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# A Study on Cyber Crime Awareness among B. Ed Teacher Trainees

Yashaswini K<sup>1</sup>, Sharath Kumar C R<sup>2</sup>

<sup>1</sup>Teacher Trainee (B.Ed), BGS B.Ed College, Mysore, Karnataka, India

<sup>2</sup>Assistant Professor, BGS B.Ed College, Mysore, Karnataka, India

**Abstract:** *Technology plays an increasingly significant role in improving access to education for people living in impoverished areas and developing countries. Computers and the internet have offered great benefits to society. More than one third of the world's total population, had access to the internet. Internet, though offers great benefit to society, however it can also present opportunities for crime using new and highly sophisticated technology tools. Cyber crime is nothing but an emerging and fast growing discipline of crime.*

*Due to special nature of this cyberspace the cyber criminals get maximum opportunity to commit crime. Cyber crime is a new wave of crimes using internet facilities, which needs to be addressed urgently and earnestly by policy planners to protect the young generation as there is a high risk of becoming a victim of this crime. Present study was undertaken to investigate the significance of difference in cybercrime awareness of prospective teachers on the basis of gender, locale and stream. The sample of the study comprised of 120 B.Ed students selected randomly from the colleges of education affiliated to university of Mysore. Cybercrime awareness scale by Rajasekar (2013) was used for data collection. Mean, median, standard deviations were employed to check the nature of distribution of data.*

*Result of the study revealed that: (a) there is no significance difference between male and female teachers. (b) There is no significance difference between rural and urban teachers. (c) There is no significance difference between science and arts stream teachers. The present study has the following educational implications for the B.Ed trainees: it can be useful to learn about a student's level of knowledge of cybercrime. The B.Ed student teachers can educate their students about the negative consequences of using the internet without taking adequate precautions.*

**Keywords:** *Technology, Cybercrime, Awareness, B.Ed teacher trainees.*

## I. INTRODUCTION

Education in its general sense is a form of learning in which the knowledge, skills, values, beliefs and habits of a group of people are transferred from one generation to the next through storytelling, discussion, teaching, training or a research. Education may also include informal transmission of such information from one human being to another.

A right to education has been recognized by some governments. At the global level, article 13 of the United Nations 1966 international covenant on economic, social and cultural rights recognizes the right of everyone to an education. Although education is compulsory in most places up to a certain age, attendance at school often isn't and a minority of parents chooses home-schooling, sometimes with the assistance of modern electronic educational technology (e-learning). Education can take place in formal or informal settings.

Technology plays an increasingly significant role in improving access to education for people living in impoverished areas and developing countries. Educational technology alone but is also about the societal culture wherein that educational technology is implemented. Challenges of technology is distracts students requires management, leads to tech disparity, costs money and less face time etc.

Computers and the internet have offered great benefits to society. More than one third of the world's total population, had access to the internet. Internet, though offers great benefit to society, however it can also present opportunities for crime using new and highly sophisticated technology tools. Cyber crime is nothing but an emerging and fast growing discipline of crime.

The connected computer machines have created a different world called cyber world. Due to special nature of this cyberspace the cyber criminals get maximum opportunity to commit crime. Cyber crime is a new wave of crimes using internet facilities, which needs to be addressed urgently and earnestly by policy planners to protect the young generation as there is a high risk of becoming a victim of this crime.

## II. TYPES OF CYBERCRIME

- 1) *Identify theft and Invasion of Privacy:* Access to an individual's social security number affords the opportunity to gather all the documents related to that person's identity. Identity theft happens when someone uses personal or financial information without permission. It can damage credit status and cost time and money.
- 2) *Internet Fraud:* It generally covers cybercrime activity that takes place over the internet or on email. One of the most prevalent and successful online scams is phishing. This involves the scammer luring into providing them with personal information, such as credit card numbers, social security numbers or other sensitive information they can use.
- 3) *ATM Fraud:* Is basically fraudulent activity of gaining illegal access to someone's ATM card and PIN to withdraw money from their account. Another kind of ATM fraud is breaking into an ATM and stealing money from the machine.
- 4) *Wire Fraud:* It involves the use of some form of telecommunications or the internet. These can include phone call, a fax, an email, a text or social media messaging.
- 5) *Piracy and File Sharing:* The illegal duplication and distribution of copyrighted files is known as piracy. File sharing is the public or private sharing of files or folders on a computer connected to a network.
- 6) *Child Pornography:* Is a form of child sexual exploitation. Federal law defines child pornography as any visual depiction of sexually explicit conduct involving a minor.
- 7) *Hacking:* Hacking in cyber security refers to the misuse of devices like computers, smartphones, tablets and networks to cause damage to or corrupt systems, gather information on users, steal data and documents or disrupt data related activity.
- 8) *Computer viruses:* Is a type of malicious software or malware that spreads between computers and causes damage to data and software. Computer viruses aim to disrupt systems, cause major operational issues and results in data loss and leakage.

### A. Common forms of Cybercrime in India Include

- 1) Phishing
- 2) Identity theft
- 3) Hacking
- 4) Inciting terrorism
- 5) Grooming
- 6) Misuse of social media
- 7) Social engineering attack
- 8) E-commerce and e-trading fraud
- 9) E-banking fraud
- 10) Online human trafficking
- 11) Online drugs trafficking.

## III. CYBERCRIME AWARENESS

According to Aggarwal(2015) a person should have the following knowledge to be aware about the cybercrimes:

- 1) The basics of internet security.
- 2) The basic information of cyber law.
- 3) Impact of technology on crime.
- 4) Minimum hardware and software required to protect data from theft.
- 5) Internet policies required for working of organization.

### A. Kumar, Koley and Kumar(2015) Suggested following good Practices to Minimize Cybercrime

- 1) Update the computers
- 2) Choosing a password that is difficult to guess is the first step in keeping passwords safe and out of the wrong hands.
- 3) Changing password on a regular basis.
- 4) Use protection software to protect computers.
- 5) Protect your personal information.
- 6) Keep an eye out for bogus email messages.
- 7) Do not respond to emails that request personal information.
- 8) Keep an eye out for privacy policy on websites and apps.
- 9) Check your bank and credit card statements on a regular basis.

#### IV. NEED AND IMPORTANCE OF THE STUDY

Cyber crime seems to be the serious and tough as far as each and every nation is concerned. Government with all its intelligence departments and policies react so as to eradicate this cyber crime. Government has taken necessary initiatives in creating awareness among the people with the help of the newly emerged cyber cells. Students who are the creators of the future generation are also highly expected to get educated about cyber crimes. Hence there exists a need for study this cyber crime awareness of B.Ed, teacher trainees. Teachers are considered and supposed to be the builders of our future society. They interact with students and other key persons of the society very effectively. So there is a felt a dire need to make the teacher trainees aware of the cyber crimes. Society today is dealing with many issues which have emerged due to development in the field of information technology. Cyber resources are being used almost in all the fields. Education has also been found to be affected by this. Teachers of today need to be aware and competent to deal with the emerging problems like cybercrime. They need to have proper attitude towards computer. It will be difficult for those who are computer illiterate to survive in the modern education system.

#### V. REVIEW OF RELATED LITERATURE

The review of related literature is a comprehensive summary of all the research that was carried out previously on that particular study. It is important to know and evaluate the research studies to know the accuracy of the made study. The researcher must be aware of the conducted research so that they can contribute other than it with the new study.

##### A. Studies Conducted In India

- 1) Bansal(2017) conducted a study on 50 prospective teachers (25 science and 25 social science) from a college of education in Gurugram, Haryana. The result of the study indicated that science pupil teachers have significantly better aware about cybercrime as compared to their social studies counterparts.
- 2) Kumarvelu (2018) conducted a research on title “cyber crime awareness”, conducted a study on 327 B.Ed teacher trainees. Cyber crime awareness scale by Rajasekar(2010) was used for data collection. Result of the study revealed that cyber crime awareness of male B.Ed teacher trainees was significantly better as compared to female B.Ed teacher trainees.
- 3) Shekar and Nathyal(2018) conducted a research on title “cyber crime awareness”. Conducted a study on 80 B.Ed teacher trainees, 40 of whom came from rural areas and the other 40 from urban areas. Cyber crime awareness scale constructed and validated by Rajasekar(2011) was administered to selected sample. The obtained data were analyzed by using mean, S.D. and t-test. Analysis of the results revealed no significant cyber crime awareness among B.Ed teacher trainees on the basis of locality.
- 4) Sunder(2018) conducted a study on ascertain the cyber crime awareness of teachers. The cyber crime awareness scale of Rajasekar(2013) used. Cyber crime awareness of science teachers was found to be significantly higher as compared to social science teachers.
- 5) Vajagathali, Kumar and Narayan(2019) conducted a study on 150 different disciplines students of under-graduate and post-graduates in Mangalore. The result of the study indicated that cyber crime awareness of students from science discipline was significantly better as compared to other students of disciplines.
- 6) Choudary(2020) conducted a study on title “cyber crime awareness scale”. Conducted a study on 500 college students randomly from five zone of Haryana state. The result of the study revealed that the professional students have significantly better cyber crime awareness as compared to traditional students.

##### B. Studies Conducted In Abroad

- 1) Yu(2014) explored the fear of cybercrime among college students in the United States and tested three common predictors for fear of crime i.e. perceived risk of victimization, perceived crime seriousness and victimization experience on four different cybercrimes i.e. digital piracy, online scam, cyber bullying and computer virus. The study was done anonymously using an internet survey and participation was completely voluntary. 519 students were sent the email and 270 genuine answers were finally logged for analysis. The final sample was composed of 148 females (54.8%) and 122 males (45.2%). The result revealed that computer virus is the most feared cybercrime, followed by online scam and cyber bullying.
- 2) Hasan et al(2015) conducted a survey to analyze the cybercrime awareness in Malaysia and found that female students are more aware of cybercrime as compared to male students.
- 3) Hasan, Rahman, Farah and Omar (2015) conducted a study on 342 students in the faculty of accountancy of UniversitiTeknologi MARA (UiTM). The result of the study indicated that female students are significantly more aware and have affirmative insight as compared to male students.

- 4) Tibi, Kholod and Bashier(2019) studied cybercrime awareness among students at a teacher training college. For this purpose, a sample of 73 Arab students from a teacher education college in the center of Israel was selected. A questionnaire survey was conducted to collect the data about student's awareness of cybercrime. The finding of the study revealed that the level of cybercrime awareness among the participants was inadequate and that the independent variables, such as year of study, major subjects and the prior computer knowledge did not yield any statistically significant difference in cybercrime awareness among students.
- 5) Bakaul and Akter(2020) investigated the awareness of cybercrime and cyber security in earning the harmless transmission of data and the secure use of the internet. A questionnaire based survey was conducted over a period of three months on a sample of 100 students of Britannia University consisting 54% male and 46% female with age range of 20-26 years. It has been revealed from the survey findings that almost four-fifth of respondents (79%) were found to be aware of cybercrime whereas 21% were not aware of cybercrime out of which 61% were found to be aware of hacking, 56% of identity theft, 28% of phishing, 87% of computer virus, 21% of spamming, 64% of cyber bullying, 90% of pornography and 60% of fraud.

## VI. STATEMENT OF THE PROBLEM

“A study on Cyber Crime awareness among B.Ed Teacher Trainees”.

### A. Objectives Of The Study

- 1) To access the level of cyber crime awareness among B.Ed teacher trainees.
- 2) To study the significant difference between male and female B.Ed teacher trainees with respect to their cyber crime awareness.
- 3) To study the significant difference between urban and rural B.Ed teacher trainees with respect to their cyber crime awareness.
- 4) To study the significant difference between Science and Arts stream B.Ed teacher trainees with respect to their cyber crime awareness.

### B. Hypothesis Of The Study

- 1) There is no significant difference between male and female B.Ed college teacher trainees with respect to cyber crime awareness.
- 2) There is no significant difference between urban and rural B.Ed teacher trainees with respect to cyber crime awareness.
- 3) There is no significant difference between science and arts stream B.Ed teacher trainees with respect to cyber crime awareness.

### C. Variables Of The Study

- 1) *Main Variable:* Cyber Crime awareness
- 2) *Background Variable:* Male/female; Rural/urban; Science/Arts.

### D. Methods Of The Study

Descriptive/survey method was used to study the “Cyber Crime awareness among B.Ed teacher trainees”.

### E. Sampling Method

The teacher trainees studying in B.Ed Colleges approved by NCTE and Recognized by Government of Karnataka and affiliated to University of Mysore become the total population of the study .The population for the research was selected by using stratified random sampling technique

### F. Tool Used In The Present Study

To measure Cyber Crime awareness, the tool developed by Dr. S. Rajasekhar (2013) was used.

### G. Description Of The Scale

Rajasekar developed the cybercrime awareness scale to evaluate the cybercrime awareness of B.Ed students. This scale consisted of 36 sentences, 21 of which were positive and 15 of which were negative. Each statement was set against five point scale of “strongly agree”, “agree”, “undecided”, “disagree” and “strongly disagree”.

**H. Reliability**

Full co-efficient scale's of reliability was calculated using the Spearman-Brown Prophecy formula and found to be 0.76, which is strong.

**I. Validity**

The cybercrime awareness scale has construct validity as items were selected having 't' values equal to or greater than 1.75. The scale's intrinsic validity was found to be 0.87, indicating that it is valid.

**Scoring Procedure**

Nature of statement	Item serial no. wise	total
Positive	1,2,4,6,7,9,11,12,14,17,18,20,21,23,24,26,27,29,30,34,36	21
Negative	3,5,8,10,13,15,16,19,22,25,28,31,32,33,35	15
Total		36

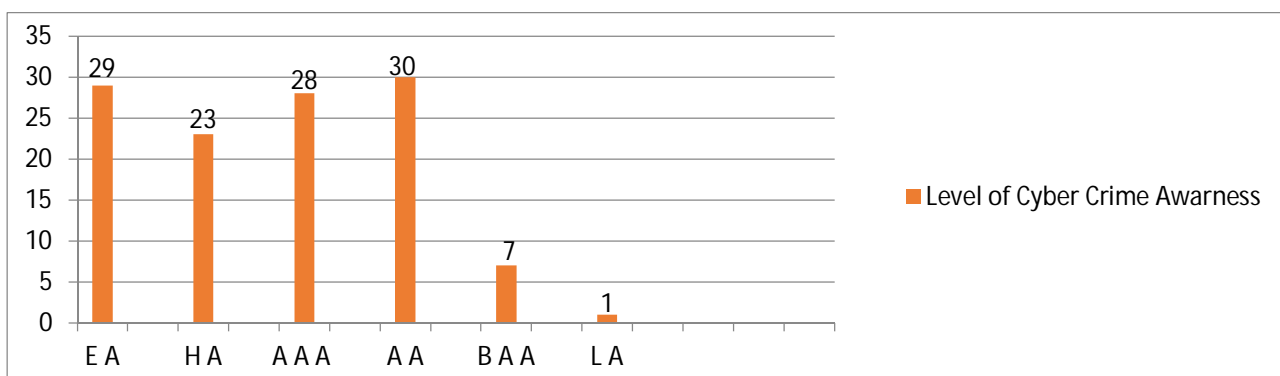
**B**

Nature of statement	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Positive	5	4	3	2	1
Negative	1	2	3	4	5

**VII. DATA ANALYSIS**

1) H1. To access the level of cyber crime awareness among B.Ed teacher trainees.

Sl No	Raw Score	Grade	Level of Cyber crime Behaviour	No of students	%
1	143& above	A	Excellent Awareness (E A)	29	24.57%
2	133-142	B	High Awareness (H A)	23	19.49%
3	123-132	C	Above average Awareness (A A A)	28	23.72%
4	108-122	D	Average Awareness (A A)	30	24.42%
5	99-107	E	Below Average Awareness (B A V)	07	5.93%
6	88-98	F	Low Awareness (L A)	1	0.84%

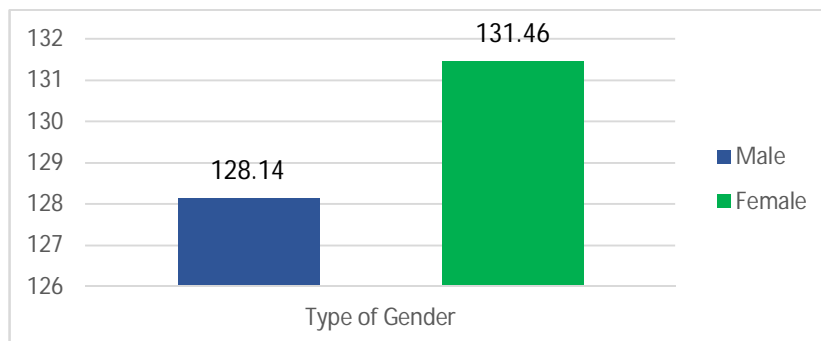


2) H2. To study the significant difference between male and female B.Ed teacher trainees with respect to their cyber crime awareness.

Sl No	Type of Gender	N	Mean	SD	df	"t"	Remarks
1	Male	49	128.14	14.85	116	1.1837	Accepted
2	Female	69	131.46	15.14			

(Standard error:2.806)

Above table shows that that obtained “t” value is less than that “t” value of df 116 at 0.05 level of significant. That is the null hypothesis is accepted and it is concluded that there is no significant difference between Male & Female B.Ed teacher trainees with respect to their cyber crime awareness.

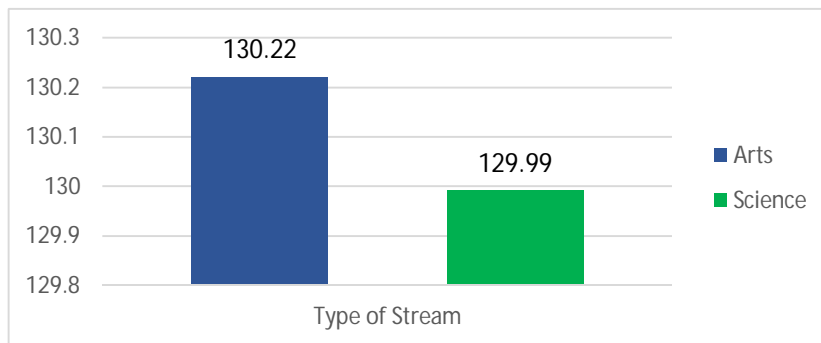


3) H3. To study the significant difference between arts and science stream B.Ed teacher trainees with respect to their cyber crime awareness.

Sl No	Type of Stream	N	Mean	SD	df	“t”	Remarks
1	Arts	51	130.22	15.48	116	0.0821	Accepted
2	Science	67	129.99	14.82			

(Standard error:2.807)

Above table shows that that obtained “t” value is less than that “t” value of df 116 at 0.05 level of significant. That is the null hypothesis is accepted and it is concluded that there is no significant difference between Arts & Science B.Ed teacher trainees with respect to their cyber crime awareness.

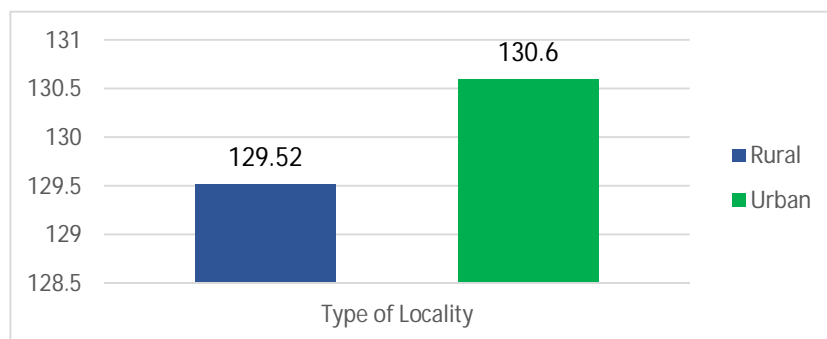


4) H4. To study the significant difference between Urban and Rural B.Ed teacher trainees with respect to their cyber crime awareness.

Sl No	Type of Locality	N	Mean	SD	df	“t”	Remarks
1	Rural	56	129.52	13.92	116	0.3876	Accepted
2	Urban	62	130.60	16.09			

(Standard error:2.783)

Above table shows that that obtained “t” value is less than that “t” value of df 116 at 0.05 level of significant. That is the null hypothesis is accepted and it is concluded that there is no significant difference between Rural & Urban B.Ed teacher trainees with respect to their cyber crime awareness.



### VIII. LIMITATIONS OF THE STUDY

- 1) This study was restricted only to B.Ed teacher trainees of Mysuru city.
- 2) This study was restricted only to B.Ed teacher trainees of University of Mysore.
- 3) This study was confined only to the arts and science stream.
- 4) This study was confined only to the rural and urban students.

### IX. SUGGESTIONS FOR FURTHER STUDY

- 1) The present study could be undertaken at various teacher training programs.
- 2) The present study could be conducted for In-service teachers also.
- 3) The present study could be conducted with other psychological variables which effects on teaching.
- 4) Cybercrime awareness can be studied in relation to level of education.
- 5) Cybercrime awareness can be studied in relation to age groups.
- 6) Cybercrime awareness can be studied in relation to knowledge of computer.
- 7) Cybercrime awareness can be studied in relation to institutional management.
- 8) Cybercrime awareness can be studied in relation to behavioral pattern.

### X. FINDINGS OF THE STUDY

By the 24.57% of teachers have excellent cybercrime awareness, 19.49% have high cybercrime awareness, 23.72% have above average cybercrime awareness, 24.42% have average awareness, 5.93% have below average cybercrime awareness and 0.84% have low cybercrime awareness.

- 1) The values of mean of cybercrime awareness of male and female prospective teachers are 128.14 and 131.46 respectively. It is concluded that there is no significant difference between male and female B.Ed teacher trainees with respect to their cybercrime awareness.
- 2) The values of mean of cybercrime awareness of rural and urban prospective teachers are 129.52 and 130.60 respectively. It is concluded that there is no significant difference rural and urban B.Ed teacher trainees with respect to their cybercrime awareness.
- 3) The values of mean of cybercrime awareness of science and arts stream prospective teachers are 129.99 and 130.22 respectively. It is concluded that there is no significant difference between science and arts B.Ed teacher trainees with respect to their cybercrime awareness.

### XI. CONCLUSION

The present study useful to know about the student’s level of knowledge of cybercrime. The B.Ed student teachers can educate their students about the negative consequences of using the internet without taking adequate precautions. It is essential that B.Ed pupil teachers are aware of cybercrime in order to combat it. According to the findings, there is no significant difference between cybercrime awareness among B.Ed teacher trainees with respect to gender stream and locale. With the increase in the users of internet, the increase in cybercrimes can also be seen. There are various kinds of cybercrimes which are happening in day-to-day life. But people are not aware of all such types. Majority of the people know only about hacking and virus. They are not aware of phishing, defamation, identity theft, cyber stalking etc.





It is the need of today's world to have knowledge about these crimes which are associated with the internet. According to the findings, there is no significant difference between cybercrime awareness among B.Ed teacher trainees with respect to gender stream and locale. It is the duty of each one of us to be aware of the basic cyber security. Cyber security refers to the technologies and processes that are designed to protect computers, networks and data from unauthorized access and attacks delivered via the internet by cyber criminals. The people should be aware of the basic cyber securities.

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