2010.
- Scheuer, M. (2004). *Imperial Hubris: Why the West is losing the War on Terror*. Washington DC: Brassey's.
- Seib, P. (2008). *The Al Jazeera Effect: How the New Global Media Are Reshaping World Politics*. Dulles, VA: Potomac Books
- Seib, P. & Janbek, D.M. (2011). *Global Terrorism and New Media: the post Al Qaeda generation*. London: Routledge.
- Venkatraman, S. (2004). *Media in a terrorized world: reflections in the wake of 911*. Singapore: Eastern Universities Press.
- Wilkinson, P. (2007). *The Media and Terrorism: A Reassessment*. *Terrorism and Political Violence*, 9(2), 51-64.

## **'HO' TRIBE OF WEST SINGHBHUM JHARKHAND**

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### **Abstract**

*Jharkhand was created by bifurcation of the southern part of erstwhile Bihar in 2000. Jharkhand state came into existence on 15<sup>th</sup> November 2000. Jharkhand holds the 6<sup>th</sup> rank in terms of Scheduled Tribe (ST) population among the Indian States. Jharkhand is a state in Eastern India. It was carved out of the southern part of Bihar. The state has an area of 79, 710 km. It shares its boundary with the states of Bihar to the north, Uttar Pradesh and Chhattisgarh to the west, Odisha to the south and West Bengal to the east. Two notable features of Jharkhand are its high proportion of ST population which is about 26. 3% against an all India average of 8% and a high percentage of area under forest cover which is about 29% against the Indian average of 23%. Jharkhand state has large number of tribal population. In order to protect the interests of scheduled tribes with regard to land alienation and other social factors provisions of the Fifth schedule has been enshrined under Article 244[1] of the constitution of India. This study deals with the tradition and customs of HO Tribe of west singhbhum district.*

**Keywords:** *Jharkhand, population, scheduled tribe*

Jharkhand has around 32 tribal groups, major among them being Santhal, Oraon, Munda and HO. Eight out of the thirty-two tribes of Jharkhand fall under Primitive Tribal Group. They are Asur, Birhor, Korwa, Savor, Pahariya, Mal Pahariya and Souriya pahariya. Primitive Tribal Groups remain the most isolated and disadvantaged indigenous tribal groups with noticeable reduction in their population.

The Fifth Schedule under, Article 244 (2) of the constitution defines, "Scheduled Areas" as such areas as the president may by order declare to be Scheduled Areas after consultation with the governor of the that state.

The tribal normally live in contiguous area unlike other communities. Their lives are closely associated with the nature as they eke out their livelihoods from the natural environment- steams, trees, plants, animals etc. It is, therefore, recognized that maintaining their identities would invariably mean keeping their environment intact with them.

Jharkhand has 32 tribes that were originally classified on the basis of culture.

Hunter Gatherer- Birhor, Korwa, Hill Kharia; Shifting Agriculture- Sauria Paharia; Simple Artisans- Mahli, Lohra, Karmali, Chik Baraik; Settled Agriculture- Santhal, Munda, Oraon, Ho, Bhumij etc.

The majority of Jharkhand tribes are concentrated in eastern and western Singhbhum Ranchi, Dumka Hazaribagh, Palamu and Giridih. According to census 2011 total population of ST, in the state is 8645042 out of which 7868130 lives in rural areas while 776892 lives in urban areas. Total percentage of scheduled tribes in Jharkhand in 2001 was 26.3 percentage while in 2011 the total population constitute 26.20 percentage of the Jharkhand population. The district with highest ST population is Khunti.

The ethnonym HO is derived from the HO language word HO meaning human. Over 90 percentage of the HO practice the indigenous religion SARNALISM. The majority of the HO are involved in agriculture either as land owners or labourers while others are engaged in mining. The HO is one of the Kolarian tribe of Jharkhand and a branch of the Mundas an Austro-Asiatic languages speaking tribe of the Chotanagpur region. They use the HO dialect to communicate among themselves and Hindi as inter-community communication language. While fewer than five percent of the HO speakers are literate in the language. HO is typically written in Devanagiri Latin scripts. A native alphabet called Warang Citi and invented by LAKO BODRA in the 20th century, also exists.

**Content :** The Ho is one of the scheduled tribe of Jharkhand. The Ho in Jharkhand belong to Proto-Australoid Stock and speak Ho and Hindi languages: a corrupt version of Bengali is also spoken by the Hos of Jharkhand. In Jharkhand, Ho tribe swells near the rivers, river terraces or by the side of the springs. It is noteworthy in this largely depends on agriculture. Agriculture is the main stay of the people of the Ho tribe in Jharkhand.

Besides, the Ho at Jharkhand practice wage earning for their sustenance. In fact, the majority of the Hos earn their living through daily labor in the different industries and mines in the territory. It is to be noted that the conditions of the people engaged as daily labor are better than the people who depend on agriculture. Furthermore, the Ho at Jharkhand is known to possess a panchayat, takes decisions on behalf of the entire society. It is the fourth largest tribe of Jharkhand and mainly concentrated around the areas of Pashchmi Singhbhum, Purbi Singhbhum and Saraikela Kharswan.

### **SOCIAL, RELIGIOUS, CULTURAL AND ECONOMIC LIFE OF HO TRIBE**

The HO settlement region is divided into groups called PIR which is controlled by a divisional headman known as MANKI. The headman of each village is called Munda who is subject to the authority of the manki. The mundas are assisted by Dakuas or the constable appointed by the manki; HO tribe followed the maternal lineage but now they have adopted the patriarchal

type system in their society, marriage are fixed through negotiation and mutual consent. marriage in the maternal family is permissible; Monogamy is the general form in this tribe and polygamy is also practiced; The HO practice monogamy but in certain situation like barrenness widowhood and widower hood, they practice bigamy or trigamy. For the purpose of marriage, they follow the rule of tribe endogamy and clan exogamy; They follow their indigenous religious system called saran or sarnaism. Their religion resembles to a great extent that of santhals, oraons, mundas and other tribals people; Inter tribe and tribe caste marriage is not permissible. It is treated a social offence. There are many types of marriage among the HO such as andi diku andi apotipi rajikhushi and anade; The HO religion presents a mixture of tribal religion hindusim and christianty. The sun, moon, earth river, and mountain are the principal bongas of the HO. The singhbonga is the chief bonga of the HOS; The people celebrate both traditional as well as adopted festivals. Their important traditional festivals are maghe, baha, rajosala, hareo, jamnawo, kokwontanri and kolam, sohrai, and so on; Their festivals are durga puja vishwakarma, ganesh rath yatra and so on. sometimes they give less importance to their traditional festivals; They are primarily agriculturists. Their economy is also based on hunting and primitive shifting cultivation, mining works and so on. Dance is important to Adivasi culture in general and for the HO, it is more than simply a means of entertainment. Their songs are generally accompanied by dances which change with the seasons. Songs and distinctively choreographed dance are integral part of HO culture and art as well as important parts of their traditional festivals, especially mage parab. Most villages have a dedicated dancing ground, called AKHRA usually consisting of a cleared space of hard ground under a spreading tree. Dances are organized on a staggered basis in the villages so. That other villages can participate. Traditional HO music incorporated native instruments including a dama[drum] dumang[mandar], dholak and the rutu[flute]. The HO people brew handia, called by them diyeng. Sal tree is the most important tree for HO community. Almost half the population is engaged in cultivation and another one third also work as land less agricultural labourers. The Hos are comparatively more advanced than other tribes and have taken to setteld cultivation as their mode of life. Many Hos are engaged in mining towns dotting the territory have brought the HO people in close touch with the good and bad aspects of urbanization. some of the prominent mining towns in the area are chiria, gua, noamundi, and kiriburu. As per the 2011 census the literacy rate for the HO population was around 44. 7 percentage for all and 33. 1 percentage for women, much lower than the Jharkhand average of 66. 4 percentage for all and 55. 4 percentage for women.

**Notable HO people:** Late Vijay singh soy- Indian politician and a former member of Bihar vidhan sabha and elected member of 12<sup>th</sup> Lok sabha; MR.

Arjun munda. Minister of tribal affairs ministry and ex chief minister of Jharkhand; Geeta koda- Indian politician and presently serving as the incumbent member of parliament of west singhbhum; Bagun sumbrui- Indian politician and former member of legislative assembly and member of parliament; D. N. Champia- Indian politician former member of legislative council.

**Conclusion**

As we know in all caste and creed have some special characteristic. Attitude occupation and other things may occur in life of any caste and creed. The HOS and HO community lives in life style of village, they also lives in natural environment which is suitable for that community. So, peoples have distinguished cultural traditions and linguistic identity.

**References**

Census of India, 2001, <http://jharkhand.nic>  
[www.jharenvis.nic.in](http://www.jharenvis.nic.in).  
[www.jharkhand.gov.in](http://www.jharkhand.gov.in)  
THE HOS OF THE HO COUNTRY, Dhanur singh purty.  
[en.m.wikipedia.org](http://en.m.wikipedia.org), HO people

## STUDY FOOD HYGIENE KNOWLEDGE AND PRACTICE

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### Abstract

*It is critical for human beings to understand food related risks to preserve their health and the health food hygiene is vital to human of others beings therefore, knowledge and hygiene practice of food among food handlers are particularly important. Food poisoning is considered as one of the most food – related disease that takes lives, hospitalizes people and loses many society incomes. The burden of this problems varies and could affect all population in the developing countries. In a recent report of World Health Organization (WHO), it was revealed that every year, 1.5 million cases of food borne disease reported in developing countries. Increasing the food hygiene knowledge of the food handlers, and implementing good hygienic practices remain the most effective strategies to control the burdens of foodborne diseases in any society. Food hygiene has a critical role in assuring that food stays safe at every stage of the food chain from production to harvest, processing, storage, distribution, all the way preparation and consumption, food hygiene knowledge is important as it help to protect consumer from the risk of food borne illness. It also helps to prevent consumers from risks of health related conditions such as allergy and even death.*

**Keywords:** *food, hygiene, knowledge, practice*

The term hygiene can be defined as “the principles for maintaining health and practice of these”. Therefore food hygiene can be interpreted as “all the principles and practices relating to food which are essential for maintaining health”. Everybody have the right to expect the food they eat is safe and suitable for consumption. Food is nutritive product that people eat or drink in order to maintain life and growth. Every day, millions of people get sick from the food that they eat throughout the world. This is called as food – borne illness and can be fatal. In a recent report of World Health Organization (WHO), it was revealed that every year millions of cases of food borne disease were reported in developing countries. Unfortunately, this figure remained constant for almost years (WHO, 2015) Each year 2.5 million people die because of food borne disease. (Teh et al; 2016; stratev et al; 2017). However, these numbers do not reflect the actual data because in the official reports, only the reported cases are recorded. Therefore, the importance of unreported cases should not be ignored [ovca et al;2014]. In India, the burden of food-borne disease is not known, as most of them either go unrecognized or unreported ,or are not investigated, and

may be visible only if associated with a major public health or economic impact [WHO,2015].

When the consumers prepared food at home, most of them practice a variety of poor and bad hygiene [The et al; 2016] it is important to stress here that 95.4percent people are failing to implement basic food hygiene practices at home. It shows that most of the consumers are lacking the knowledge about food hygiene. Therefore, in the present circumstances, we are curious to know the level of the food hygiene knowledge among our society. We are also curious to know the practices level of our society in regards of food hygiene. Food hygiene is used as a scientific method/discipline describing handling, preparation and storage of food in ways that prevent food –borne disease outbreak. Food hygiene is about handling, storing and preparing food to prevent infection and help to make sure that our food keeps enough nutrients for us to have a healthy diet. Food hygiene is important as it helps to protect consumer from the risk of food –borne illnesses.it also helps to prevent consumers from risks of health-related conditions. Such as allergy and even death. It also protects food processing establishments from product recalls which results in financial losses due to unsafe products. Other issues due to unsafe products which can impact a business include; rejected products possible lawsuits and business closure by the public health authorities due to reports of unsafe product sold to the general public. Food can be unsafe for many reasons. It might be contaminated by germs-microbes such as bacteria, virus or molds. These microbes might have been present before the food was harvested or collected, or they could have been introduced during handling or preparation. In either case, the food might look fine but could make you very sick.

For an older person, a food related illness can be life threatening. As you age, you have more trouble fighting off microbes. Health problems, like diabetes or kidney disease, also make you more likely to get sick from eating foods that are unsafe. So be careful about how food is prepared and stored some foods present higher risks than others. Here are some tips on selecting lower – risk food options: - Always wash vegetables including all salad ingredients, before eating cooked vegetables also are a lower – risk option then raw vegetables.

Choose hard or processed cheese, cheddar or mozzarella or any cheese that is clearly labeled “Made from pasteurized milk” instead of soft cheese made from unpasteurized (Raw) milk such as brie, camembert, blue-veined or queso fresco. Eat fish, shellfish, meat and poultry that have been cooked to a safe minimum internal temperature, instead of eating the food raw or undercooked.

Drink pasteurized milk and juices instead of the unpasteurized versions. Make sure pasteurized eggs or egg products are used in recipes that call for raw or undercooked eggs, such as homemade Caesar salad dressing, raw cookie dough, or eggnog. Heat up hot dogs, deli meats and luncheon meats to 165F (Steaming hot) instead of eating the meat unheated.

As you grow older, your senses of taste and smell might change. Some illnesses like COVID-19 or health conditions can change your senses of smell and taste. Certain medicines might also make things taste different. If you cannot rely on your sense of taste or smell to tell that food is spoiled, be extra careful about how you handle your food. Food hygiene starts with storing your food properly. Sometimes that's as simple as following directions on the container. For example, if the label says "refrigerate after opening," do that; it's also a good idea to keep any canned and packaged items in a cool place. When you are ready to use packaged food, check the date on the label. That bottle of juice might have been in your cabinet so long it is now out of date (See reading food labels to understand the date on the food label)

Try to use refrigerated leftovers within 3 or 4 days to reduce your risk of food poisoning. Throw away foods older than that or those that show moldy areas. Some foods, and also caffeine and alcohol, are unsafe to take with certain medicines. A food medicine from working the way it should, cause a side effect from a medicine to get worse, cause a new side effect, or change the way your body processes the food or medicine. For example some statin act differently on the body if you consume large amount of grape fruit juice. Every time you use a new medicine, check the label for interactions. If you have any questions, talk to your doctor or pharmacist.

Food Hygiene when cooking: - When preparing foods, follow four basic steps clean, separate, cook and chill.

Clean: - Wash your hands, the cutting board and the counter with hot soapy water, and make knives and other utensils are clean before you start to prepare food. Clean the lids of can before opening. Rinse fruits and vegetables under running water, but do not use soap or detergent. Do not rinse raw meat before cooking, you might contaminate other things by splashing disease causing microbes around. Keep your refrigerator clean, especially the vegetable and meat bins. When there is a spill, use hot, soapy water to clean it up.

Separate- products like meat and fish should be put in the plastic bags and placed in separate part of the cart.at check out, make sure the raw meat and seafood are not mixed with other items in your bags. When you are cooking, it is also important to keep ready to eat foods like fresh produce apart from food that will be cooked. Use a different cutting board for fresh produce then you use for meat. Cook- Use a food thermometer. Put it in the thickest part of the food you are cooking to check that the inside has reached the right temperature.

Chill- Keeping foods cold slows the growth of microbes, so your refrigerator should always be 40degree Fahrenheit or below. The freezer should be at zero-degree Fahrenheit or below. Put foods in refrigerator within two hours of cooking it. Use freeze leftovers within 3 to 4 days. Food hygiene when eating out –it is nice to take a break from cooking or get together with others for a meal at a restaurant, but do you think about food hygiene when you eat, you

should pick a tidy place with clean tables and floors. do not be afraid to ask the waiter how items on the menu are prepared. Are prepared items clean and fresh. If you take leftovers home, get them into the refrigerator within two hours—sooner if the temperature outside is above 90 degree Fahrenheit.

### **Conclusion**

It was observed during the study that there are very unhygienic practice has been performed in the society. It would be more interesting to find out major causative reasons to overcome these problems. The study of food hygiene knowledge and practices is addressed on two levels; food preparation at their current stage of development and food preparation responsibilities in future understanding food relating risks is critical for the preservation of the food preparers own health and the health of others. Children, in addition to the elderly, pregnant women and immune-compromised persons, are the most vulnerable category to food-borne illness, and as adults, they will continue to practice food related behaviors at home as caregivers for family members. After habits are established, they tend to be long lasting and difficult to alter at later life stages.

Students belonging to the age group [13-19] are more curious about everything. Hence the food hygiene knowledge can be effectively transmitted to the children at this stage. As the young students are the potential candidate to get the proper information about the food hygiene knowledge and practices. Therefore, it is strongly believed that educating students about food hygiene knowledge and practice is vital to bring any change and move towards hygienic and healthy foods. Most of children start cooking and serving at this age. Therefore, children of this age need to be aware of food hygiene, so that they can make changes in practices towards food hygiene. If this age group [13-19] students became aware of food hygiene then it can be expected that they can make their society aware of food hygiene.

Hence, the main motivation of the study is the misunderstanding of responsibility towards food hygiene and gaps in knowledge and practices that promoting us to continue with female students. The purpose of this study was to gain insight into the experiences of people with food their understanding of food-related risks, food hygiene knowledge and practices.

### **References**

- Byrd-Bredbenner, C., Abbot, J. M., & Quick, V. (2010). Food safety knowledge and beliefs of middle school children: implications for food safety educators. *Journal of Food Science Education*, 9(1), 19–30.
- Ferk, C. C., Calder, B. L., & Camire, M. E. (2016). Assessing the food safety knowledge of university of Maine students. *Journal of Food Science Education*, 15(1), 14–22.

- Lazou, T., Georgiadis, M., Pentieva, K., McKeivitt, A., & Iossifidou, E. (2012). Food safety knowledge and food-handling practices of Greek university students: A questionnaire-based survey. *Food Control*, *28*(2), 400–411.
- Low, W. Y., Jani, R., Halim, H. A., Alias, A. A., & Moy, F. M. (2016). Determinants of food hygiene knowledge among youths: A cross-sectional online study. *Food Control*, *59*, 88–93. <https://doi.org/10.1016/j.foodcont.2015.04.032>
- Mullan, B. A., Wong, C., & Kothe, E. J. (2013). Predicting adolescents' safe food handling using an extended theory of planned behavior. *Food Control*, *31*(2), 454–460.
- Nan Unklesbay, Jeannie Sneed, & Ramses Toma (1998) College Students' Attitudes, Practices, and Knowledge of Food Safety. *Journal of Food Protection*, *61*(9), 1175-1180.
- Ovca, A., Jevšnik, M., & Raspor, P. (2014). Food safety awareness, knowledge and practices among students in Slovenia. *Food Control*, *42*, 144–151.
- Ovca, A., Jevšnik, M., & Raspor, P. (2018). Curriculum Analysis of Food Safety Competences at Elementary and Upper-Secondary Level of Formal Education Inside Food-Related Programs in Slovenia. *Journal of Food Science Education*, *17*(2), 42–51.
- Ovca, A., Jevšnik, M., Kavčič, M., & Raspor, P. (2018). Food safety knowledge and attitudes among future professional food handlers. *Food Control*, *84*, 345–353.
- Peralta, L. R., Dudley, D. A., & Cotton, W. G. (2016). Teaching healthy eating to elementary school students: a scoping review of nutrition education resources. *Journal of School Health*, *86*(5), 334–345.
- Ronto, R., Ball, L., Pendergast, D., & Harris, N. D. (2016). Food literacy at secondary schools in Australia. *Journal of School Health*, *86*(11), 823–831.
- Sibanyoni, J. J., Tshabalala, P. A., & Tabit, F. T. (2017). Food safety knowledge and awareness of food handlers in school feeding programmes in Mpumalanga, South Africa. *Food Control*, *73*, 1397–1406.
- Stein, S. E., Dirks, B. P., & Quinlan, J. J. (2010). Assessing and addressing safe food handling knowledge, attitudes, and behaviors of college undergraduates. *Journal of Food Science Education*, *9*(2), 47–52.
- Stratev, D., Odeyemi, O. A., Pavlov, A., Kyuchukova, R., Fatehi, F., & Bamidele, F. A. (2017). Food safety knowledge and hygiene practices among veterinary medicine students at Trakia University, Bulgaria. *Journal of Infection and Public Health*, *10*(6), 778–782. <https://doi.org/10.1016/j.jiph.2016.12.001>
- Teh, N. S. A., Hamid, M. R. A., Asmawi, U. M. M., & Nor, N. M. (2016). Food Hygiene's Knowledge, Attitudes and Practices between Urban and Suburban Adolescents. *Procedia-Social and Behavioral Sciences*, *234*, 36–44. <https://doi.org/10.1016/j.sbspro.2016.10.217>

- Tomaszewska, M., Trafialek, J., Suebpongsang, P., & Kolanowski, W. (2018). Food hygiene knowledge and practice of consumers in Poland and in Thailand-A survey. *Food Control*, 85, 76–84.
- Tucker, S. J. (2009). Parents as agents of change for childhood obesity prevention: a clinical nursing research programme. *Paediatrics and Child Health*, 19, S189-S193.
- Wilcock, A., Pun, M., Khanona, J., & Aung, M. (2004). Consumer attitudes, knowledge and behaviour: a review of food safety issues. *Trends in Food Science & Technology*, 15(2), 56-66.

**Thesis**

- Bhatt, Suchi Rai (2015). Impact analysis of food adulterants on health in some selected urban area of Varanasi, Ph.D. thesis, V. B. S. Purvanchal University, Uttar Pradesh
- Godwin, Lizmitha (2011). Health and nutritional status of women and preschool children in urban slums of Kochi. Ph.D. Thesis. Mahatma Gandhi University, Kerala.
- Padma Parvathy, G (2012) Awareness and attitudes of food safety knowledge and practices of mothers. Ph.D. thesis, Manonmaniam Sundaranar University.
- Poonam (2012). Studies on nutritional status and health awareness among adolescent girls of Ambedkar Nagar district of Uttar Pradesh. Ph.D. thesis, V. B. S. Purvanchal University, Uttar Pradesh

**Books**

- Gupta SP (2015). Statistical methods in behavioural sciences. Sharda pustak bhavan and publisher
- Kavita Marwaha (2007). Food Hygiene, Gene-Tech Books, New Delhi
- Motarjemi, Y. (2016). Chapter 1 - The Starting Point: What Is Food Hygiene? In H. Lelieveld, J. Holah, & D. Gabrić (Eds.), *Handbook of Hygiene Control in the Food Industry (Second Edition)* (pp. 1–11). San Diego: Woodhead Publishing. <https://doi.org/10.1016/B978-0-08-100155-4.00001-7>
- Singh, Arun Kumar (2015). Research methods in psychology, sociology and education. New Delhi.

## 'FREE' SERVICES ON THE NET: MOVE FROM BARTER TO MONEY

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### Abstract

*Consumers routinely use 'free' services on the web by accessing these from laptops and mobile. These services are actually paid by the user's time, attention, and data. Consumers depend on regulators and authorities to protect their interests. The barter trade of service can move to a system of money, say 'Cyberdollar'. Whenever a service is used, the consumer of service shall pay Cyberdollars for the services used. Service-provider shall pay Cyberdollars to the consumer for their time spent, attention and for data. A Cyberdollar-based marketplace for web services shall be more efficient and vibrant than the present barter system. Consumers shall be able to influence the price of various services based on utility and quality, and service providers shall be able to optimize their earnings by dynamic pricing of services offered. Consumers shall have a choice of gracefully opting out of services, and service providers may seek compensation for loss of business. Cyberdollars may emerge as the most powerful currency used all over the globe for transacting on the world wide web.*

**Keywords:** *Access to world wide web, Free web services, Prices of web-based services, Virtual currency*

Long ago, hidden in the haze of history, mankind discovered trading. Both the seller and buyer are better off after the trade! To begin with, all trade was barter. Things like cacao beans and shell beads were used as a common medium for barter (Bower, 2019). Later, silver and gold were used, and we had money. The origin of money as a direct result of barter is debatable (Soldatos, 2018). The backing of state for giving credibility, using money as a means for taxation, and as means of borrowing and lending may have led to the concept of money. Borrowing and lending also led to the concept of the interest, and defined benefit of holding money. Money is in existence since possibly 3000 B.C. and by now it is an integral part of our lives. There is no doubt that trading is far simpler with money.

Money has changed its form, as it evolved, from a piece of gold to a gold coin with the king's insignia to paper. With the advent of technology options, money took the form of plastic, and later of only bits of information, recorded somewhere and accessed from your laptop or mobile phone. Money is now a powerful and virtually the only medium of exchange and measure of values of all goods and services. Of course, community and government may provide common facilities that could be used without immediate payment. These public goods are funded by community/taxpayers' funds, and the provider of a public good is not looking to making a profit. Let us compare it with another everyday scenario; today, we reach for our laptop or smartphone and routinely use a

service without paying for it, but we know this is not a public good. Moreover, by your using the 'free' service, a big tech company, as the service provider, makes big money. But there is no exchange of money from user to service provider. Transaction is, of course, mutually beneficial. So, how do we measure the value of service used? Are we in a primitive barter era? Scholars, industry-watchers, and society-at-large have examined various aspects of these 'free' services.

**Literature review- 'Free' services on web**

Successful transition from barter economy to fiat (paper) money economy relies on credibility of regulatory authority (government) issuing the fiat money, and ability of the government to regulate supply of fiat money and patiently manage the transition. (Ritter, 1995). Since World Wide Web is an 'economy' spanning virtually the entire globe, definition of regulatory authority becomes harder. Digitization is said to be creating a second economy, with intercommunication, exchange of information, and completion of a business transaction electronically, with very little human involvement. Physical economy and human activity are connected to and depend on smooth functioning of 'second' (digital) economy. (McKinsey, 2011). It leads to the question: Would digital economy benefit by a currency of its own? Can currency arrest trend of creating walled gardens of ecosystem of a single service provider? A decade ago, the inventor of internet (Berners-Lee, 2010) expressed concern stating that 'some of the most successful inhabitants' of the web 'have begun to chip away at its principles' A currency can facilitate assigning value to information collected by service-provider, obviating need for walling.

Offers of free internet access to selected contents have been disallowed by regulatory authorities to uphold principle of net-neutrality (Manne, 2016). This move might have deprived some of the poorest users, a chance to have access to the world of information. Would a pricing mechanism help in such situations? Free services widely available on net have numerous non-pecuniary costs (Hoofnagle and Whittington, 2014) and may be denied legal protections available as consumers. Authors advocate free service providers offering an explicit paid option to users, with safeguards for privacy of data, and legal rights of a consumer. Setting a price pre-supposes estimating costs for each user or category of users. With ability to search quickly, the web has boosted barter, with users looking for exchange possibilities- the classical 'double-coincide' of wants. (Rice, 2003). A measure of value of services under barter can help both the parties in estimating fairness of barter, they are entering. A consumer pays by spending her time on internet. Time costs are much higher than monetary costs, and consumer gain has been estimated using opportunity cost of people's time. (Goolsbee and Klenow, 2006). Authors estimate consumer surplus from the internet maybe around 2% of full-income, a significant figure of several thousand dollars per user. Estimating the size of attention economy of free

digital services Brynjolfsson and Oh (2012) reckon consumer surplus to be \$100 billion per year for the US in 2007-2011. Can this economy become more efficient if a currency is used, instead of prevalent barter?

Information technology giants offering free services- Google and Facebook-wield so much influence that a case is made to regulate them as public utilities. (Simons and Ghosh, 2020). At the time of writing this paper, anti-trust proceedings have resulted in filing of a complaint under Sherman act against google (Government of US, 2020) noting that “American consumers are forced to accept Google’s policies, privacy practices and use of personal data”. For these services’ consumer-users have no means to influence, as not only the technology of algorithms, but even the metrics are available only to service-providers and not the consumer. Ability to measure utility of a service can provide a consumer an opportunity to explicitly express an opinion on the service by buying it at a particular price-point.

### **Hypothesis – ‘Cyberdollars’ to buy ‘free’ services**

Let us examine the business of tech companies operating in the cyberworld, where in exchange for access to a digital good, consumers can offer money, information (such as personal data), or time (often in the form of attention). Unlike money, information and time need to be used by tech company offering digital goods, and cannot be easily transferred. If what we are doing is barter, logically we should move to more sophisticated money-based trading. Introducing money will have the benefit of the ability to measure the service and compare different services provided by different tech companies, possibly earn money on the platform of one service-provider and use it elsewhere, somewhat similar to using frequent flyer miles for a hotel booking. Has the time come to invent money? Let me call it, Cyberdollar. Is it the shell bead of today, or, a gold bar? Why do we need the gold bar? The fact of the matter is that the service you use could be paid for by dollars or by the user’s time, attention, and data, or sometimes by a combination. Users watch advertisements and provide data about themselves while using a free service, which is used by tech company making the offering. Business models of services fueled by users providing data are already thriving and we are looking for the ideal win-win (Lambrecht *et al.*, 2014). A price suited to each consumer shall be good for both industry and consumers. Will it be possible with Cyberdollars?

### **Thought experiments- validating hypothesis**

A consumer shall earn Cybercents by merely visiting a website. Imagine you drove past a billboard on a street, the advertisement you saw appealed to you and you earned two cents, as well. The concept is simple. The user looks at the ad, using their laptop or smartphone and a few cents gets added to their Cyberdollar account. The advertiser pays the consumer for ‘consuming’ the message in the advertisement. The complication lies in determining whether the user actually read and paid attention to the ad, or looked the other way, and

visited the site only to earn a few Cybercents, or, more likely, that a software tool is used to imitate the steps and earn without anyone actually reading the ad. In some cases, a user may not wish to be identified and use a software service as a guest. The service provider may still like to pay the user a few Cybercents for the ad, but does not know whom to pay. To earn Cyberdollars, there may be some pre-requisites. Each consumer will have an identity. An e-mail ID is a convenient identity. Each laptop and smartphone will have an 'owner' identified by their e-mail ID. While using a software service, the users can decide, by a single keyclick, whether they wish to be identified or go by the default e-mail ID for their device or continue as an anonymous guest. An advertiser may pay, let us say, half a Cybercent if the user is an anonymous guest, one Cybercent if they disclose who they are, and two Cybercents if they 'like' the ad. The advertiser may establish checks, such as a super quick picture recognition, to verify that the ad is consumed by a person, and not a software. Thus, if you skip the check, you may not get your Cybercents. Since consumers' time is precious, tech companies shall devise clever ways to quickly verify the fact that an ad is consumed by a human; however, who knows, someday providers may like to pay even if an advertisement is consumed by your virtual assistant. If the concept of Cyberdollar gets accepted and gains popularity, users' devices may have options to skip any checks, always assume any use is done by that user, or, authenticate usage by a biometric measure, such as fingerprint or face recognition. Users may even have a list of regularly used 'trusted' websites/services, and more stringent verification needs for others. The fundamental point is that users earn Cybercents for each 'consumption' of an advertisement/message if they choose to disclose their identity.

***How to earn and spend cyberdollars***

A user may be able to decide a price for her time through the settings in her laptop and e-mail ID. It may be a one-time setting something akin to a cookie. The user may decide a price for some selected services and a default value for others. There will a price for time spent counted in Cybercents per minute, and a price for sharing your identity. Obviously, each software service will have a logic to determine if the price demanded by the consumer is acceptable. If consumers price themselves too high they may not earn any Cyberdollars. Alternatively, if the price is too low, they may be inundated by advertisements. The user may price her time differently for different websites/services, perhaps by appropriate settings for services identified by the user, and a default value. Taking this concept further, the user may vary prices for their time based on the time of the day, day of the week, and even the someday based on their mood at the moment, as seen by their virtual assistant looking at their face through the camera of the user's device and actions on their keypad.

Cyberdollars earned will get stored in a cyber account. The main question for the user is: What use is that? What can they buy using Cyberdollars? Let us think

of some possibilities. To begin with, the service provider shall pay Cyberdollars for the ads consumed, time and attention of a user, and for sharing of personal data; and shall charge Cyberdollars for services provided, which may be measured by connect time, clicks, volume of data accessed etc. Existing 'barter' can be viewed as if a consumer is earning and spending exactly the same amount of Cyberdollars each time she uses a service. Since every Cyberdollar earned is spent immediately, there is no need or possibility of storing Cyberdollars. Nonetheless, as the market evolves, a consumer may be able to earn more Cyberdollars than she spends for the service. Cyberdollars saved may be available to the consumers, which they may use to buy something, such as software or apps. It could be used for membership of a 'free' service, priced at  $x$  Cyberdollars per month, or,  $y$  Cybercents per words posted by the user, or  $z$  Cybercents per minute of the time used. These prices could be dynamic and vary depending on the time of usage and the user's profile, for example, a celebrity consumer may even get paid for using a service rather than paying for it. Perhaps a user could buy something more tangible, say a piece of music or an e-book. The existence of Cyberdollars, norms, and mechanisms for earning and burning of Cyberdollars shall conceivably lead to an ecosystem of Cybermoney, moving from today's barter, and later to full-fledged money. Will a user be able to earn interest on accrued Cyberdollars? Will a user pay interest and borrow Cyberdollars? Who will be the regulator for managing the policies for Cyberdollars?

For the ecosystem of Cybermoney to succeed, it shall be international, cutting across national boundaries, be acceptable to all, or almost all big tech companies, enabling consumers earning by ads, and targeting consumers based on their profile. Looking at it from the perspective of tech companies, Cyberdollars ought to provide greater opportunity to earn than the present barter system. Service providers may price each search or posting or even access such that an average consumer earns a little less than what they spend on a single interaction. The consumer may resist it and price themselves higher. Tech companies shall use algorithms to determine price, and Cyberdollar paid or earned for any given service that can fluctuate every second, similar to that of stocks or currencies. There could even be norms, possibly laws, regulating the prices of a consumer's time and identity data, placing lower and upper limits, as in minimum wage regulations. In the beginning, big tech companies are likely to choose prices so that Cyberdollars paid by an 'average' consumer for 'average' services are likely to match the Cyberdollars earned by a consumer for 'average' time and identity data. This pricing will maintain continuity from the present 'free' services or more accurately, services in lieu of the user's time and personal data.

One crucial challenge shall be the use of common currency, by all service-providers. Over a while, a consortium of industry players may emerge as

regulator-custodians of Cyberdollars. To begin with, there may be multiple competing currencies.

Let us look at a successful model, we all are familiar with. A private company issues stock. It can be traded. There are established methods for valuing a private company and its stock. We have a working legal framework for private companies. Public companies also issue stock and operate under the applicable legal framework. Availability and trading of stock of publicly traded companies bring in a substantially higher degree of dynamism and vibrancy in the market, and its impact on the public company. Management of a public company considers the impact on the stock price for every decision taken by them. Easy and quick trading on the stock market gives to the investor, the ability to switch stocks, based on their assessment. Similarly, the concept of measuring the value of services by Cybercents paid to use a service, and reward for the time, attention, and data by Cybercents earned may bring the type of dynamism and vibrancy provided by stock exchanges to publicly traded companies. Acceptability of a common currency, that is every tech company using Cyberdollars, rather than Cybereuros and Cyberyens, shall provide flexibility to every user, similar to an investor switching investment in the stocks of publicly traded companies with ease. Of course, we can imagine the conversion of Cyberdollars to Cybereuros, and flexibility to switch becomes a two-stage process, albeit a slightly more complex one.

Since the e-mail and laptop or mobile identifies the user, the support of the providers of e-mail services and devices will be crucial. Possibly, these companies may earn a small fee every time the currency is used, similar to credit card providers of today. Some of them may offer large discounts, to market their services.

Devices shall have a purse for safekeeping of Cyberdollars, and possibly another for keeping Cyberyens. These purses shall have the facility to put in Cybermoney when the owner earns it by giving their time/attention or data to a service provider. Similarly, purses will be able to pay out Cybermoney when the owner uses a service. Adding in and paying out Cybermoney shall be done by service-provider, as agreed with the owner of the purse; a transaction not very different from updating a cookie. Some service-providers may allow negative balance in a purse for selected consumers, like banks giving an overdraft to its customers, and for this, may charge interest on the overdraft allowed to the consumer.

As of now, we have the barter system, where a user can use services, 'pay' by giving their time and attention, as the service-provider also collects some data about them. The usage of data is governed by norms and regulations. When we introduce the concept of Cybermoney, the challenge we face is: What if a consumer runs out of Cyberdollars, and wants to use a service, or, they may choose to prevent any invasion of their privacy and not disclose anything about themselves. Service-providers are unlikely to opt to deny service to such

consumers. Paying by real dollars into their bank account is one possibility. Services may have expensive 'paid' options, and some of them may have emergency options for specified limited use without any payment, like smartphones.

A consumer with extreme reluctance to share data, may not disclose an e-mail ID. Since each device has a unique identity, and each device has a defined owner, the device may divulge the identity of the consumer. To avoid such unintended identification, a device may have a setting for 'unidentified device- send- my earnings to charity'. On the other hand, a consumer may like to share their full profile and earn as much as possible. For such consumers, a device may have an option to fill out a form, or better still, get the user's virtual assistant to fill in the form, and choose the services for sharing various details.

### ***Premiums and discounts***

Cyberdollars open up the cyber equivalent of rent or buy options. A consumer shall choose the period for they want a service, and consumers shall see service providers putting up a menu from long-term (3 years) with 'free' version upgrades to free trial for a week offers. A consumer may choose the price for themselves by allowing selected access to their details and a carefully selected pattern for ads for their long-term service providers; no details and no ads for any free trial services. The choice is important and will lead to greater vibrancy in the cyber market-place.

Service providers can benefit by combining different sets of data for the same consumers for precise targeting. In the barter world of today, this brings no direct benefit to the consumer. The interests of consumers have led to regulations to ensure a sense of balance. Cyberdollars allow consumers to decide what they want to disclose and to whom, including discerning between the data shared with a service in the course of using it, data explicitly shared by the consumer herself, and data available with another service. Consumer may earn more if they are willing to share more about themselves, and click 'use my data wherever you can find it', which will result in jacking up their earnings.

A consumer may decide to discontinue using a service- they 'unsubscribe'. They may like the service provider to remove all data from their records- the user wishes to be forgotten. Except for celebrities and public figures, the right to be forgotten is usually recognized as part of protecting the privacy of individuals (De Baets, 2016). Service providers may have the right to archive anonymized data, but they should confirm that they will not use it for furthering their business. For potential loss of business, a service provider may charge a fee for forgetting a consumer, possibly based on how long she has used the service. Industry norms and regulations will emerge as the business model matures. Dissatisfaction with the quality of service will be a greater challenge. Will consumers have recourse to remedies if they are dissatisfied or if they think their right to be forgotten has been violated by a service provider. Regulators and

authorities will find assessing the extent of damage easier in Cyberdollars-based monetary trade, as compared to today's barter system.

While a really dissatisfied consumer may decide to unsubscribe and discontinue a service, such drastic actions shall be infrequent. More likely are user reactions ranging from 'Wow, I am thrilled' to 'Not quite up to the mark, but will do'. Cyberdollars shall facilitate the capturing of these responses, by varying consumer payments within a given band, so that consumers can provide feedback, as well as, service providers earn more if the service quality is good.

For a consumer, the Cyberdollars saved is pin money earned if she is careful and clever in using the web services, whereas, for the tech companies, it is the source of business earning, for which, they have to work out their business model carefully. Also, tech companies shall expect that execution of the actual business transactions, say Cyberdollars charged per second of connect time, and Cyberdollars paid for showing a targeted advertisement for twenty seconds, ought to be carried out without human involvement. In other words, the business model, essentially the basis for charging and paying Cyberdollars shall be built into an algorithm. Of course, for a tech company, the total Cyberdollars earned minus Cyberdollars paid ought to have a balance, such that the company does not slip into irrecoverable Cyberdollar debt. In a stable state, a mature tech company may have a small number of privileged customers earning more than what they pay to the company, while the bulk of customers may pay a little more than the Cyberdollars they earn. A popular tech company would like to maintain an image of being stable and predictable, and changes to business models shall be few and far between. Accordingly, the tech companies may offer multiple Cyberdollars pricing plans for their 'free' services, with varying opportunities, and multiple options to earn Cyberdollars. We can imagine, some companies may offer incentive schemes designed to attract many consumers and of which, only a few may actually benefit from the incentives offered. Naturally, Cyberdollars charged shall be based on services rendered. The simplest form could be a fixed charge for a period. A tech company shall have a wide choice for imaginatively pricing its services, and we can be pretty sure that novel pricing patterns will emerge, possibly with a variety greater than the e-commerce pricing models in use now.

For example, a service may have a price for a casual individual user, and a higher price for professional, or business user, with the agreed standard of assurance of quality, accuracy, and verifiability. The commercial gain for a service provider shall depend on number of services rendered. This may lead to a possibility of an unscrupulous service provider passing off 'fake' services to make money. Over a longer period, we shall find independent certifiers and auditors to verify services consumed; and possibly warranties issued for audited service quality.

The use of Cyberdollars can result in ongoing improvement in service quality, enforcement of guarantees with automatic and quick penalties for a decline in

service quality. Further innovations in processes and technology, as we see in Fin Tech shall lead to greater maturity and efficiency resulting in universal acceptability of Cyberdollars (Wonglimpiyarat, 2017).

***Can it be real money?***

If and when Cyberdollar usage reaches a critical volume, we shall encounter the big question of converting Cyberdollars to real dollars and vice-versa. If there is no legitimate way of conversion, we shall witness a grey market with all its imperfections and infirmities, whereas if the conversion is as easy as say, euros to dollars, regulations for Cyberdollars shall have to be at par with real currencies, with sophisticated processes for exchange, and an entire range of banking mechanisms such as base interest rates, and reserve requirements. Would Cyberdollars emerge as a virtual currency, usable across national boundaries? (Baron *et al.*, 2015). There is a danger of Cyberdollars getting used for nefarious, or, criminal acts; and, greater difficulties in case of varying interpretation of what is a crime amongst transacting parties in a cross-border exchange. There is a need for a banking regulator, able to manage a currency with the potential for being the most powerful currency. Can a banking regulator exist without government backing shall be the moot point? One possibility is to mandate an upper limit for Cyberdollars for each device, placing a ceiling on total Cyberdollar funds, and thus the impact Cyberdollars can have on the total economy. In the unlikely occurrence where a super-efficient consumer can earn a lot of Cyberdollars without spending enough, they would simply lose their earnings beyond a set limit, thus incentivizing them to spend more and signaling to service providers the possibility of a correction to their pricing algorithm. As the concept catches on, funds in Cyberdollars grow, and regulatory frameworks evolve, the limit shall move up, leading to convertibility from Cyberdollars to real funds, and ultimately the disappearance of Cyberdollars as a separate entity. At the time of the introduction of Cyberdollars, moving from the present barter system, there could imbalance in earning and spending Cyberdollars. A tech company with understanding and wherewithal to run a business may be able to cope with a deficit or surplus of Cyberdollars if there is no possibility of converting real dollars to Cyberdollars and vice-versa. For example, a tech company with surplus Cyberdollars may either discard them, that is these bring no benefit to the tech company, or reduce the price of services and aim for a larger customer base. Similarly, a tech company, whose Cyberdollar earnings are less than the Cyberdollars spent may choose to try a higher price for their service, or, aim for higher future earnings to offset the current deficit.

However, individual consumers shall need Cyberdollars for the services they desire to use, at the point of time they wish to use the service. Tech companies may either provide a version of a service without any Cyberdollar charge, but with an overload of advertisements, and possibly demand of personal data, or, provide emergency services by giving access to a 'light' version. Some tech

companies may give a choice of both an absolutely free version with an overload of ads, and a light version for emergencies and quick use.

There is a dangerous possibility hidden under the lure of earning of Cyberdollars. A 'consumer' with no interest in using a service may repeatedly use a service only to earn Cyberdollars. Similarly, service providers may claim absolute intellectual rights on data paid for by them, and may use it for purposes far beyond expectations at the time of procuring it; mostly aided by later developments of technology with greater capacity for data crunching. We can expect a code of conduct to evolve pledging data usage as per settled terms, and seeking of consumer consent for newer exploitation opportunities, even if the consumer is no longer an active user of the service; besides of course, in the case of the right of the consumer 'to be forgotten', if they so desire.

### **Inference- beginning of new era**

Introduction of Cyberdollars shall alter the 'free' services marketplace by users getting the power to earn Cyberdollars from one service-provider and spend it on another. Of course, Cyberdollars shall require security and traceability of transactions, like present-day banking systems, perhaps even stronger. Designing a system for secure handling of Cyberdollars would be a challenge. The system for handling of Cyberdollars may be built using advanced technology such as blockchain and proper encryption, supported by non-repudiable identification. Our experience with storing of currency and money storage and payments from mobile phones shows that mobile money, with minimal regulations, complements real money (Nair and Emozozo, 2018). Such experiences shall be useful in working out the framework for Cyberdollars.

We already have lots of experience of handling money electronically, carried out in multiple ways, including the legal and ethical aspects of handling money (Angel and McCabe, 2015). Although, almost all of it is powered by businesses with a deep understanding of the handling of funds, banking, and appropriate laws and regulations. Tech companies may begin using Cybermoney with the promise of greater user convenience and speed. Would we work with real dollars held or exchanged electronically as well as the Cyberdollars, especially if there is a possibility of changing one to another, even to a limited extent? A consumer may find two different kinds of dollars bothersome, and slowly the distinction may get blurred and eventually disappear. However, to begin with, a 'free' service remains free, Cyberdollars only provides a measure for service providers and consumers to conveniently compare their 'give' and 'take' and bring vibrancy to the marketplace. We are moving from shell beads to money. The conversion of Cyberdollars to real dollar shall be the equivalent of setting up money changers to convert pounds, yens, and francs to dollars.

### **Conclusion**

Tech companies have encompassed larger and larger space in our daily and professional lives through the services offered by them- both explicitly priced

and 'free' services paid by user's time and data. Increasing, the importance of web-based services has led to close examination of these companies by governments, regulators, and civil society. Regulatory authorities in various countries are taking measures to protect the interests of consumers by introducing legislation, directives, and one-time actions (Tuttle, 2018; European Commission, 2019). Consumers have very little direct influence. Cyberdollars shall offer greater opportunity for direct consumer feedback, and shall enable regulators to check the track record of service prices and spot unfair practices. The beauty of the cyberworld is its global presence manifested in connecting businesses and consumers across geographies and governed by multiple political and legal philosophies. Even finding a name for Cyberdollars which is acceptable to most consumers shall be a challenge. Of course, when we enter an unchartered path, there shall be unexpected challenges. Think of the introduction of the first coin, limited to a small community. Cyberdollars can begin with a few leading tech service providers and economies agreeing to a common framework, and then it shall evolve and grow. The law and society have learned to deal with the world wide web, is learning to deal with driverless cars, and if the first bold step is taken, we will learn to use and benefit from Cyberdollars, as well.

**References**

Angel, J.J. and McCabe, D. 2015 'The Ethics of Payments: Paper, Plastic or Bitcoin?', *Journal of Business Ethics*, 132(3), p. 603-611.

Arthur, W. B. 2011, Oct 1, 'The second economy' *McKinsey Quarterly*, <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/the-second-economy>

Baron, J., O'Mahony, A., Manheim, D. and Dion-Schwarz, C. 2015 In 'National Security Implications of Virtual Currency' RAND Corporation, Santa Monica, California.

Berners-Lee, T. 2010 'Long live the web' *Scientific American*, 303(6), p. 80-85.

Bower, B. 2019 'Money's Murky Origin'. *Science News*. <https://www.sciencenews.org/article/money-ancient-origins-debate-mystery>

Brynjolfsson, E. and Oh, J. H. 2012 'The Attention Economy: Measuring the Value of Free Digital Services on the Internet' *Thirty Third International Conference on Information Systems, Orlando 2012*.

De Baets, A. 2016 'A historian's view on the right to be forgotten', *International Review of Law, Computers & Technology*, 30(1-2), p. 57-66.

European commission Factsheet 2019 'General Data Protection Regulation'. *European Commission website* [europa.eu/rapid/press-release\\_MEMO-18-387\\_en.pdf](http://europa.eu/rapid/press-release_MEMO-18-387_en.pdf)

- Goolsbee, A and Klenow, P J 2006 'Valuing consumer products by the time spent using them: an application to the internet' *NBER working paper series* <http://www.nber.org/papers/w11995>
- Government of US 2020 Court case in the united states district court for the district of Columbia. *Website of US department of Justice* <https://www.justice.gov/opa/press-release/file/1328941/download>
- Hoofnagle, C J and Whittington, J 2014 'Free: Accounting for the Costs of the Internet's Most Popular Price' *UCLA Law Review*, 6(3), p. 606-670.
- Lambrecht, A., Goldfarb, A., Bonatti, A., Ghose, A., Goldstein, D.G., Lewis, R., Rao, A., Sahni, N. and Yao, S. 2014 'How do firms make money selling digital goods on-line?' *Marketing Letters*, 25(3), p. 331-341.
- Manne, G. A. 2016, Jan 29. 'Since when is free web access a bad thing?' *Wall Street Journal* Retrieved from <https://www.proquest.com/docview/1761035211?accountid=45979>
- Nair, M. and Emozozo, R. 2018 'Electronic currency in Africa: M-Pesa as private inside money', *Economic Affairs*, 38(2), p. 197-206.
- Rice, Daniel, 2003 'Barter's Back! Internet Barter: The Recent Resurgence of an Ancient Practice' *AMCIS 2003 Proceedings*. Paper 7. <http://aisel.aisnet.org/amcis2003/7>
- Ritter, J. A. 1995 'The Transition from Barter to Fiat Money' *The American Economic Review*, 85(1), p. 134-149
- Simons, J. and Ghosh, D. 2020 'Utilities for democracy: why and how the algorithmic infrastructure of facebook and google must be regulated' *Brookings website*. <https://www.brookings.edu/research/utilities-for-democracy-why-and-how-the-algorithmic-infrastructure-of-facebook-and-google-must-be-regulated/>
- Soldatos, G.T. 2018 'Property Rights on Credit and State Control of Money: The Irrelevance of the Origin of Money', *The Economist's Voice*, 15(1), p. 1-5.
- Tuttle, H. 2018 'Global Regulation Landscape: Data Protection in 2018', *Risk Management*, 65(11), p. 28-34.
- Wonglimpiyarat, J. 2017 'FinTech banking industry: a systemic approach', *Foresight*, 19(6), p. 590-603.

ONLINE FINANCIAL FRAUDS AND CYBER LAWS IN  
INDIA -AN ANALYSIS

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**Abstract**

*With the advancement of technology, data protection and data privacy have become a major concern. People are mostly occupied by the internet, computer and mobile phones nowadays. From buying medicines, cosmetics, grocery items, food, clothes etc, or finding a groom or bride, or managing finances, people are dependent on online apps or websites, which often lead to breach of private data if not used cautiously. Data protection is now under threat by the interference of strangers. Thus, in this study, an attempt has been made to explore the viewpoint of the netizens on online financial transactions and whether the existing cyber laws in India are giving sufficient protection to the right of privacy and confidentiality of the netizens.*

**Keywords:** *technology, internet, cyber security, financial frauds, law, netizens*

We all are now acquainted with using mobile phones, tablets, laptops, computers and other electronic gadgets. Since internet is easy to use, there are no geographical barriers, services can be afforded with minimal cost and we can get everything at the tip of our fingers with less effort, we have become more reliant on it. However, most of us are unaware of the insecurity of the internet, the websites or apps which we follow regularly. Due to this, the scammers get an opportunity to mislead innocent people and loot their hard-earned money. Cyber crimes are carried out over the internet, computer, mobile phones, email, etc with intent to steal personal details, incur financial losses, damage to reputation, thereby infringing the right to privacy of netizens. Online financial frauds which include hacking (illegal access to one's computer or computer resource or destroying it), phishing (emails from fraudsters representing them to be reputed companies to gain personal information), email or spoofing (creation of email messages with a forged sender address), carding (stealing someone's credit card details and use for personal benefits), vishing (fraudulent practice of making phone calls or voice messages representing them to be reputed companies to steal personal information) have become very common cyber crimes in the digital world.<sup>1</sup> Internet banking services include mobile banking, phone banking, financial transactions through debit card or credit card, electronic fund transfer. Though India got its first codified legislation on cyber crimes in the year 2000, which is The Information Technology Act, it has failed to become a strong legislation

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<sup>1</sup> <https://www.stthomas.edu/publicsafety/prevention/fraudidtheft/phishingpharmingvishingsmishing/> as on 03-05-2021

for online financial frauds. In this study, the viewpoint of the netizens on online financial transactions has been surveyed and the current cyber law in India has been analyzed to find out whether the emerging cyber issues on internet banking have been well addressed in the legislations.

### **Literature Review**

Literature review guides the path through which a researcher go ahead with the study. It is an initial part of the research. It helps the researcher to fill up the lacunas left behind by the previous authors. The author has referred to 'Cyber Laws' by Justice Yatindra Singh, 'Cyber laws & Information Technology' by Dr. Jyoti Rattan and Dr. Vijay Rattan' and various books, journals, articles, newspapers for conducting the study.

### **Objectives of the Study**

The emerging crimes on online financial transactions have compelled the author to conduct the study. The objectives of the study are to gather information on the attitudes of the netizens regarding online financial transactions, to understand the type of frauds on digital payments which are arising at a rapid rate and whether the prevailing legislations in India covers the emerging frauds on online transactions.

### **Research Methodology**

Research methodology is the most significant part of research. Partly empirical and partly non-empirical method has been used by the author to conduct the study. For the empirical study, questionnaire has been used as a tool for data collection. Questionnaire was sent to 45 netizens via email, whatsapp, facebook messenger to collect their viewpoint on online financial transactions. The study was limited to the city of Kolkata, West Bengal, India. The data collected has been analyzed and demonstrated in a tabular form by calculating percentage to bring out conclusions. In the non-empirical part, data has been taken from primary and secondary sources. Statutes, legislations, case studies have been referred for primary sources and journals, magazines and websites have been referred for secondary sources.

### **Historical background of internet banking in India<sup>2</sup>**

The historical origin of internet banking in India can be traced back to the 1990s. The credit of launching internet banking in India goes to the ICICI bank. In 1999 Citibank, IndusInd Bank and HDFC followed with internet banking services. The Government of India as well as the Reserve Bank of India took various measures to ease the development of internet banking in India. The Information Technology Act, 2000 was enacted by the Government of India with effect from 17<sup>th</sup> October, 2000 which provided legal recognition to electronic transactions and provisions to deal with e-commerce. The

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<sup>2</sup> Chandrawati N Irala, Dr, BB.Pandey, 'Evolution of e-banking in India- An Empirical Study'

Reserve Bank of India has been issuing many guidelines to ensure that internet banking is functioning under a smooth basis and for the regulation and mitigation of the challenges of financial stability, information technology, technological risk management, cyber frauds. The Banking Regulation Act, 1949 does not deal with banking frauds directly but the provisions under this Act helps to understand the operations of banking sectors and the reasons behind the banking frauds that have occurred. Dr. K.C. Chakrabarty, the chairman and members of IIT, IIM, IDBRT, banks and Reserve Bank of India prepared the IT Vision Document 2011-2017 to increase the usage of internet banking. The competition has been very tough for the public sector banks as the newly established private sector banks and foreign banks are leaders in the adoption of internet banking. With lower internet costs and efficiency of internet, internet banking was started from 1999 in India.

**The Information Technology Act, 2000 on online financial frauds**

Cyber crime is any type of criminal activity that is carried out against individuals, against individual's property, against organization, against society at large to steal personal details, cause damage to electronic gadgets, harass, torture or defame people, thereby violating the right of privacy of netizens. The fraudsters make out different ways to steal personal information of netizens. For instance, they send emails or sms in the name of a bank or reputed company with an attached link. If we click on that link, fake website will open and will ask to provide card details, UPI Pin, OTP and other details and we may fall into the trap.<sup>3</sup> One of the most common all around the world on the internet is lottery fraud. The fraudsters send an email or whatsapp message by saying that a lottery worth crore has been won by the receiver.<sup>4</sup> Then there are some apps which ask people to deposit money for the registration of the app. Fraudsters create fake accounts or fake profiles on that app to cheat people. They will first make connections and affairs with the victim and act as innocent people and make up sad stories to ask people for money as a favor. There are few fake online shopping websites which display attractive products at the lowest price and offer discounts or cash back to gain the attention of the customers. Once the product is purchased and payment is done, either the product delivered is of cheap quality or not delivered at all. These websites also do not have any refund or return policy. These websites do not have cash on delivery as a payment method. Social media frauds are also very common all over the world. The fraudsters by making fake profile make contacts with people and induce them into online relationships. Then they gain their trust and ask for money or personal details. The recipients

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<sup>3</sup> <https://www.proofpoint.com/us/threat-reference/email-spoofing#:~:text=Email%20spoofing%20is%20a%20technique,users%20take%20at%20face%20value+as+on+03-04-2021>

<sup>4</sup> <http://www.cybercelldelhi.in/lotteryscam.html> as on 03-04-2021

believing their profile to be real send money and fall victim of online financial fraud.<sup>5</sup>

In India, The Information Technology Act, 2000 deal with cyber crimes. The Act includes protection from cyber crimes like identity theft, cyber terrorism, hacking, cyber pornography, defamation, damage to computer or computer resources, etc. The provisions under IT Act dealing with internet financial frauds are as follows. Section 43 of the Act imposes penalty and compensation for access or securing access without permission, downloading or copying of data stored in a computer or computer resource, introducing computer viruses, damaging computers, denial of access, abetting such acts, illegal charging for services on another's account.<sup>6</sup> Section 66 of the Act makes a person liable for any act referred to in Section 43 and who does it dishonestly or fraudulently shall be penalized with detention for 3 years or with fine of 5 lakhs or with both.<sup>7</sup> Section 66B of the Act imposes a penalty with detention for a period up to 3 years or with fine of 1 lakh rupees or both for dishonestly receiving stolen computer resource or communication device.<sup>8</sup> Section 66C punishes an individual who makes use of the electronic signature, password or any other unique identification feature of any other person for a period of 3 years and will also be responsible for a fine which may extend up to 1 lakh rupees.<sup>9</sup> Section 66D of the IT Act penalizes a person who by means of any communication device or computer resource cheats by misrepresenting themselves. The offender shall be punished with imprisonment for a period of 3 years and shall also be responsible for a fine which may extend up to 1 lakh rupees.<sup>10</sup>

### **Analysis**

The Act contains a lot of ambiguity and confusion. There is no provision on criminal breach of trust or misappropriation of property under the IT Act. The cyber crimes under this Act are always associated with the provisions under The Indian Penal Code, 1860. For example, data theft under section 43(b) read with Section 66 of IT Act is always associated Section 379, 420 of IPC, hacking under section 43(a) read with Section 66C of IT Act is associated with section 379 IPC, credit card fraud under section 43(a), 43(b) read with section 66 of IT Act is associated with section 420, 467, 468, 471 of IPC, dishonestly receiving stolen computer resource or communication device under section 66B is associated with section 413, 414 of IPC, phishing under section 43 of

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<sup>5</sup> <https://www.consumersinternational.org/media/293343/social-media-scams-final-245.pdf> as on 03-04-2021

<sup>6</sup> Section 43, Information Technology Act, 2000

<sup>7</sup> Section 66, Information Technology Act, 2000

<sup>8</sup> Section 66B, Information Technology Act, 2000

<sup>9</sup> Section 66C, Information Technology Act, 2000

<sup>10</sup> Section 66D, Information Technology Act, 2000

## ***FINANCIAL FRAUDS AND CYBER LAWS***

IT Act is associated with section 379, 420 of IPC, embezzlement, that is diverting money to one's own account can be explained under criminal breach of trust, misappropriation of property under the Indian Penal Code, 1860.<sup>11</sup> Section 379, 413, 414, 420, 467, 468, 471 IPC includes punishment for theft, habitually dealing in stolen property, assisting in concealment of stolen property, forgery of valuable security, will, forgery for the purpose of cheating, using as genuine a forged document, respectively. The cyber crimes under the IT Act are bailable offences as a matter of right and it is only non-bailable when they are associated with the offences under IPC, which gives the offender an ample time to destroy the evidences when they are released on bail. Spam are uninvited and massive amount of emails where the recipient has not granted confirmable permission for the message to be sent and that the message is sent as a part of a larger collection of messages, all having similar content. The Information Technology Act, 2000 does not discuss the provision of spam at all. They should also have a provision to unsubscribe them or they may not be sent unless asked for. Australia has enacted the Spam Act which prohibits the sending of uninvited commercial electronic messages with an Australian link. In other words, commercial spam sent by phone or email is not permitted to originate from Australia and is not allowed to be sent by Australian addresses, whatever their place of origin. This will be enforced by the Australian Communications Authority. Many US States have enacted laws against unsolicited mail known as Anti Spam laws. The US Congress has enacted 'Controlling the Assault of Non-Solicited Pornographic and Marketing Act of 2003' or the 'CAN-SPAM Act, 2003' to solve these issues.<sup>12</sup> SPIM is an unavoidable or unrequested instant message. It has become an increasing threat to consumers. There is no specific law in India to deal with SPIM. The IT (Amendment) Act, 2008 reduced the quantum of punishment for a majority of cyber crimes. This needs to be rectified by enhancing the fines. The Act also does not cover a majority of crimes committed through mobiles. The Act thus becomes a weak legislation for the cyber criminals. Section 66C of IT Act defines identity theft to be an offence but does not mention frauds committed without using electronic signatures or unique identification features. Thus identity fraud is often but not necessarily the consequence of identity theft. Someone can steal or misappropriate personal information without committing identity theft using the information about every person, for instance when a major data breach occurs.<sup>13</sup> The increasing internet financial frauds highlight the need to set up a broader regulatory framework to protect our technological sovereignty. The Information Technology Act, 2000 also

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<sup>11</sup> The Indian Penal Code, 1860

<sup>12</sup> <https://spamlaws.com/world.shtml> as on 28-04-2021

<sup>13</sup> [https://en.wikipedia.org/wiki/Identity\\_theft](https://en.wikipedia.org/wiki/Identity_theft) as on 28-04-2021

does not speak about data security and data privacy. Therefore, India needs to have a modern and specific legislation on digital money transactions so that data breaches do not occur while making a digital payment. The lack of any specific regulatory framework gives chance to scammers to steal personal data.

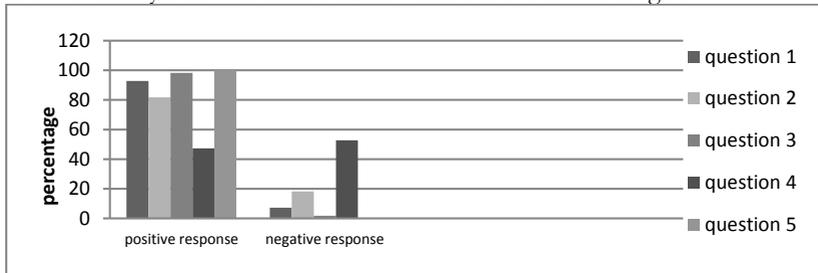
**Result of the empirical study<sup>14</sup>**

To study the opinion of netizens on online financial transactions, a survey has been made based on some questions which are as follows-

**Table 1 : Opinion given by the netizens of Kolkata (Total No. of respondent :45)**

Sr. no.	Questions	Yes (%)	No (%)
1.	Are you aware of The Information Technology Act, 2000?	92.82	7.18
2.	Did you ever receive any message which said that you have won a lottery and then called you to share your bank details?	81.78	18.22
3.	Did you ever receive any fake messages, emails or calls representing them to be from reputed companies and asked you to share your bank details, password, OTP, PIN etc?	98.20	1.8
4.	Have you ever invested any money for registering an app and afterwards found that app to be a fake one?	47.33	52.67
5.	Do you think a modern and specific legislation is needed to deal with the emerging frauds on online financial transactions?	100	0

From the age 21-65, both male and female respondents gave their opinion on online financial transactions. Table 1 demonstrates the data analysis of the respondents within the study area. The result of table 1 is further shown in the figure 1.



**Figure 1 : Pictorial demonstration of the viewpoint of the respondents**

Figure 1 represents the viewpoint of the respondents on online financial transactions which has been calculated in percentage. It shows both the positive responses and the negative responses of the respondents within Kolkata based on the questions asked by the author.

**Suggestions**

Here can be some measures to protect the confidentiality and privacy of personal data of netizens whenever they are making any online money payment. Smart and cautious use of internet by the netizens, OTP, password, PIN, CVV, other bank details should not be shared with any anyone, Do not click on any unverified links sent by unknown and suspicious email addresses or instant messages, Should not download unpopular apps because that can

<sup>14</sup> Source: author

contain malware or virus, Unknown public wifi should not be used because that can lead to hacking, Two-step verification should be enabled on all apps by the users so that if anyone hacks, a security alert will be shown, Before registering for an app, verify whether it is real or fake, All permissions to access by an app should be removed once that app is downloaded, Last login should be checked, First Information Report (F.I.R.) or General Diary (G.D.) should be lodged by the victim within three days to recover the lost money, Global awareness of the right of netizens, Strong enforcement mechanism for the protection of the rights.

### **Conclusion**

Thus it can be concluded from the above study that the frauds on e-banking has increased, especially during the pandemic. Online transactions are effortless, saves time and cost without much hassle making digital frauds a common occurrence. By questioning people of different ages, it can be inferred that fraudsters are always trying to find an opportunity to steal people's money by various ways. The netizens should be extra cautious of their technology rights and know how to handle their personal data. In my opinion, it is better to use bank's personal net banking app or website while making any online transaction rather than any outsider app, though all third party apps are not hoax. In that case also we have to remain alert by not sharing any OTP, PIN, password to any bank employee and we should always verify an app before registering for it. Though there are sufficient laws on online financial frauds which to some extent help prevent the frauds, a strong and specific legislation is needed in India to deal specifically with the financial frauds digitally. The Information Technology Act, 2000 is always dependent on The Indian Penal Code, 1860 to forbid the occurrence of digital money frauds. The Indian Penal Code, 1860 does not define the word 'fraud' entirely and does not specifically mention the classification of digital money frauds. Therefore, a specific legislation is the need of the hour to keep pace with the emerging technologies and issues on digital financial frauds. Global awareness, education of promotion of the rights of the netizens is also needed to stop the occurrence of frauds.

### **References**

- Justice Yatindra Singh, *Cyber Laws*, 4<sup>th</sup> edition, Universal Law Publishing Co. Jyoti Rattan, *Cyber Laws & Information Technology*, 6<sup>th</sup> edition, 2017, Bharat's K. D. Gaur, *The Indian Penal Code*, 4<sup>th</sup> edition, Universal Law Publishing Co. Babu Sarkar's, *Information Technology and Cyber Crime Law in India*, 1<sup>st</sup> edition, 2014, Moon Law Agency  
Chandrawati Nirala, Dr, BB.Pandey, 'Evolution of e-banking in India- An Empirical Study'  
<https://spamlaws.com/world.shtml>  
The Times of India



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