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Editorial

The entire globe is currently going through a very challenging phase because of the novel corona virus. It has shaken the whole world and affected all the spheres of life - medical health sector, judiciary, journalism and media, and most importantly education. The outbreak has resulted in hampering the education of students. The COVID-19 pandemic has brought a drastic change in the lives of people. Technology is acting as a boon in this situation. The present era is an age of technology and its influence is being reflected in all productive endeavours.

With growing advancements in the field of science and technology, people all over the world are connected to digital technologies and virtual platforms. The sudden shift away from regular conventional mode of work is the time for one to adapt to such situations by making use of technology in the right manner. Through effective use of technology, individuals become more capable, competent and confident in their performance, enabling them to accomplish the tasks they set for themselves. The productive usage of technology will help to harness the resources needed for a successful life.

The research papers and articles in this issue focus on the areas highlighting the issues and challenges of using technology during the pandemic and also the role of various digital outlet in education. It is hoped that the reading of these articles would help educators and policy makers to improve the quality of education by making use of technology in a truthful manner in this digital era.

With Regards
Editorial Board

CONTENT

NEED ASSESSMENT STUDY ON
VOCATIONAL SKILL FOR EQUIVALENCY LEARNERS

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ABSTRACT

The majority of population in Kerala has gone through various formal education courses and successfully completed their basic education. The government of Kerala has declared the state as a total literate. For this, state has introduced equivalency programme for those who have not completed basic education. This study is aimed at need assessment for adults in vocational skill of the courses. The Normative survey method was adopted for the study. The sample for the study included 128 Learners, 120 Preraks, and 20 Resource Persons selected from various Blocks and Municipalities of Kannur District, Kerala State. The tools used for the study were Questionnaire and Interview Schedule. The collected data were analysed using percentage analysis. The findings of the study revealed that most of the equivalency learners were female and that the majority of the equivalency learners got in vocational training during their course and opined that vocational training is necessary to improve their quality of life.

INTRODUCTION

Continuing education is the continuation of education of the educational provision beyond initial education, especially in the vocational sphere. It's major concerns seem to focus on the provision of vocational continuing education, access to it and extension of it. No such claims may be legitimately made about the next form of education strategy; for recurrent education has certainly had some radical claims made on its behalf. Continuing education is not the same as further education for a number of reasons: further education is post-compulsory but not necessarily be post-initiative; further education tends to imply a specific level of study whereas continuing education does not; further education is usually pre-vocational, vocational or academic while conceptually continuing education need not be directed towards any course assessment or award.

Continuing Education Centres are community based centres with area specific community based approach. They are the

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providers of programmes for basic education, post-literacy, income generation activities and quality of life improvement. They are the centres of community factions, for upgrading skills and coordinating the services of government departments. They serve as a window or focal point where diverse kinds of continuing education programmes can be taken up for all sections of population. The Continuing Education Centres therefore serve as multipurpose centres with multiple functions to perform.

Skill development and Income generation are the key target specific programmes of continuing education. It helps participants to acquire or upgrade vocational skills and to enable them to conduct income generating activities. These are largely focused on the development of functional knowledge with a view to making learning relevant to living and working. A large number of programmes involving varying levels of vocational skills can be introduced in continuing education. Skill development and Income Generation Programmes are functional in nature and these are largely focused on the development of functional knowledge with a view to making learning relevant to living and working. Providing vocational skills means equipping people for their direct involvement in some economic or productive activities. Acquiring vocational skills is the ability of engaging oneself in an occupation or gainful employment. Every member of the community with special focus on neo-literates and those who have had little or no formal education form the Priority Target Group of these programmes. Vocationalisation of education has been part of the foundation of man's creative and progressive development. A central tenet of vocationalisation of education is often expressed by the phrase "to fit for useful employment". This implies an economic future for the individual which will be better than what he/she might have had without vocationalisation of education. Economic improvement thus leads to a better standard of living for the individual, as well as to the society as a whole.

NEED AND SIGNIFICANCE OF THE STUDY

Kerala is a learning society. It is a model state in the field of adult and continuing education. It has launched many literacy and post literacy programmes to make the state a fully literate state. The programmes in Kerala were effectively followed by post literacy programme with the main effect of preventing neo-literates falling into illiteracy and bringing about a desired attitudinal change among them. Continuing education programme was introduced much earlier in Kerala on its own initiative and prior to the launching of centrally sponsored continuing education programme.

The majority of population has gone through various formal education courses and completed basic education. The government of Kerala declared it as a total literacy state and the percentage of literacy was 94 in 2011 census.

Hence the state introduced equivalency programme for those who have not completed their basic education. At present four levels are in vogue, the 4th, the 7th, the 10th and the higher secondary. Thousands of adult learners enroll themselves to the equivalency courses and gradually upgrade their educational level to higher secondary standard. Separate curriculum and syllabuses have been prepared for each level and text books are also prepared accordingly. The economic dimension includes occupational education, vocational development, employability, entrepreneurship and alleviation of poverty. Vocational education thus is rich and diverse. The profile of vocational learner varies more than in any other sector of education, in terms of age, abilities and interests. The curricular demands cover a very wide range of trades –practically related to all aspects of everyday life. Vocational education covers the spectrum of occupational areas-from traditional crafts and trades to those occupations based on modern technology. Hence, a study on need assessment for adults in their vocational skill seem to be significant.

OBJECTIVES OF THE STUDY

The major objectives of the study are:

1. To study the socio-economic profile of equivalency learners.
2. To enquire the needs of equivalency learners on their vocation skills.

3. To study the problems faced by equivalency learners who have inadequate vocational skills.
4. To put forth certain suggestions to acquire new vocational skills for equivalency learners.

METHODOLOGY IN BRIEF

Method

Normative survey method was adopted for the study.

Sample

Total 128 Learners, 120 Preraks, and 20 Resource Persons were selected from various Blocks and Municipalities of Kannur District Kerala State. The learners studied the fourth, seventh and tenth equivalency courses run by the Kerala State Literacy Mission Authority. The Preraks and Resource Persons instructed the learners in non-formal methods.

Tools used

Major tools used for the study were:

a. Questionnaire
b. Interview Schedule

Questionnaire was used for equivalency learners to collect data and interview schedule was used to collect information from Preraks and Resource Personsof the continuing education centres.

Statistical techniques

The collected data were analysed using percentage analysis.

Table 1

Socio-Economic Profile of the Equivalency learners

No.	Status	Particulars	Number N = 128	Percentage
1		Male	32	25
2	Gender	Female	96	75
3	Religion	Hindu	116	90.63
4		Muslim	8	6.25
5		Christian	4	3.12
6		OBC	80	62.50
7		ST	24	18.75
8	Caste	SC	16	12.50
9		Forward Caste	8	6.25
10		Below 30	16	12.50
11		30-40	28	21.87
12	Age Group	41-50	40	31.25
13		Above 50	44	34.38
14		Married	80	62.50
15	Marital Status	Unmarried	28	21.88
16		Widow	20	15.62

The table 1 reveals socio-economic profile of the equivalency learners. As per the table majority of the learners were female (75%- 96 out of 128) and only 25 % (32 out of 128) were male learners. Majority of the learners were Hindu (90.63%), followed by Muslim (6.25%) and Christian (3.12%). A close observation of the caste of the learners shows that, most of them belong to Other Backward Community (OBC), followed by Scheduled Tribe (ST-18.75%), Scheduled Caste (SC-12.50%) and Forward Caste (FC-6.25%). It indicates that, neo-literates are less among Forward Caste. Analysis of the age of the learners shows that, majority of them belongs to above 50 age group (34.38%), followed by 41-50 age group (31.25%) and 30-40 age group (21.87%). The equivalency learners with below 30 age group are very less and found only 12.50% in the sample. The learners' marital status shows that, most of them are married (62.50%). A close observation of the marital status of the learners' reveals that 15.62% of them were widows and they opined that the equivalency course can decrease their loneliness.

Table 2

Vocational needs of the Equivalency Learners

No	Vocational Needs	Number N= 128	Percentage
1	Computer Training	108	84.37
2	Tailoring course	88	68.75
3	Soap Making course	84	65.25
4	Umbrella Making training	80	62.50
5	Fashion Designing course	72	56.25
6	Sari Designing course	68	53.13
7	Artificial Jewellery Making course	54	42.19
8	Coon Agriculture course	50	39.06
9	Driving course	48	37.50
10	Electronic and Home Appliances Repairing course	44	34.37

The learners opined about the different vocational courses they wanted. The major courses were: computer training (84.37%), tailoring course (68.75%), soap making course (65.25%), Umbrella making training (62.50%), fashion designing course (56.25%), sari designing course (53.13%), artificial jewellery making course (42.19%), coon agriculture course (39.06%), driving course (37.50%) and electronic and home appliances repairing course (34.37%)

Table 3

Problems faced by Learners during equivalency course

No	Problems	Number (N=128)	Percentage
1	Low capacity in reading and writing	88	68.75
2	Low knowledge in subjects	84	65.62
3	Low memory power	77	60.16
4	Low eye sight	35	27.34
5	Family problems	23	18.00

The learners also opined about different problems they faced during in their equivalency course. The major problems were namely low capacity in reading and writing (68.75%, low knowledge in the subjects (65.62%, low memory power (60.16%), low eye sight (27.34%) and their family problems (18%).

Table 4

Equivalency learners' suggestions

No	Suggestion	Number (N=128)	Percentage
1	Provision for Vocational trainings	92	71.87
2	Simplified syllabus	77	60.16
3	Need for more untest classes	60	46.87
4	Need for local learning centres	55	42.97
5	Need for additional study materials	48	37.50
6	Development of course calendar	36	28.12
7	Required related programmes	35	27.34

The major suggestions of the learners to improve the equivalency courses are indicated in the table 4. The major suggestions were give vocational trainings to learners during the course (71.87%), simplifies equivalency course syllabus (60.16%), more face to face classes (46.87%), need for local training centres (42.97%), need for additional study materials (37.50%), development of course calendar (28.12%) and related programmes (27.34%) such as Kalolsavam (art fest) and study tour.

MAJOR FINDINGS

1. The study reveals that most of the equivalency learners were female. 62.5% of the equivalency learners included in Other Backward Communities, 18.75% from Schedule Tribes and 12.5% from Schedule Caste. Only 6.25% from Forward Community. Most of the equivalency learners included in the age group above 50 (34.38%) followed by the age group 41 to 50 (31.25%). 21.87% of them in age group 30 to 40 and only 12.5% of the equivalency learners were below 30 age group.62.5% of the equivalency learners were married. 15% of them were widows and 21.87% of them, not married. Monthly income of the majority of equivalency learners was between Rs. 4000 and 20,000.

2. Widow learners got some jobs through equivalency courses and got some earnings. Also they could avoid loneliness through equivalency courses.

3. Profession of the equivalency learners: Coolie- 50%. Govt./Public Servants- 12.5%. 37.5% of the equivalency learners were jobless.

4. The majority of the equivalency learners had no Prior Learning (60%).

5. The majority of the equivalency learners got vocational trainings through the course.

6. All learners wanted to include more vocational topics in their equivalency text books.

7. They opined that vocational training is needed to improve there quality of life.

8. The major problems faced by the learners were low vocational skills, low income, decreased quality of life, non-availability of jobs, who performance in their job and dependency on others.

9. The major courses required by the learners were computer training, tailoring, saree designing, fashion designing, soap and umbrella making.

10. The learners suggested to improve the equivalency courses through vocational trainings during the course, simplified syllabuses scientific and systematic course calendar related programmes such as awareness programmes and kalolsavam or art fest.

11. According to Preraks, major socio-economic, educational and cultural needs of the equivalency learners were skill up gradation, income generation activities, higher studies with certification.

12. Resource Persons suggested to improve equivalency courses thorugh permanent vocational trainings, simplified syllabuses, systematic course calendar and more classes with study materials to the learners.

SUGGESTIONS

The analysis of the Continuing education programmes indicates a vast number of centres conducting only equivalency courses. The learners demanded new vocational trainings in their equivalency courses. The continuing education programme should include most needed modern vocational courses. The programme should be need-based, innovative and it should aim at improving the knowledge, upgrading of the skills and bringing a change in the attitude of the learners. The approach and strategy adopted should have high degree of participation. A Continuing Education Centre can organize vocational education in close collaboration with government departments and agencies.

CONCLUSION

A nation's progress in every practical field depends on its capacity to provide for its citizens every opportunity for learning, whether it is in the sphere of technical or higher education or research, medical education, human rights education, elementary and primary education, adult education or lifelong learning programmes. Hence education is a tool to promote the wellbeing, prosperity and future development of the individual, the society, and the entire human civilization. Planning of vocationalisation is a formidable and complex process. It involves

careful estimation of the job potential in the existing situation and also the possible job potential in the emerging patterns of development. Vocationalisation needs the support, co-operation and assistance of all strata of society for its success. In fact, everyone in the society owes in a smaller or larger measure some education, and therefore, education has the right to demand some service from everyone for the future of the nation. The future of our people depends much on the success of vocationalisation of education. Inclusion of vocational skills in the curriculum creates motivation to the learners in classes and also helps in income generation. This promotes learners' social, economic and educational forwardness along with education. Integration of vocational skill in the formal and non-formal curriculum is the need for the hour. Hence the learners' prior knowledge and skills have to be assessed carefully in the programme for better involvement and performance of learners.

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LOCUS OF CONTROL ON ACADEMIC ACHIEVEMENT OF SECONDARY STUDENTS IN RELATION TO THEIR GENDER OF COOCHBEHAR DISTRICT

* Tapas Barman

ABSTRACT

In the present day competitive world the society's concern and interest for academic achievement, especially among the adolescents has increased, which is the combination of their ability and effort. A good academic achievement gained by a student plays a pivotal role for his/her good career, for social, cultural and economic development and the development of the nation. The present study examined the impact of locus of control on academic achievement of secondary school students in relation to their gender of selected Coochbehar district. The sample consisted of 300 adolescents selected from the age group ranged between 14 to 18 drawn from secondary schools of Coochbehar district. Roma Pal's locus of control inventory was used to elicit responses from the participants. Mean, Standard deviation, Standard error of mean, t test, Pearson's correlation coefficient were used to analyse the data and test the hypotheses. The study revealed that there was no significant difference between boys and girls in the academic achievement from the secondary students of Coochbehar district. The locus of control of boys and girls also had no significant difference. The study also revealed that there exist a weak positive correlation between locus of control and academic achievement of secondary school students of Coochbehar district.

INTRODUCTION

Education is the most powerful weapon which can be used to change the world-Nelson Mandela. In the modern society, education plays an important role which helps to eliminate deficiencies and obstacles of country's development and assists in developing it socially, culturally, economically and politically. Education takes place through teaching-learning processes, where the learners have a profound influence upon teachers. The way learners observe individual-self and the world in individual's surrounding has a great influence over her/his educational process. One of the most significant factors on individual's educational achievement is his / her individual interest and involvement in his / her personal control and over what is happening around and

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how it effects and this is called as one's Locus of Control.

In psychology, locus of control is considered as an important aspect of personality. The concept was developed by Julian B. Rotter (1954), and it refers to an individual's perception and believes of what are the main causes of the good or bad events in it as life and how they can control events affecting them, either in general or in a specific areas.

Academic achievement is a combination of ability and efforts and the ability to a level of proficiency attained in academic work as formally acquired through knowledge in school subjects which is often represented by percentage of marks or grade obtained by students in examination. It generally refers to the scholastic achievement of the students at the end of an academic programme.

Several researcher- Puri (1984), Metin (1996), Edmonds (2002), Subramanyam (2007), Bozorgi (2009), Tella, Tella and Adeniyi (2009), Adeyinka, Adedeji and Olufemi (2011), Kutamis, Mesci and Ovdur (2011), Das and Pattanaik (2013), Ogunmakin and Akomla (2013), Razmefer (2013), Gujjar and Aijaz (2014), Hasan and Khalid (2014), Hill (2016), Choudhury and Barooah (2017), Kumar and Asha (2017), Atetwe, Aloka and Gudo (2018) found that there existed significant relationship between locus of control and academic achievement among students. For this reason an attempt is made through the present investigation to study the locus of control on academic achievement of secondary students in relation to their gender in Coochbehar district.

NEED AND SIGNIFICANCE OF THE STUDY

Recently, locus of control of the adolescents has drawn the attention of many educationists, psychologists, psychiatrists, and sociologists. Many researchers have expressed that locus of control is the most important factor in student's academic performance. Individual differences work everywhere and in every situation, whether it is personality difference in learning or responding to a specific situation. In this context this study is aimed at studying how far gender and locus of control are affecting the academic achievement of secondary students.

METHODOLOGY IN BRIEF
Method

Normative Survey method was adopted for the present study.
Sample

The sample consisted of 300 secondary students of Coochbehar district taken through simple random sampling technique.
Tool used

Roma Pal's locus of control inventory was used to elicit response from the participants.
Statistical technique used

Mean, standard deviation, t test and coefficient of correlation were used to analyze the data.
OBJECTIVES OF THE STUDY

The main objectives of the present study were

1. To study the locus of control of boys and girls secondary school students of Coochbehar District.
2. To study the academic achievement of boys and girls of secondary school students of Coochbehar District.
3. To study the relation between locus of control and academic achievement of secondary school students of Coochbehar District.

HYPOTHESES

The following hypotheses were formulated in the present study

1. There is no significant difference in the mean scores of locus of control of boys and girls secondary students of Coochbehar District.

2. There is no significant difference in the mean scores of academic achievement of boys and girls of secondary students of Coochbehar District.

3. There is no significant relationship between locus of control and academic achievement of secondary students of Coochbehar District.

RESULT AND DISCUSSION

The result of this study was interpreted in the following manner.

HYPOTHESIS 1: There is no significant difference in the mean scores of locus of control of boys and girls secondary students of Coochbehar District.

Table 1

Mean, Standard deviation, Standard error of mean and significant difference of locus of control of boys and girls secondary students

Category	Mean value	SD (σ)	Standard Error of mean	t value	Significant
Boys	51.5466	2.7698	0.2261	1.1019	NS*
Girls	51.88	2.4602	0.2008		

Table 1 it is evident that the mean scores of locus of control of boy secondary students is 51.5466 and SD is 2.7698. Whereas the mean scores of locus of control of girls is 51.88 and SD is 2.4602. The standard error of mean scores of boys' and girls' in the locus of control is 0.2261 and 0.2008 respectively. From the calculation it is found that obtained t- value is 1.1019 which is not significant even at 0.05 (95%) level. It suggests that no significant difference exists between locus of control of boys and girls.

HYPOTHESIS 2: There is no significant difference in the mean scores of academic achievement of boys and girls of secondary students of Coochbehar District.

Table 2

Mean, Standard deviation, Standard error of mean and significant difference of academic achievement of boys and girls secondary students

Category	Mean value	SD value (σ)	Standard Error of mean	t- value	Significant
Boys	43.6476	21.2173	1.7323	0.0976	NS*
Girls	43.414	20.2066	1.6498		

Table 2 showed that the mean scores of academic achievement of boys of secondary school is 43.6476 and SD is 21.2173. Whereas the mean scores of academic achievement of girls is 43.414 and SD is 20.2066. The standard error of mean scores of boys and girls in the academic achievement is 1.7323 and 1.6498 respectively. From the calculation it was found that obtained t value is 0.0976 which is not significant at 0.05 (95%) and 0.01 (99%) level. It revealed that no significant difference between boys and girls in their academic achievement.

HYPOTHESIS 3: There is no significant relationship between locus of control and academic achievement of secondary students of Coochbehar District.

Table 3

Mean, Standard deviation, Standard error of mean and degree of correlation of locus of control and academic achievement of boy and girl secondary students

Category	Mean value	SD (σ)	Standard Error of mean	Degree of correlation (r)	Remark
Boys	51.7133	2.6205	0.1513	0.0868	Very weak positive
Girls	43.4834	20.7223	1.1964		

Table 3 showed that the mean scores of locus of control of boys of secondary students is 51.7133and SD is 2.6205. Whereas the mean scores of academic achievement of girls is 43.4834 and SD is 20.7223. The standard error of mean scores of boys and girls in their locus of control and academic achievement is 0.1513 and 1.1964 respectively. From the calculation it was found that the obtained r- value (coefficient of correlation) is 0.0868. Hence it was found that a very weak positive relationship exists between locus of control and academic achievement.

EDUCATIONAL IMPLICATIONS
Educational implications of the present study are mentioned below

The study transpired that a weak positive relationship exists between locus of control and academic achievement.

It is an indicator to the teachers to take appropriate action to hold them to control their locus of control.

a. The teacher understands and helps the students locus of control by designing class activities and extra curricular activities according to the performance of their students.

b. The administrators and policy makers will be benefited by the result of the study for further formulations regarding teacher outcome designing teaching learning materials and taking measures for important of classroom environmental modification.

CONCLUSION
The t-value of academic achievement of boys and girls of secondary school of Coochbehar district is 0.0976 which is less than the critical value and hence not significant. = It means that there was no significant difference between locus

of control and academic achievement of boys and girls of secondary schools of Coochbehar district.

The t-value of locus of control of secondary schools of boys and girls of Coochbehar district is 1.1019 which is less than the critical value of t at 0.05 level. Hence there is no significant difference in the locus of control of boy and girl secondary students of Coochbehar district.

The locus of control of boys and girls secondary schools was found to be weakly related to their academic achievement. Their degree of relationship is 0.0868 (coefficient correlation).

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A STUDY ON THE RELATION BETWEEN MENTAL HEALTH AND ADJUSTMENT ABILITY OF SECONDARY STUDENTS IN RELATION TO THEIR GENDER

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ABSTRACT

Nowadays mental health and adjustment ability are two important factors for the development of an individual. If one does not have good mental health he/she cannot enjoy life. On the other hand, if someone has adjustment problem, he/she will always face difficulties to adapt to the environment. The present study aims to compare the mental health and adjustment ability of secondary students of Tufanganj subdivision in relation to their gender. A sample of 200 secondary students were drawn from the population for the present study. The researcher used Mental Health Inventory (MHI) constructed by Dr. Jagdish, Dept. of psychology R.B.S.P.G. college, AGRA and Dr. A. K. Srivastava Dept. of Psychology B.H.U., VARASASI. In this study researcher found the relation between mental health and adjustment ability of secondary students. There is no significant difference in the mental health and adjustment ability of secondary students based on sex in Tufanganj subdivisions. This study also showed significant and postive relationship between mental health and adjustment ability. Hence mental health and adjustment ability of persons make an important role in ones life.

Generally, people having good mental health also have good adjustment ability. In this study also the author found the same trend.

INTRODUCTION

It is said that health is wealth. But, when we talk about health, we generally think about physical health and hardly think about mental health. Today it has become very essential element specially in our stressful daily life. Also, in a multi-dimensional society, we need to have good adjustment ability too. Mental health and adjustment ability are two important factors needed to maintain a good social life. Adjustment ability helps an individual to balance between needs and satisfaction.

According to the World Health Organization (WHO), mental health includes "subjective well-being, perceived self-efficacy, autonomy, competence, inter-generational dependence, and self-actualization of one's intellectual and emotional potential, among others." The WHO further states that the well-being of an individual is encompassed in the realization of their abilities, coping with normal

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stresses of life, productive work and contribution to their community. Cultural differences, subjective assessments, and competing professional theories- all affect ones "mental health". A widely-accepted definition of health by mental health specialists is by Sigmund Freud's the psychoanalyst who stated this as capacity "to work and to love".

In psychology, adjustment refers to the behavioural process of balancing conflicting needs, or needs against obstacles in the environment. Humans and animals regularly do this, for example, when they are stimulated by their physiological state to seek food, they eat (if possible) to reduce their hunger and thus adjust to the hunger stimulus. Adjustment disorder occurs when there is an inability to make a normal adjustment to some need or stress in the environment.

NEED AND SIGNIFICANCE OF THE STUDY

In our day to day life it is very important for people to have good mental health. People having good adjustment ability can easily adjust with the new situations. It is the need of the hour that people should have good mental health and good adjustment ability. It can help them to be a successful person in their life. Without good mental health one cannot face problems in their daily life, specially in their work places.

Although mental health is an important term in the educational field, it has not received sufficient attention by the researchers. As a result, the previews in education and allied discipline could only partly and peripherally cover this domain. In the Indian context, through the reviewing, of the several literature revealed that rarely studies have been undertaken in Tufanganj subdivision of Coochbehar district in West Bengal to study the metal health of SC secondary students. Hence such a study has been conducted.

OBJECTIVES OF THE STUDY

The main objectives of the study were
i)   To study the mental health of secondary school students of Tufanganj sub-division.
ii)   To study the adjustment ability of secondary school students of Tufanganj sub-division.
iii) To find the relation between mental health and adjustment ability of secondary school students of Tufanganj sub-division.

HYPOTHESES

$H_0 1$: There is no significant difference in the mean scores of mental health of boys and girls of secondary school students of Tufanganj district sub-division.

$H_0 2$: There is no significant difference in the mean scores of adjustment ability of boys and girls of secondary school students of the Tufanganj district sub-division.

$H_0 3$: There is no significant relationship between the mean scores of mental health and adjustment ability of secondary school students of Tufanganj district sub-division.

METHODOLOGY IN BRIEF
Method

Normative Survey method was adopted for the study.
Sample

A sample of 200 students were selected from secondary schools of Tufanganj Subdivision, West Bengal. Stratified Random sampling was adopted for the collection the data.

Tool used

The researcher used Mental Health Inventory (MHI) constructed by Dr. Jagdish, Dept. of psychology R.B.S.P.G. college, AGRA and Dr. A. K. Srivastava Dept. of Psychology B.H.U., VARASASI.

Statistical Technique used

For the analysis and interpretation of the collected data, the statistical technique was used was t-test.

RESULT AND DISCUSSION

The results of this present study are interpreted in the following manner as detailed below.

Hypothesis 1: There is no significant difference in the mean scores of mental health of boys and girls of secondary school students of Tufanganj district sub-division.

Table 1

Mean, Standard deviation, Standard error of mean and significant difference of adjustment ability of boys and girls secondary schools students of Tufanganj subdivision.

Category	Mean value	S.D (σ)	Standard error of mean	t value	Significant
Male	80	9.63	0.963	0.25	NS*
Female	81.25	5.85	0.585		

As the value of t is less than 1.96 at 5% significant level, it could be interpreted that there is no significant difference in the mean scores of mental health of boys and girls of secondary school students of Tufanganj subdivision.

Hypothesis 2: There is no significant difference in the mean scores of adjustment ability of boys and girls of secondary school students of Tufanganj district sub-division.

Table 2

Mean, Standard deviation, Standard error of mean and significant difference of adjustment ability of boys and girls secondary school students of Tufanganj subdivision.

Category	Mean value	S.D (σ)	Standard error of mean	t value	Significant
Male	92	15.73	0.157	1.32	NS*
Female	81.25	9.83	0.983		

As the value of t is less than 1.96 at 5% significant level it is stated that there is no significant difference in the mean scores of adjustment ability of boys and girls of secondary school students of Tufanganj district sub-division.

Hypothesis 3: There is no significant relationship between the mean scores of mental health and adjustment ability of secondary school students of Tufanganj district sub-division.

Table 3

Mean, Standard deviation, Standard error of mean and coefficient of correlation between mental health and adjustment ability of secondary school students of Tufanganj subdivision.

Category	Mean value	S.D (σ)	Standard error of mean	Correlation (ρ)	Significant
Mental health	61.41	6.56	0.656	0.71	S*
Adjustment ability	71.35	9.69	0.969		

As the value of ρ is greater than 0.138 at 5% significant level and 0.181 at 1% significant level, we can say that there is significant relationship between mental health and adjustment ability of secondary school students of Tufanganj district sub-division.

FINDINGS

i) There is no significant difference in the mental health of boys and girls of secondary school students of Tufanganj subdivision.

ii) There is no significant difference in the adjustment ability of boys and girls of secondary school students of the Tufanganj district sub-division.

iii) There is significant relationship between mental health and adjustment ability of secondary school students of Tufanganj district sub-division.

EDUCATIONAL IMPLICATION

This study will help people to understand the relation between mental health and adjustment ability and help people to understand the importance of mental health and adjustment ability in their day to day life.

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VIRTUAL LEARNING CHALLENGES FOR COLLEGE STUDENTS DURING COVID-19 PANDEMIC IN CONTEXT OF THE INDIAN EDUCATION SYSTEM

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ABSTRACT

The Outbreak of Covid-19 has observed in India during the end of the last academic year when the college students prepared themselves with the completion of academic syllabus for final exam. Colleges were shut down without any prior notice and without idea of re-opening predictions. The national and state governments have taken precautionary measures for education system and finally all have adjusted with an option of e-education system during this critical situation. Virtual education system has supported the education of students at various education levels with various challenges in it. Since ages, Indian education system is a system that has formed with direct contact between Guru and disciple, but multimedia aids are nowadays used as supplements in education. If virtual education becomes whole and soul then all its limitations become challenges in the process. Virtual learning challenges of college students can be addressed through proper guidance, little accuracy and attention, and wise use of technology.

INTRODUCTION

When each and every task comes with its own challenges then it increases with users and circumstances. COVID-19 pandemic is itself a challenge for the whole world. Under this pandemic, human beings face so many challenges in almost every activity during each day. Education is one of the important aspects and a field of challenge. The education system is already struggling among certain challenges as obstacles change its pattern with contemporary demanding situations for each new generation in normal conditions. These problems take higher place when something uncertain happens. India has faced the pandemic due to the corona virus during the end of academic year when students were preparing themselves for getting promoted in higher class of their educational level. In the promotional pressure they might have got confused with what is more important to deal first. A way was found in form of virtual/e learning options. Hence, to fulfill the needs of learners and

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to reduce a lag in education system, option of virtual teaching-learning is believed to be best fitted in this situation. Humans always find a way from problems but in the beginning of trial and error phase they face some obstacles and then overcome it with possible solutions. Electronic education has many challenges to be used but the intensity of it increases due to the situation of COVID-19 pandemic. Once we find the problem and its reasons then it makes it easy to solve it rapidly.

The present study has been conducted to know about learning platforms used by college students during the pandemic and challenges they may have faced in their learning activities. Based on the results of the study, the role of teachers, parents, stakeholders and governments can be clarified to support college students for their educational development during COVID-19 pandemic.

NEED AND SIGNIFICANCE OF THE STUDY

As per Indian traditional education system, students are habituated to learn in face to face interactive environment and no one has ever thought to change that system as it is very comfortable situation to learn and teach. With changing time education system has gone through many changes but the instructional system remained almost unchanged. Many technological inputs can be observed in 21st century's education system in India but total virtual learning was never a plan to be implemented in it. The situation of the corona virus pandemic has put education in non-essential part of life for temporary period of time in the beginning and later it has been started with virtual teaching-learning mode. No one has ever expected such a kind of situation to be faced and that makes a space to study about virtual teaching-learning situation to provide betterment in future for the same with efficient use of virtual learning platforms. Only if educators know the challenges faced by their students during virtual learning, then they could try to overcome possible obstacles from it and education can be provided more smoothly. The study would provide a brief knowledge about the kinds of virtual learning platforms used by students for learning with comfort, issues that occur during such education process which definitely help students and educators to make future learning system more convenient with efficient use of virtual technology.

OBJECTIVES OF THE STUDY

1. To know about the virtual learning platforms used by college students during COVID-19 pandemic.
2. To study the difficulties faced by college students in virtual learning during COVID-19 pandemic.
3. To study the reasons of difficulties faced by college students in virtual learning during COVID-19 pandemic.

RESEARCH QUESTIONS

1. What kind of e-learning platforms are used by educators to teach college students?
2. What are the e-learning platforms that students find comfortable to learn with?

3. Which features of e-learning platforms are liked by students to learn effectively and why?

4. Which features of e-learning platforms make students feel not appropriate for their education and why?

5. What are the major pinching issues faced by students during virtual learning programmes and why?

6. What kind of time management issues that students are facing during virtual learning programmes and why?

7. What kind of instrumental issues that students are facing during virtual learning programmes and why?

8. What kind of environmental issues that students are facing during virtual learning programmes and why?

9. What kind of interactive issues that students are facing during virtual learning programmes with their tutors and why?

10. What are non-satisfactory aspects of virtual learning programmes that students expect to be removed essentially and why?

METHODOLOGY IN BRIEF
Method

To study the research objective appropriately, the researcher has followed survey method to study the present problem. It is a descriptive type of research to justify interpretation of research questions to be described from the sample responses.

Sample

The sample of the study was selected by random sampling method from different colleges of Education in Gujarat state. Teacher students (N=188) were voluntarily taken to collect data for the study from various teacher education institutions of Gujarat state. The students varied in terms of their educational courses, academic year and subjects of specialization.

Tool used

The researcher has prepared a questionnaire to collect appropriate data from the selected sample. Open ended questions were formed to get complete answers with proper justification from the sample units. The questionnaire was circulated through Google forms to get responses for the study in COVID-19 pandemic situation of social distancing.

Responses regarding use of various e-learning platforms and difficulties in the use of the same were collected from college students of various courses of various educational institutions of the state through the questionnaire in Google forms. Students' responses were reported for each item and these records were used to determine a percentage of student teachers with similar views.

Statistical techniques used

Percentage analysis was used for analyzing the collected data. The percentages found from the survey were used to draw interpretation of the study related to the difficulties in the use of particular virtual learning platform by college students in COVID-19 pandemic.

RESULTS AND DISCUSSION

Table 1

Usage of e-learning Platforms by College Students during COVID-19 Pandemic

Sr. No.	e-learning Platform	Percent of Usage
1	Zoom meeting App	91
2	YouTube	76
3	Google Meet	57
4	WhatsApp	72
5	BISAG	19
6	Google Classroom	86
7	Telegram	67
8	Microsoft Team	41
9	WebEx	33
10	Slide Share	56
11	LinkedIn	01
12	Coursera	05
13	MOOC	09
14	Diksha	23
15	Other Web Sites	66

In the answer of the first research question it can be observed that teacher students are using Zoom, Google meet, Google Classroom, WhatsApp, Microsoft Team, and BISAG to teach their students during COVID-19 pandemic.

Out of mentioned e-learning platforms in the questionnaire, college students have chosen their convenient e-tool for virtual learning. Observations drawn from the data reveals that more students (86%) are using Google Classroom to connect to their educational

organization frequently and conveniently compared to WhatsApp (72%) and Telegram (67%). Also more students (91%) are using Zoom meeting App for attending their lectures compared to Google Meet (57%), Microsoft team (41%) and WebEx Meet (33%), 76% students have used YouTube for self-study compared to reading material available online and slide share. Use of Google Classroom, Zoom Meeting App and YouTube has been observed to have more usage in comparison to other learning e-platforms in virtual learning of college students during COVID-19 pandemic and lockdown situation. User friendly features of these apps are appreciated by its users. Students are also using MOOC, Diksha, Coursera, LinkedIn, SlideShare and other educational websites for self-study and for their educational development.

Open ended responses of the sample units of the study are described in the second part of the result and discussion session based on the framed research questions one by one as below. Responses of the students are described and interpretations are given in the form of answers of research questions of the study.

Features like quick access tools which are easy to understand and user friendly, less complicated system with consuming less Internet data in learning platforms used by them during COVID-19 pandemic. E-learning platforms which are consuming more Internet data and create problem in sharing teaching learning material during their lectures are stated less used and unfavourable e-learning platforms by students.

Based on the Responses collected from the sample units of the present study it can be said that major pinching challenges of students in virtual learning programmes are like not able to concentrate in online learning for longer periods of time, it makes them tired physically and mentally, they cannot interact with their tutors satisfactorily as well as with the peer groups, they are facing problem of availability of proper learning environment at home. They are not able to develop their practical skill in respective subjects as everything cannot be learned by PowerPoint presentation and multimedia. Availability of technical devices and high speed internet data with unbreakable connections seemed to be important issues for students in virtual learning mode during COVID 19 pandemic.

From the responses of the questionnaire it has been observed that some students can concentrate on their studies only in the morning period of time, some are not. They also required proper break between two consecutive lectures every day so they can focus on each lecture appropriately. Some students cannot study in the morning period of time and they prefer evening time or in the afternoon as being home with other family members. Another problem among students regarding time management is as they cannot cope up with virtual learning schedule compared to their regular studies as they were habituated. They cannot provide time for other works as sometime their tutors set the lectures in uncertain time.

All the parents cannot afford high speed Internet data and digital devices for their children. So some students cannot receive their education due to lack of availability of instruments an if they have a device for their learning programmes they cannot use it properly as they face low data

availability and they have to share the device with their siblings. Students lose their focus in gaming applications and social media websites instead of study in virtual learning mode.

Based on the responses, it has been observed that students don't feel motivated to study at home as they cannot have proper learning environment and as being home with their family members, they cannot get socialise with their peers and tutors comfortably. Home environment is observed to be a good place for self-study but for regular classes they cannot concentrate properly and avoid attending lectures during the pandemic. Neighbourhood noise is also one of the environmental challenges for students in virtual learning.

Interpretations drawn from the results regarding interaction reveal that students who are extroverts can easily ask questions to their teacher educators but those students who are introverts are not compatible to ask questions to their teacher educators even in the virtual mode of education. Some students are seen to remain with their confusions and query regarding their concepts due to lack or negligible interaction with their tutors. Sometimes teacher educators cannot understand the queries of the students and due to lack of proper communication channel students and educators are not able to connect properly. Interaction challenges are also there due to internet connection problem, limitations of e-learning platforms, network connection issues also raised problems in smooth interactive learning practise during COVID-19 pandemic. In face to face learning students can interact with their classmates immediately after teaching session by teacher educators. Online learning system does not provide proper time to the students to interact with each other.

In the interpretation of last research question, researcher has observed that some students are strictly not satisfied with this virtual learning system due to COVID-19 situation but if they are still trying to keep their self engaging in their learning they expect to be provided with some face - to - face learning programmes at some time interval with keeping safety measures properly. They are also expecting some face to face interaction with their teacher educators to solve their queries regarding the subjects, some students are demanding for practical and hands on training related to their subjects that can be possible by providing proper social distancing and with proper sanitisation facility at particular time interval that should included in their academic calendar. E-learning platforms should be developed in such a way that minimise the user challenges by students and proper training should be given to their educators as well as to college students so the virtual learning process can be smooth. Proper gadgets and internet connection should be provided to all of them who are engaged in virtual teaching-learning process. With appropriate support of government, educational institution, parents and educators, virtual learning challenges can be minimised during this COVID-19 pandemic.

MAJOR FINDINGS

In response of various platform used by college students for virtual learning were observed in favor of Google Classroom, Zoom Meeting app, Telegram, Google meet, slideshare and YouTube. For educational material recourses, students were found to use random Google search for different educational websites. Students are in favor of such e-platforms as they are very much user friendly.

Students have mentioned the major difficulties in the use of e-platforms for virtual learning during COVID-19 pandemic in terms of interaction with their educators and class mates, time management at being home all the time for their study, technical aspects in terms of instruments, internet connection, limitation of e-platform applications like technical errors in connection of audio and video, limited access of the application, exchange of e-learning material, technical tools, electricity and availability of internet data with its cost effectiveness.

Other than technical challenges, students have faced difficulties in the use of e-learning platforms due to lack of interaction with their tutor, less content clarity, insufficient time for discussion, uncomforting in asking questions, and disturbance due to home environment. Reason for facing such challenges which can be observed through this study is discomfort of college students in use of e-learning platforms as they have never used it in full-fledged condition before this COVID-19 pandemic and their technical ability to use such e-platforms efficiently.

Government authorization can help in the technical challenges of college students for their education. Many technical difficulties cannot be overcome including its expensiveness by parents and educators but their active support and guidance can definitely help students in their study by using various kinds of effective e-platforms in their educational practice during this COVID-19 pandemic.

CONCLUSION

Based on the result and the discussion of the present study, it is clearly observed that the sudden change in education system from face to face to entire virtual mode has raised many challenges for college students during COVID-19 pandemic. Students are facing many challenges in virtual learning system in terms of time management, learning environment, resource availability, instrument availability and interaction with their tutors as well as with their peer groups. With the help of efficient and skilled tutors, appropriate e-learning platforms, skilful use of e-resources and appropriate technical support including technical devices, these challenges of virtual learning can be minimized for college students during COVID-19 pandemic.

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CHALLENGES OF USING E-LEARNING PLATFORMS TO PROMOTE DIGITAL EDUCATION

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ABSTRACT

Amidst the pandemic of covid-19 in present times, the field of education is going towards adopting digital mode. The government has also launched a number of channels as well as portals for digital education. Portals have been started to train not only the students but also the teachers. There are many challenges faced by people involved in digital education. This research is conducted to know the challenges of using e-learning platforms as well as to think about possible solutions to overcome these challenges.

INTRODUCTION

For centuries, human beings have been receiving education in a formal as well as informal ways. Evidences of these are also obtained from the puranas as well as shastras. Over time, new dimensions have been added to the educational curriculum, one of which is technology.

In the contemporary time, the technological dimension of the education sector remains very important, especially at a time when the entire world is facing so many hurdles at the time of this COVID-19 pandemic. The rapid use of technology is changing not only in the field of education but also in other fields. All sectors such as health, agriculture, banking, marketing and all have turned towards digitalization. Currently the most popular concept in education is digital education or e-learning platform.

NEED AND SIGNIFICANCE OF THE STUDY

According to UGC, at the time of this pandemic, a certain percentage of course will have to be completed through online education. Currently schools, colleges, and universities are using many e-platforms for providing education like Google Meet, Cisco Webex, Zoom, Google Classroom and Microsoft Teams.

There is a positive and a negative side to anything. When we accept the positive side of digital education, we also have to accept its challenging side. Then we have to understand the challenges, think of ways to overcome it and work in that direction. It is necessary to study how far the e-learning platform is effectively used to promote digital education. This research has been conducted to find out the challenges involved in using e-learning platforms to promote digital education.

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OBJECTIVES OF THE STUDY

The objectives of doing this research are as follows.

1. To study the difficulties faced by secondary school teachers in teaching through e-learning platform.
2. To study the difficulties faced by the students of secondary school through e-learning platform.
3. To study the difficulties faced by the affiliated institutes through e-learning platform.
4. To study the difficulties faced by the parents in the e-learning platform.

METHODOLOGY IN BRIEF

Method

Descriptive research design was adopted for conducting the present study.

Sample

Purposive sampling method was used to select the sample.

Purposive sampling method was used to select the sample.

No.	No.of schools selected as sample	No.of students selected as sample from each school	No.of teachers selected as sample from each school	No.of students included in sample	No.of total teachers included in sample	No.of total parents included in sample
1.	6	10	3	60	18	60

Tool used

Questionnaire was used as an instrument to gather the information from the respondents.

Statistical technique used

Percentage analysis was used to collect the data from the respondents.

RESULT AND DISCUSSION

The analysis of the information obtained from the sample for the present research is as follows.

Sample		Favorable	Unfavorable	Neutral	Total
Teachers	(f)	3	15	0	18
	%	16.67%	83.33%	0	
Students	(f)	15	40	5	60
	%	25%	66.67%	8.33%	
School management	(f)	3	3	0	6
	%	50%	50%	0	
Parents	(f)	20	30	10	60
	%	33.33%	50%	16.67%	
Total	(f)	41	88	15	144
	%	28.47%	61.11%	10.41%	

It is inferred from the second table that in the sample of teachers involved in the study, 83.3% had high level of difficulties in teaching through e-learning platform and only 16.67% had high level of difficulties in teaching through e-learning platform.

It is also inferred from the said table that in the sample of students involved in the study, 66.67% had high level of difficulties in learning through e-learning platform.

It is also inferred from the table that in the sample of school management members involved in the study, 50% had high level of difficulties in using e-learning platform.

It is also inferred from the table that in the sample of school management members involved in the study, 50% had high level of difficulties in using e-learning platform.

FINDINGS

The findings of the study indicate that teachers, students, school management and also parents face many difficulties in using e-learning platforms.

(A) challenges for teachers

   i. Sometimes,teachers are not trained for the e-learning platform so they might face troubles while operating the system.

   ii. Virtual class raises questions of discipline.

   iii. Teaching can not be done through eye to eye contact via e-learning.

   iv. All children have different grasping power therefore children need the attention of teacher according to their potentials which is not feasible in online platform.

   v. Two-way communiation does not take place effectively in online platforms.

   vi. Students cannot be kept active in online platforms.

   vii. Children are fickle by nature. So it is very important to pay attention to them which is not possible for the teacher on the online platform.

   viii. Assignments given to the students are not submitted at the right time by the students.

   ix. There is more scope in online education to be misunderstood by students on the suggestions given by the teachers.

   x. The progress of students cannot be effectively evaluated.

   xi. Sometimes,regularity cannot be brought into education.

   xii. There is no scope for effective discussion.

(B) challenges for students

   i. Students in rural areas have to face problem of internet connectivity.

   ii. If the student's financial situation is not good,they can not engage in digital learning as they can't afford the tools for online leraning.

   iii. They are deprived of studies due to insufficient knowledge of digital education.

   iv. For digital education, it is very important for students to be self-disciplined which is rarely observed among students.

   v. In classroom education,students get answers to many questions only through discussion with their friends while in digital education,there is no scope for interaction.

vi. Students can not manage time properly.

vii. Digital education requires self-motivation and this is not found in many students.

viii. sometimes student-teachers connectivity seems to be absent in digital education.

ix. A classroom-like environment can not be experience in digital education.

x. The questions that have arisen can not be resolved immediately.

(C) challenges for school management

i. School management finds it difficult to equip digital education with new technologies.

ii. In many cases, they are not able to provide proper facility.

iii. Often parents don't accept digital education in place of traditional education due to mind set.

(D) challenges for parents

i. Parents whose financial condition is not good can not provide tools for digital education to their children.

ii. Understanding digital education remains very difficult for less deprived parents.

iii. There is possibility that children are distracted due to such platform.

iv. Parents are unable to guide or supervise their children.

CONCLUSION

Teachers, students, school management as well as parents are facing many challenges while considering digital education as an alternative to classroom education. During this time when the world is facing a pandemic, e-learning platforms are becoming important for enlightenment. It is very important to make use of the opportunities of getting knowledge from all sources including digital education.

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PERCEPTION OF TEACHERS TOWARDS USING ENVIRONMENTAL MODEL FOR TEACHING BIOLOGY

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ABSTRACT

Biology is on important subject in school curriculum. The goal of successful teaching of Biology depends on how far the students achieve the fundamental knowledge of biological concepts. The prime duty of the Biology teachers is to adopt effective methods to make the teaching learning process as an interesting one and give the experience of discovering scientific concepts through the scientific process, with impact on environment and society. Instead of teaching Biology inside the classroom, teachers can take students outside their classroom for teaching certain some concepts in Biology. There are different methods followed by teachers to take the students to outside the classroom. Some of the methods are nature study, outdoor education, outdoor learning, field trip, place based studies and environmental based education and environmental models. Environmental models were developed on the basis of available resources of society. Environmental models shall provide direct experiences to the students to experience the concepts in Biology. The goal of Environmental model is to make learning more authentic and interesting through taking students outside the class room and co-operative social experiences. The commitment of teachers to take students outside the classroom depends entirely on their perception towards methods and strategies used for that. Thus teacher's perception toward using Environmental model plays a pivotal role in its incorporation. The present study is attempt to find out the perception of teachers towards environmental model for teaching Biology. The study revealed that there are many advantages of using environmental model for teaching Biology and also teachers opined that Environmental model is highly suitable for realizing the instructional objectives framed for teaching Biology.

NEED AND SIGNIFICANCE OF THE STUDY

One of the objectives of teaching Biology is to develop interest among learners. Most of the teachers use traditional methods to teach all

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concepts in Biology. But this method may fail to arouse interest among learners and results in poor learning.Sharp (1957) opined that "That which can be learned inside the classroom should be learned there, that which can best be learned in the out-of-doors through direct experience, dealing with native materials and life situations should be learned there"(cited in Broda, 2007).Instead of teaching Biology inside the classroom, teachers can take the students outside the classroom for teaching some concepts in Biology. There are different models, approaches, strategies for outdoor education which were developed by the earlier researchers in the field of education. Research studies conducted in this area revealed that outdoor learning is highly effective. The purpose of taking students outside the classroom would help the students to get first-hand experience, and enrich their knowledge. Environmental models developed for environmental education aims to create awareness about environment and develop positive attitude towards environment. Environmental models were developed on the basis of available resources. Environmental models provide direct experiences to the students to learn the concepts in Biology. The goal of Environmental model is to make learning more authentic through taking students outside the class room and co-operative social experiences. Environmental model for teaching Biology focuses on understanding the content and process of scientific observation and investigation. Through this Environmental model of teaching Biology, independent thinking, co-operative skills, and interest in inquiry and process skills can be developed among students which are essential for developing various skills and capabilities of students. The outdoor environment is the one most neglected areas by teachers, curriculum developers, and planners due to rigid time table and examination - oriented system of education. Studies conducted on the effectiveness of field trip by Falk, 1983; Falk & Balling, 1982; Falk, Martin, & Balling, 1978; Martin, Falk, and Balling, showed that the learning performance of students acquainted with the field trip location were significantly better than those not as familiar. Also their ability in cognitive tasks depended on the field trip setting. Widyastuti, Probosari, Saputro, Soetikno and Sajidan (2019) studied teachers' viewpoints of teaching science using experiential learning related to environmental issues revealed that difference between teachers' perceptions and practicing on teaching environmental issues, but, in general, they showed interest only in experiential learning implementation.

OBJECTIVES OF THE STUDY

1. To collect the response of the Science teachers regarding the practice of taking the students outside the classroom for teaching Biology.

2. To collect the opinion of the Science teachers regarding the advantages of using Environmental model for teaching Biology for the students of standard IX.

3. To collect the opinion of the Science teachers regarding the extend of feasibility of Environmental model for teaching Biology for the students of standard IX.

4. To assess the suitability of Environmental model in realizing the instructional objectives for teaching Biology.

METHODOLOGY IN BRIEF
Method
For the present study, normative survey method is adopted.

Sample

The sample selected for the study consists of 35 Science teachers drawn from 20 schools in Kanniyakumari district of Tamil Nadu. The investigator adopted simple random sampling technique.

Tool used

Self-made validated closed end Questionnaire was used to study the perception of science teachers on various areas namely,the practice of taking the students outside the classroom, advantages of using Environmental model for teaching, feasibility of Environmental model for teaching ,suitability of Environmental model in realizing the instructional objectives for teaching Biology.

Statistical technique used

The statistical technique used for the study was percentage analysis.

RESULT AND DISCUSSION

Table 1

Response (in percentage) of teachers regarding taking the students outside classroom

Response	Frequency	Percent
No	13	37.1
Yes	22	62.9

From the table -1 it is clear that,62.9% of high school teachers have reported that they take their students outside classroom for teaching certain concepts in Biology and 37.1% of them reported that they don't do so.

Table 2

Response (in percentage) of teachers regarding taking the students outside classroom with respect to number of times (How often go outside)

No of times	Frequency	Percent	Valid Percent
once a day	5	14.3	22.7
once in a week	1	2.9	4.5
once in a month	13	37.1	59.1
twice a month	3	8.6	13.6

From the table-2, 62.9% high school Biology teachers ,14.3% of them take their students outside classroom for teaching specific concepts in Biology once in a day, 2.9% of them take their students outside once in a week,37.1% of them take their students outside once in a month and 8.6% of them take their students outside twice in a month.

1.3 Response of the teachers regarding the Advantages of using Environmental models in teaching Biology

Table 3

Response of the teachers regarding the Advantages of using Environmental models in teaching Biology

Advantages	%
Develops exploration and imagination in children	68.5
Develops self-care and self control among students	34.3
Learning outside the class room is more interesting than learning inside the classroom	65.7
Students learn more	62.9
Students enjoy learning science	85.7
Enables to teach joyfully	45.7
Students improve their interpersonal skills	45.7
Provides more recreational experiences to students	34.3
Provides active learning experiences	60.0
Provides direct personal experiences to students	57.1
Develops positive attitude towards learning	54.3
Increases motivation to learn	54.3
Enhance process skills	25.7
Develops an understanding, appreciation and respect for the environment	62.9
Builds leadership qualities among students	57.1
Provides opportunities for higher level of thinking among	48.6
Provides first hand concrete experiences to students	51.4
Promotes independent thinking	54.3
Learned concepts can be retained for longer time	48.6
Students can learn in groups	45.7
other reasons	31.4

From the table-3 it is clear that majority of the Biology teachers have opined that the environmental model is highly beneficial for the students with respect to certain aspects. 68.5 % of the teachers have stated that the environmental model develops exploration and imagination in children, 34.3% of the teachers have stated that the environmental model develops self-care and self control among students.65.7% of them have reported that learning from outside the class room is more interesting than learning from inside the classroom.62.9% of them reported that the students can learn more when they are taught through the environmental model. 85.7% of them

have reported that the Students can enjoy learning science through this model. 45.7% have reported that it enables them to teach joyfully.45.7% have reported that the students can improve their interpersonal skills through this model.34.3% have reported that it provides more recreational experiences to students.60% have reported that it provides active learning experiences. 57.1% have reported that it provides direct personal experiences to students. 54.3% have reported that it develops positive attitude towards learning. 54.3% have reported that it increases motivation to learn.25.7% have reported that it enhances process skills.62.9% have reported that it develops an understanding, appreciation and respect for the environment. 57.1% have reported that it builds leadership qualities among students.48.6% have reported that it provides opportunities for higher level of thinking among students.51.4% have reported that it provides first hand concrete experiences to students.54.3% have reported that it promotes independent thinking.48.6% have reported that it helps to retain the learned concepts for longer time.45.7% have reported that the students can learn in groups. 31.4% have suggested other merits of this model.

Table 4

Response (in percentage) of teachers regardingExtent of Feasibility of Environmental model

Response	Frequency	Percent
Some Extent	27	77.1
Great Extent	8	22.9

From the table - 4, 22.9 % of teachers opined that this model is feasible to a great extent and 77.1% of them reported that it is feasible to some extent to teach Biology.

Table 5

Response (in percentage) of teacher regarding suitability of the Environmental model in teaching in realizing the instructional objectives of teaching Biology

Instructional Objectives of Teaching Biology,	Not at all	Some Extent	Great Extent
To acquire knowledge of terms,facts, events, concepts and principles concerning Biology	-	65.7	34.3
To develop understanding of terms, facts, concepts, principles etc. related to Biology	-	62.9	37.1
To apply acquired knowledge in unfamiliar situation	-	74.3	25.7
To acquire practical skills related to the study of Biology	2.9	60.0	37.1
To develop interest towards learning Biology.	2.9	40.0	57.1
To develop positive attitude towards Biology	2.9	48.6	48.6

From the table -5, it is clear that 65.7 % of teachers opined that this model is suitable to acquire knowledge of terms, of acts, events, concepts and principles concerning Biology to a great extent and 34.3% of them opined that this model are suitable for the above to some extent.

37.1% of teachers have rated that this model is suitable to develop understanding of terms, facts, concepts, principles etc. related to Biology to a great extent and 62.9% of them rated this model to some extent for the above item.

25.7 % of teachers have rated that this model is suitable to apply acquired knowledge in unfamiliar situation to a great extent and 74.3% of them rated this model to some extent for the above item.

37.1% of teachers have rated that this model is suitable to acquire practical skills related to the study of Biology to a great extent,60% of them rated this model to a some extent for the above item and only 2.9% of them rated this model are not at all suitable for the above the item.

57.1% of teachers have rated that this model is suitable to develop interest towards learning Biology to a great extent,40% of them rated this model to a some extent for the above item and only 2.9% of them rated this model are not at all suitable for the above the item.

48.6 % of teachers have rated that this model is suitable to develop positive attitude towards Biology to a great extent,48.6% of them rated this model to a some extent for the above item and only 2.9% of them rated this model are not at all suitable for the above the item.

CONCLUSION

Environmental model for teaching biology create interest among students to learn Biology.And also all students in the class would get unique opportunities to learn the concepts and actively participate in the learning Environmental model of teaching provides scientific skills as well as inculcate habit of searching more knowledge through observation and inquiry. From the analysis it is found that 62.9% of high school teachers they take their students outside classroom for teaching certain concepts in Biology Teachers revealed that there are many advantages of using environmental model for teaching biology and also teachers opined the suitability of the Environmental model is highly effective for realizing the instructional objectives of teaching Biology. But most teachers are not frequently taking students outside for learning. For the effective integration of environmental models in the teaching learning process, teachers' active involvement and initiation is important. So necessary training is needed for science teachers to adopt environmental models using environmental resources for teaching Biology.

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DIFFICULTIES EXPERIENCED BY HIGHER SECONDARY STUDENTS IN LEARNING PHYSICS

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ABSTRACT

Each student is unique in their intellectual, physical, emotional, social and psychological development. The uniqueness of the individual is due to his environment, herdity cultural background, socio-economic status and experiences. Each student faces unique difficulties in learning also. Many times the teacher fails to address these difficulties. Learning Science concepts and principles, especially Physics is difficult for many students. These learning difficulties affect adversely their achievement in Physics. Hence there is an imperative need to design the teaching learning process to meet the needs and problems of learners. The purpose of this study was to identify the difficulties experienced by higher secondary students in learning Physics based on gender and type of management. A two-tier diagnostic test was used to identify the difficulties of students in learning Physics. The tool consisted of 40 items from nine areas of standard XI Physics. The sample of the study consisted of 675 higher secondary students from different schools in kanyakumari district. Stratified random sampling technique was adopted. The findings of the study revealed that majority of the students had difficulties in learning physics. Gender and type of management differed significantly in learning Physics. The study through recommended that Physics teachers should make use innovative strategies to deal with the concepts and principles of physics.

NEED AND SIGNIFICANCE OF THE STUDY

Science is a dynamic and expanding body of knowledge covering over-new dimensions of experience. It has dominated every field and it has becomes essential for every citizen. Paul De Hart suggested that the Science curriculum of the future be based on interrelationships between human beings, natural phenomena, advancement in Science and Technology and the quality of life. Science comprises the basic discipline such as Physics, Chemistry and Biology. Physics is one of the branches of Science that deals with the phenomena which are related to matter and

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energy. The purpose of Physics teaching in school is to enable students to grasp systematically the basic knowledge of Physics needed for further study of modern Science and Technology and to understand its application in their daily life.

Physics is considered by many as one of the difficult subjects for higher secondary students. Ekici,(2016) studied the difficulty in learning physics and revealed that most of the content in Physics course was the reason for perceiving Physics as difficult for the students. According to his recommendation the concept should be related to the real life of the student and the physics text book should be prepared based on the need of the student. Learning Physics depends on various factors such as needs, interest of the child, his/her learning style, the kind of teaching-learning material used and teaching methods used by the teacher. The reason for difficulty in learning Physics could be the abstract nature of the subject, use of mathematical application, formulas, graphs and conceptual explanation. Ornek, Robinson, and Haugan (2008)identified two factors which are responsible for difficulty in learning Physics. These are students-controlled factor and course-controlled factor. In their findings students-controlled factor influence more in success than course-controlled factor. Myneni, Naraganan, Rebello, Rouinfar and Pamtambekar (2013) found that the interactive method of teaching was more effective and motivated the students towards learning Physics. The investigator being a Physics Teacher Educator in Physical science education made an attempt to study the problems experienced by students in learning Physics.

OBJECTIVES OF THE STUDY
1. To find out the level of difficulties experienced by higher secondary students in learning Physics.
2. To compare the mean scores of learning difficulties of higher secondary students based on gender and type of management

HYPOTHESES
1. There is no significant difference in the mean scores of learning difficulties of male and female higher secondary students
2. There is no significant difference in the mean scores of learning difficulties of Government, private-aided and private higher secondary students.

METHODOLOGY IN BRIEF
Method
Normative survey method was adopted for the present study.
Sample
The present study was conducted on a sample of 675 higher secondary students studying in different schools of Kanniyakumari District following state board syllabus. Stratified random sampling technique was adopted to select the sample.
Tool Used
A two-tier diagnostic test validated by the investigator was used for collecting the data. The tool consisted of 40 items from nine topics namely significant figures, rules for writing SI units, ray optics, force and its interaction, Kepler's law, dimensional formula, acceleration due to gravity, stress & strain and wave motion of XI standard physics.
Statistical techniques used
The statistical techniques used for the present study were percentage analysis, standard deviation, t test and ANOVA followed by Scheffe procedure.

RESULT AND DISCUSSION
Table 1

Level of difficulty experienced by higher secondary students

Levels	Count	Percentage
Low	107	15.85
Medium	444	65.78
High	124	18.37
Total	675	100.00

It is evident from the table 1, that 15.85% of students have low level of difficulty in learning Physics, 65.78% of students have medium level of difficulty in learning Physics and 18.37% of students have high level of difficulty in learning Physics. So it can be concluded that higher secondary students have moderate level of difficulty in learning Physics.

Table 2

Comparison of learning difficulty experienced by higher secondary students based on gender

Gender	Mean	SD	N	t	p	Remark
Male	7.06	6.02	259	7.993	0.000	Sig. at 0.01 level
Female	11.22	7.38	416			

It is evident from the table 2, the calculated t value is (7.99), p<0.01 and therefore it is significant at 0.01 level of significance. Hence the null hypothesis is rejected. Also from the mean scores it is clear that female students experienced more difficulty in learning Physics than male students. Hence there is significant difference in the mean scores of learning difficulties of male and female higher secondary students.

Table 3

Comparison of learning difficulty experienced by higher secondary students based on type of management

Management	Mean	SD	Source	Sum of Squares	df	Mean Square	F	p	Remarks
Government	8.52	4.88	Between Gp	771.81	2	385.90	7.635	0.001	Sig. at 0.01 level
Aided	9.10	5.49	Within Gp	33963.47	672	50.54			
Private	11.00	9.55	Total	34735.28	674				

It is evident from the table-3, that the calculated F value is 7.635p<0.01, therefore it is significant at 0.01 level and hence the null hypothesis is not accepted. It showed that there exists significant difference in the mean learning difficulties scores of higher secondary students from government, private-aided and private in learning Physics. The result does not help to identify exact pairs of groups which differ significantly. Hence the post hoc analysis was used for further analysis.

Table 3.1

Result of Schefee procedure

Management	N	Pair	p (Scheffe)	Remark
Govt (A)	198	A Vs B	0.701	NS
Aided (B)	231	B Vs C	0.015	Sig. at 0.05 level
Private (C)	246	A Vs C	0.001	Sig. at 0.01 level

It is evident from the table-3.1, that there exists significant difference in the mean scores of learning difficulties of students from private-aided and private, Government and private schools. The other pair Government and private-aided higher secondary students did not differ in their learning difficulty.

FINDINGS OF THE STUDY

The following were the major findings of the study

1. The level of learning difficulty of higher secondary students was found to be moderate.
2. Female students experienced more difficulty in learning Physics than male students.
3. There exists significant difference in the learning difficulty of students from private-aided and private, and Government and private schools.

CONCLUSION

The result of the findings revealed that majority of the students experienced learning difficulty in Physics. Only 15.85% of the students feel that physics is easy for learning. Remaining 84.15% students feel physics as a difficult subject. Gender influences the learning difficulty of higher secondary students. Female students experienced higher difficulties in learning physics than male students. Type of management influenced the learning difficulty of the students. Among them Private-aided and private and Government and private higher secondary students have significant level of learning difficulties and the other pair viz., Government and private-aided do not differ significantly.

EDUCATIONAL IMPLICATIONS

From the findings of the study the following implications could be made. Most of the students feel Physics as a difficult subject. So the Physics teachers should adopt suitable pedagogical techniques which are easier for their

to understand the concepts. Other than lecture method and lecture-demonstration method, innovative learning techniques such as cooperative learning, collaborative learning, multimedia instruction, and brain based learning can also be be employed by the teachers. This would help the students to understand the concepts thoroughly and develop interest among the students. Now most of the classrooms are technology supported one and so the teachers could be equipped to handle various technological tools like interactive white board, digital visualizer, and digital presentation. Also teachers could identify learning difficulties of the students with the help of diagnostic test and prepare separate remedial teaching techniques for easy understanding of concepts in physics.

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TECHNOLOGY AND EDUCATION OF STUDENTS WITH VISUAL IMPAIRMENT

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** Dr. J. Sujathamalini

ABSTRACT

Assistive technology devices have become essential tools in the education of students with visual impairments. At present there are a number of assistive technologies available for the Students with Visual Disabilities pursuing school to higher education levels in India. Hence, the purpose of this paper is to prepare, explore, describe, and interpret the experiences of students with visual impairments in using assistive technology at all levels of education programme . It is the need of the hour to improve the standards for the next generation of information technology for persons who are visual impaired and print disabled. The educational needs of students with visual impairments and related technological perspectives are addressed, too, along with critical contributions of computer-aided learning and interventions. Practitioners can use digital textbooks, but they will need to ensure that they and their students are both properly motivated and adequately trained to use such technology.

This effort ensures preparation of Assistive Technology of Inclusive Education Programmes useful for the student with visual impairment pursuing all levels of education programmes.

INTRODUCTION

The world today is powered by technology, fuelled by information and driven by knowledge. Knowledge is the currency of modern life, and quality education for all is a requirement and not an option. Humans are gifted with five senses: vision, hearing, touch, taste and smell. As far as educational setting is concerned, most of the curriculum presumes that the students have perfect eyesight. Therefore most of the educational curricula tend to be eyes-intensive, which makes eyesight as an important feature to take full advantage of educational opportunities. Catering to the needs of students with visual disabilities and improving their learning are essential to their academic achievement. This article clarifies how technology additionally invites a comprehensive learning situation, with a sharp

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spotlight on assistive innovation, grounds assets that offer assistive types of assistance and apparatus, data about grants for students with visual disabilities, and online assets they can access to encourage scholastic and professional achievement.

TECHNOLOGY FOR VISUALLY IMPAIRED

Vision may be the most important sense for interpreting the world around us. When sight is impaired in childhood, it can have effects on physical, neurological, cognitive, and emotional development. Visual impairment is often considered as a disability or disorder. Even as an isolated disability, severe visual impairment causes delay in walking and talking and affects behaviour and socialization. It also examines disorders of the eye and common visual problems of the persons with disabilities.

Technology innovation is making education for the blind and visually impaired better, cheaper, and more seamlessly integrated into both traditional classroom and online settings. Many people with visual impairments live independently, using a wide range of tools and techniques.

ASSISTIVE TECHNOLOGY

Adaptive technologies refer to special versions of already existing technologies or tools, usually used by people with disabilities such as limitations to vision, hearing, and mobility. According to the United States Assistive Technology Act of 1998, assistive technology (also called adaptive technology) refers to any "product, device, or equipment, whether acquired commercially, modified or customized, that is used to maintain, increase, or improve the functional capabilities of individuals with disabilities.

VARIOUS ASSISTIVE TECHNOLOGIES FOR VISUALLY IMPAIRED
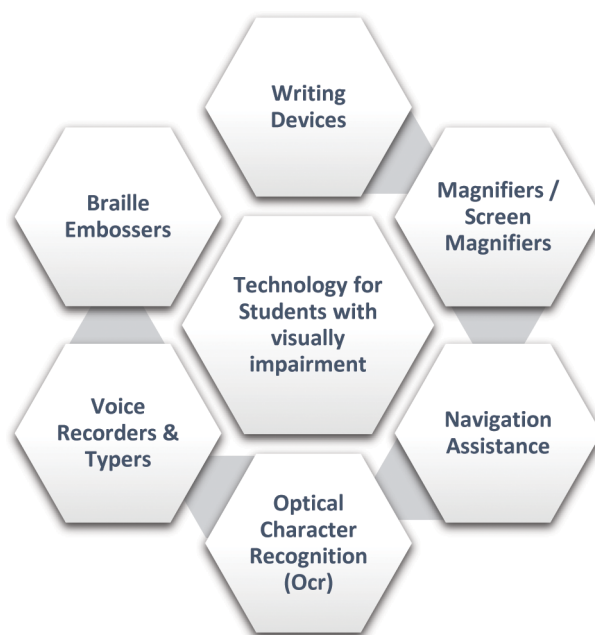
DAISY

DAISY (Digital Accessible Information System) is the emerging world standard for digital talking books for people who are blind or have a print disability. This format has been under development for over ten years, with most of the world's talking book libraries now employing some form of the standard. Work to improve and promote the adoption of the format is directed by the DAISY Consortium (<www.daisy.org>). DAISY attempts to give the talking book reader the same flexibility that readers of standard print enjoy: navigation by chapter, section, subsection, and page. Readers can read or skip footnotes, sidebars, or information added specifically for users of the audio version.

Greg Kearney

DAISY marks a significant advancement in the production of talking books for people who are blind or have a print disability. The standard and the new technology provide a better reading experience and have the potential to bring many more books to the ears and fingertips of the blind.

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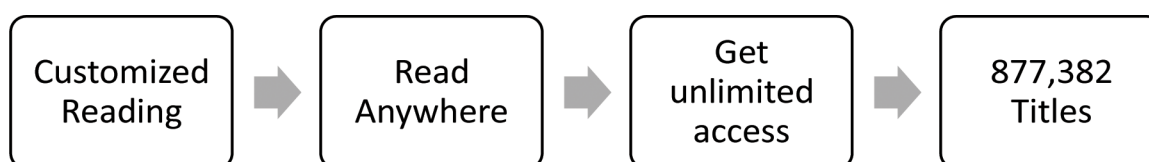
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♦ Reading on almost any device, including smartphones, tablets, Chromebooks, computers, and assistive technology devices.

SOFTWARES & APPS FOR VISUAL IMPARMENTS

- ✔ ZoomText
- ✔ MaGic
- ✔ Windows Magnifier (Built-In)
- ✔ Magnifier for MAC (Built-in)
- ✔ GlassBrick
- ✔ NVDA
- ✔ JAWS for Windows
- ✔ Windows Eyes
- ✔ Hal
- ✔ Cobra
- ✔ VoiceOver
- ✔ Orca (Solaris and Linux)
- ✔ Google Voice Typing
- ✔ Dragon Naturally Speaking
- ✔ Braina Pro
- ✔ Speechnotes
- ✔ Lazarillo
- ✔ Be My Eyes
- ✔ BlindSquare
- ✔ Nearby Explorer
- ✔ Google Maps

ADVANTAGES OF ASSISTIVE TECHNOLOGY IN EDUCATION

With the help of Assistive Technology, visually impaired students benefit a lot.

- Visually impaired students are able to work at their own pace.
- They are able to accomplish more individually.
- They are included into the regular classroom and by being included in the regular classroom it not only benefits the student with the disability, but also the other students and even the teacher.
- They are able to achieve academic standards.
- They are given the opportunity to socialize with more students.
- Technology can help students improve organizational skills and also writing skills.
- Technology helps students reach a higher level of education.

INSTRUCTIVE REQUIREMENTS FOR STUDENTS WITH DISABILITIES IN THE MIDST OF COVID-19

Around the world, the lives of at any rate 1.5 billion students and their families have been altogether influenced by the school terminations brought about by the COVID-19 flare-up. Governments have reacted by holding classes remotely – to a great extent on the web – to guarantee that students keep on considering.

However, this measure does not address instructive intermittence and interruption for all students. The estimate of 1.5 billion influenced students doesn't consider those who are minimized, impeded or "undetectable" in instructive frameworks. On the web and cutting edge based learning stages and assets should be accessible and every one of students ' needs should be obliged all together for governments, schools and instructors to guarantee that students are not abandoned during school terminations just as after schools revive, regardless of whether this happens in a half year or in a year.

CONCLUSION

With the level of technology accessible today, there is the possibility to build the availability of training students with Visual disabilities. Now and again, such students can take an interest in learning other individuals. The wide assortment of assistive innovation in global level executions permits the arrangement that fits better for specific students.

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CHALLENGES AND PROVISIONS IN IMPLEMENTING ONLINE LEARNING PRACTICES IN EDUCATION

* Dr. Sreekala K.L.

ABSTRACT

In the period of Corona virus pandemic, almost all the educational institutions remain closed, but the online learning platforms are seeing a rise. Online learning has become the default mode of learning in this lock down period. Now educational technology turns out to be the biggest intermediary of teaching learning process. Covid-19 has forced the educational institutions across India and the globe indeed to suspend physical classrooms and to shift to online mode of instruction. But no proper training is given to teachers and learners about the classroom online strategies, examinations and evaluation.

A number of benefits are there for online instruction like it is easily assessable from homes, reduced costs, and greater flexibility for teachers and learners and it has the advantage of training a large number of learners at the same time. But at the same time, educators experience many challenges also. This paper discusses some of the challenges educators face in dealing with digital education.

CHALLENGES AND PROVISIONS IN IMPLEMENTING ONLINE LEARNING PRACTICES IN EDUCATION

In the period of pandemic, almost all the educational institutions remain closed, but the online learning platforms are seeing a rise. Online learning has become the default mode of learning in this lock down period. Now educational technology turns out to be the biggest intermediary of teaching learning process. Covid 19 has forced the educational institutions across India and the globe indeed to suspend physical classrooms and to shift to online mode of instruction. But no proper training is given to teachers and learners about the classroom online strategies, examinations and evaluation.

A number of benefits are there for online instruction as it is easily assessable from homes, reduced costs, and greater flexibility for teachers and learners and it has the advantage of training a large number of learners at the same time. But at the same time, educators experience many challenges also. No doubt digital technology can enhance learning through accessing information

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and improving communication and improving self directed collaborative learning opportunities. Integrating technologies into our classroom is really a complex process. Professional development and creating a shared vision is important. Teaching becomes effective and meaningful when we integrate more than one technique to deal with a single issue. But while integrating we must make sure as to how we teach and what we teach.

CHALLENGES:

- Online learning is not effective for learners of all ages. Moreover all the learning courses are not so interesting to motivate learners. Some aspects consist of never ending sessions followed by a long list of multiple choice questions that fail to motivate learners.
- As far as MOOC's are concerned, only a small percentage of learners enrols in it seems to pass out.
- During an online classs, both teachers and learners encounter technical difficulties. Usually there is compatibility issues related to browsers and smart phones. In such cases, both teachers and learners do not know how to proceed. If the process of learning is disrupted repeatedly, they abandon the course.
- Students usually do not take online classes seriously. If the time table is fixed and attendance is compulsory, learners attend the classes. It provides flexibility in taking the classes at their own pace and time.
- Lack of expertise from the part of the educators is another problem. If the way of teaching and the platform selected for

learners are interesting, they would be motivated. So great efforts are made from the teachers to give them the best.
- Sudden shift from offline mode to online mode of teaching creates confusion in learners with regards to the goals and objectives of the programme.
- It also increases the rate of is equalities in opportunities. Private schools or schools with good funds can create sufficient provision in their institutions. What about other categories? Inequality in experience also matters. Similarly it is usually out of reach for students from rural and remote areas.
- Sudden integration of online instruction in institutions, its challenges and prospectus makes the teachers consider digital education a negative barrier.
- Learner's acquisition of devices also varies. All are not with the same quality android phones or laptops. So teachers need to provide multiple instructions to varied devices.
- Making distractions and absenting themselves from online classes creates problems to educators. Since no direct contact, the power to control concealing screens, lying about the devices, low range problems etc cannot be observed accordingly.
- Lack of professionally trained teachers who update the ICT innovations to keep up with the global technological advance seem to be rare. This needs special attention and training.

- Negative attitude from the part of administrators and educators are also a major problem. An average group of educators believe that digital instruction fail in attaining the learning goals at expected level.
- Lack of sufficient ICT support and infrastructure become a major challenge to teachers. Lack of appropriate technical support, availability of equipments, time allocated also matters in this aspect.
- Information overloading creates conflicts for learners with what the teacher is teaching. Learners are not able to differentiate the right points.

PROVISIONS
- Mass media approach – through Radio, Television for all learners.
- ICT Oriented Training to both teachers and learners
- Digital education should be made compulsory for in service and preservice programmes**.**
- Regular updating of digital knowledge by educators
- Contionous development is the main remedy for solving the problem of digital divide.
- Enhance confidence of teachers to deal with all situations.
- Favourable decisions must be taken by the policy makers and administrators.

CONCLUSION

Nowadays, the mission of all educational institutions is going to be more or less same. It is to overcome the learning crisis and respond to the covid pandemic. So the main challenge today is to reduce as much as possible the negative impact of this pandemic on learning and eqip all to get back to normality.

With the sudden shift away from the classroom in many parts of the globe, some are wondering whether the adoption of online learning will continue to persist post pandemic days, and how such a shift would impact the world wide educational scenario. Some believed that the unplanned and rapid move to online learning-with no proper training, insufficient technologies and little preparation will result in poor user experience that has a negative impact to sustained growth. Others believe that a new explosion of education will emerge with significant benefits. According to experts, the integration of digital learning in education will be further accelerated and that online education will eventually become an integral component of educational institutions.

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MOODLE: AN EFFECTIVE LEARNING MANAGEMENT TOOL

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ABSTRACT

The article details about the various facilities of Moodle used by the teacher educators and students in the institution to provide interactive e-learning platform. With arrival of web-technology, learning by electronic means is becoming popular. E-Learning is different from conventional face-to-face classroom interaction. It is a new way of teaching and learning, but in short it stands for learning by electronic means. This means, learning is not directly from lecture notes, books or face-to-face from teacher but through electronic means. With the advent of advanced technology, lessons may be taken anytime anywhere. These lessons can be made more interesting by using multimedia i.e. combination of text, graphics, sound and animation. Lessons can be delivered to the learner via various means e.g. PC, laptops and mobile phone. Moodle is a software package for producing internet-based courses and websites. This Learning Management System (LMS) allows better cooperation among learners and educators.

MOODLE SOFTWARE

MOODLE is a free software package and a tool designed to help lecturers and students. It is a tool to provide good quality teaching and learning. The MOODLE is abbreviated form of Modular Object Oriented Dynamic Learning Environment built by Martin Douglas at Curtin University, Australia. MOODLE has a number of features.

- MOODLE is easy to install, upgrade and use.
- Installed in many servers as no additional cost is leived.
- MOODLE does not require modification on Unix, Linux, Windows, Mac OS and any other systems.
- Using Process is very easy and simple.
- Each user is given an account and password to access the MOODLE portal site.
- Lecturers are registered as users who can edit the course's site, including modification of the activities and marking students.
- The types of resources are: text files, (X)HTML files, links to WebPages, images, multimedia files and links to uploaded files; while the activities commonly used are quiz, chat, forum, choice and assignment.
- The only issue is the fact that Moodle is not fully developed to cope with big projects. While it may be useful for colleges or universities of small to medium size.

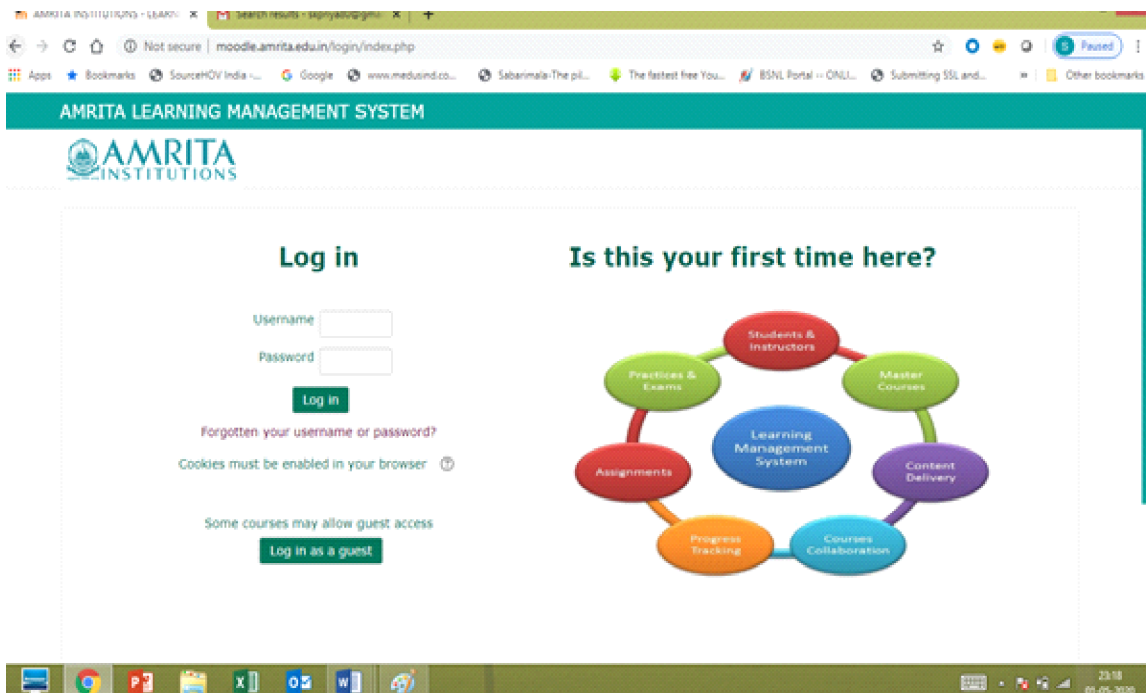* Principal, Sun College of Education, Nagercoil

Fig:1 Screen shot of MOODLE e-learning platform being used in college

Moodle is Modular Object-Oriented Dynamic Learning Environment, an effective open source e-learning practice adopted in the institution. Moodle is a Course Management System (CMS) - a software package designed to help educators to create quality online learning platform. Such e-learning systems are sometimes called Learning Management Systems (LMS). Moodle presents an excellent platform for resources and communication tools. It was created by Martin Dougiamas, a computer scientist and an educator.

The Moodle Course Management System helps the teachers with a powerful set of tools to create and manage courses, course content, course materials, track student attendance, performance through tests, administer quizzes, assignments, and provides a platform to create a forum for interaction between students and teachers and between students also.

Moodle is a learning management system that is designed to help teachers to create an online classroom setting with opportunities for rich interaction and collaboration with their students. Moodle contains various design aspects that allow instructors and students to interact, collaborate, and experience online learning in exciting multiple ways. Moodle is also a learning platform designed to provide educators, administrators and learners to create personalised learning environment. The design and development of Moodle is guided by the principles of "constructivism".

Origin of name

The acronym Moodle stands for modular object-oriented dynamic learning environment. (In the early years the "m" stood for "Martin's", named after Martin Dougiamas, the original developer). As well as being an acronym, the name was chosen because of the dictionary definition of Moodle and to correspond to an available domain name.
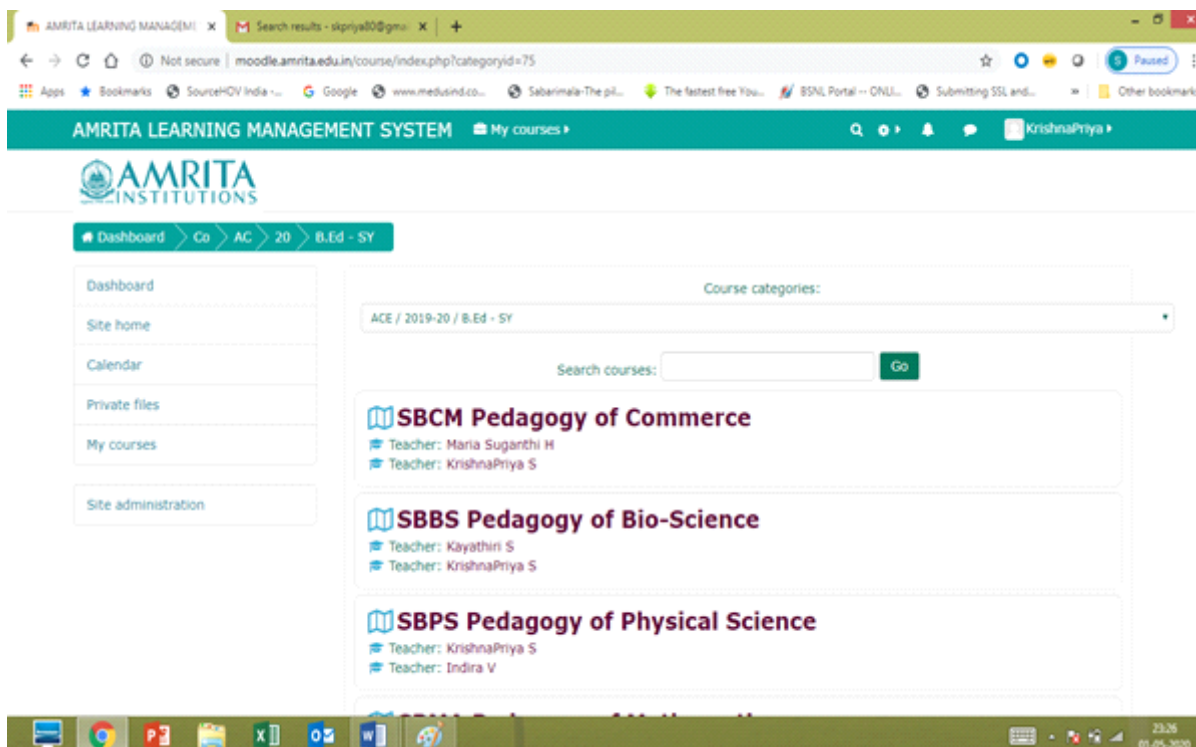
Moodle features and operations

Fig2: Screenshot of MOODLE Home Page

To run, Moodle must first be installed on a main server. An administrator configures the settings to enable access through user names and passwords. The user accesses Moodle through the internet as it is web based and does not have to install anything locally. The educators and the papers handled by them are highlighted in the opening page. All the students and the educators are added and registered by their e-mail id. The students and teachers are given their user names and passwords. The educators can upload the units, concept maps, learning resources, notes, books, power points, videos, assignments, and questions. The students can also download the app in their smartphones.

Moodle has updates installed from time to time and so it is continually being modified and enhanced. Moodle is a template-based system to which content must be added. This makes Moodle's interface very intuitive and allows for easy navigation. The whole page is presented in a "flat view" format. It is laid out in small blocks and organized around sections, following a topic or weekly outline. Each section or module has its own tools such as lessons, quizzes, assignments, and forums. All blocks on a page can be individually arranged, and the elements within each section can be easily moved around or be hidden. There is an administrator who has a control over and monitor the entire platform. The educators upload the learning resources every week.

The class notes can include lecture slides, documents in any format (PDF, HTML, DOC, etc), videos, audios, animations, graphics, etc in the content. Depending on the format chosen, we can organize the content topic wise or class schedule wise. Content can have different sub titles such as introduction, overview, survey, illustrations, animations and discussions. Content must be prepared to ensure that there is something of interest ever to the weakest and the brightest of the class. Content should be visual and interactive and not heavily textual.

LEARNING RESOURCES

After the course has been uploaded by the educator, the learner can again change or remove the content accordingly. Also, the courses can be categorised under specific teachers so that the specific teachers can make changes to specific courses. Reading materials may contain various lectures, reports, e-books, notes and various other materials for the course. Course categories help in creating a group of courses under an organizing heading. Courses can be grouped in a general way, for example, by creating categories like name of the paper and the name of the faculty in charge. For example, there can be a category called "B.Ed I Year Course", within which all the papers like "Childhood and growing up ", "Learning and teaching" are displayed. If the subject is clicked the learner can enter into that particular e-platform.

A chat window or a discussion session can be introduced to discuss the topic or course discussed on the site. Where, both the teacher and the student can interact freely among themselves to create a discussion environment. Also, the students themselves may be able to interact among themselves through this section. Such a section can improve the learning of the course to the next level, as the students can properly assimilate the course through these discussions.

ASSIGNMENTS AND OTHER TASKS

Evaluation of the students through test and quizzes can also be included in the site through moodle and they come under the various activities provided by moodle. Various types of test including essay questions, short answer questions, and multiple choice questions can be introduced in the site. For each type of test or quizzes the teacher has to use the various types of format given on the site for conducting these tests and quizzes.viz. for essay questions the teacher can select that essay type questions from the field provided for creating the different types of questions. For multiple choice questions, the multiple choice option can be selected and then the specific type of questions can be set accordingly. Each topic is uploaded with the assignments and the due dates for submission. The students write the assignment, scan and upload the assignments in their page which is evaluated by the educator.

CONCLUSION

Moodle e-learning environment is a very effective learning tool supporting blended learning which encourages the student's motivation for learning activity and maintain interest to the course

by developing his / her learning culture. The rapid development on Moodle e-learning environment develops new possibilities and solutions for developing the learning culture. Students experience and usage of Moodle is likely to increase, and consequently increase the value of Moodle as an essential tool throughout in university education. To sum it all up, Moodle is the best Online Learning Management System available at this time, as the students of our institution enjoy the course, refer the e-resources at any time and is very easy to use. Many of the various activities that a teacher can provide through a course constructed on moodle consists of : Reading materials,assignments, Online live class,papers and projects, discussion of course concepts, forums, tests and some other additional learning opportunities. In the end, all it can be said that, it is a very good source for providing and enhancing online classes/courses and it should be used to complement on ground classes to make it interesting for the students.

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