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An Investigation into Cyber-Crime Awareness among D.El.Ed. Teacher Trainees

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Abstract

The present study was conducted to explore differences in cybercrime awareness among prospective teachers based on gender, locality and stream. The sample consisted of 120 teacher trainees, randomly selected from colleges of education affiliated with SCERT, Allahabad. Data was collected using the self-made inventory of Cybercrime Awareness and statistical methods such as mean, standard deviation and 't' score were employed to analyze the distribution of data. This study has several educational implications for teacher trainees. It provides insights into the level of cyber-crime awareness among student teachers, highlighting the need for them to educate their future students about the potential risks of using the internet without proper precautions.

Keywords: Investigation, Cyber-crime and Prospective Teachers

Introduction

Technology has increasingly become a crucial tool in enhancing access to education, particularly for individuals in impoverished regions and developing countries. Computers and the internet have brought substantial benefits to society, with more than a third of the global population now having internet access. While the internet offers numerous advantages, it also creates opportunities for crime through advanced and sophisticated technological tools. Cybercrime, an emerging and rapidly growing field of criminal activity, thrives in the unique environment of cyberspace, providing criminals with ample opportunities to commit offenses. This new wave of internet-facilitated crimes urgently requires attention from policymakers to protect the younger generation, who are at a high risk of falling victim to such crimes.

Education, in its broadest sense, is a process through which knowledge, skills, values, beliefs, and habits are passed down from one generation to the next. This transfer can occur through various methods, including storytelling, discussions, teaching, training, or research. Education also encompasses the informal exchange of such information from one person to another.

The right to education has been acknowledged by various governments, and at the international level, Article 13 of the United Nations' 1966 International Covenant on Economic, Social and Cultural

Rights affirms that everyone has the right to education. While education is mandatory in many regions up to a certain age, school attendance is not always enforced, and some parents opt for home-schooling, occasionally using modern electronic educational technologies. Education can occur in both formal and informal settings.

Technology is playing an increasingly crucial role in enhancing access to education for individuals in impoverished areas and developing countries. However, the impact of educational technology is influenced not only by the technology itself but also by the societal culture in which it is implemented. Challenges associated with technology include potential distractions for students, the need for effective management, disparities in access to technology, associated costs, and reduced face-to-face interactions.

Computers and the internet have provided significant benefits to society, with over a third of the global population having internet access. While the internet offers numerous advantages, it also presents opportunities for crime through advanced and sophisticated technological tools. Cyber-crime is an emerging and rapidly growing field of criminal activity.

Connected computer systems have given rise to a distinct realm known as cyberspace. This unique environment provides ample opportunities for cybercriminals to engage in illicit activities. Cybercrime, a burgeoning and evolving category of crime facilitated by internet technologies, requires urgent and serious attention from policymakers to safeguard the younger generation, who are at a heightened risk of becoming victims.

Types of cyber-crime

1. Identity theft and invasion of privacy occur when someone gains access to an individual's social security number, allowing them to gather documents related to that person's identity. Identity theft involves the unauthorized use of personal or financial information, which can lead to significant damage to one's credit status and result in the loss of both time and money.
2. Internet fraud encompasses various cybercrimes that occur online, typically through the internet or email. One of the most common and effective online scams is phishing, where scammers deceive individuals into providing personal information such as credit card numbers, social security numbers, or other sensitive data that can be exploited for fraudulent purposes.
3. Automated teller machine fraud involves the illegal activity of gaining unauthorized access to someone's automated teller machine card and automated teller machine personal identification number to withdraw money from their account. Another form of automated teller machine fraud includes physically breaking into an automated teller machine to steal money directly from the machine.

4. Wire fraud involves using telecommunications or the internet to commit fraud. This can include methods such as phone calls, faxes, emails, texts, or social media messaging to deceive and defraud individuals or organizations.
5. Piracy refers to the illegal duplication and distribution of copyrighted files, while file sharing involves the public or private sharing of files or folders on a computer connected to a network.
6. In cyber-security, hacking refers to the misuse of devices such as computers, smartphones, tablets, and networks to cause damage or corrupt systems. It also involves gathering information on users, stealing data and documents, or disrupting data-related activities.
7. Computer viruses are a type of malicious software, or malware that spread between computers and cause damage to data and software. These viruses are designed to disrupt systems, create significant operational issues, and result in data loss and leakage.

Cyber-crime awareness

According to Agarwal (2015) a person should have the following knowledge to be aware about th e 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.

Need and importance of the study

Cyber-crime is a serious and challenging issue for every nation. Governments, through their intelligence departments and policies, are actively working to eradicate cyber-crime. They have taken important steps to raise awareness among the public, including the establishment of cyber cells. As the creators of the future, students are also expected to be educated about cyber-crimes. This makes it crucial to study cyber-crime awareness among D.El.Ed teacher trainees. Teachers, as the builders of our future society, play a vital role in interacting with students and other key members of society. Therefore, it is essential to ensure that teacher trainees are well-informed about 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.

Review of related literature

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.

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.

Title of the study

The present study is conducted on:

An investigation into cyber-crime awareness among D.El.Ed. teacher trainees

Meaning of terms used

Cyber-crime awareness

Cyber-crime also known as computer crime involves a wide range of criminal activities that are carried out by using and/or targeting a computer or related system especially illegally to access, transmit or manipulate data. **D.El.Ed**

Diploma in Elementary Education

Teacher Trainees

Students those are studying in Diploma in Elementary Education

Objectives of the study

1. To study the significant difference between male and female D.El.Ed. teacher trainees with respect to their cyber-crime awareness.
2. To study the significant difference between urban and rural D.El.Ed. teacher trainees with respect to their cyber-crime awareness.
3. To study the significant difference between Science and Arts stream D.El.Ed. teacher trainees with respect to their cyber-crime awareness.

Hypothesis of the Study

1. There is no significant difference between male and female D.El.Ed. college teacher trainees with respect to cyber-crime awareness.
2. There is no significant difference between urban and rural D.El.Ed. teacher trainees with respect to cyber-crime awareness.

3. There is no significant difference between science and arts stream D.El.Ed. teacher trainees with respect to cyber-crime awareness.

Variables of the Study

- **Independent Variable**
  - Cyber Crime awareness
- **Dependent Variable**
  - Male/Female
  - Rural/Urban
  - Science/Arts

Research methods of the study

Descriptive/survey method was used for study.

Sampling Method

The teacher trainees studying in D.El.Ed colleges approved by National Council for Teacher Education and Recognized by Government of Uttar Pradesh and affiliated to SCERT, Allahabad become the total population of the study .The population for the research was selected by using stratified random sampling technique.

Tool Used In the Present Study

To measure Cyber-crime awareness tool developed by the researcher was used.

Description of the Scale

Cyber-crime awareness scale to evaluate the cybercrime awareness of D.El.Ed students. This scale consisted of 30 statements, 18 of which were positive and 12 of which were negative. Each statement was set against five point scale of ‘strongly agree’ ‘agree’ ‘undecided’ ‘disagree’ and ‘strongly disagree’.

Reliability

Full co-efficient scale of reliability was calculated using the Spearmen-Brown Prophecy formula and found to be 0.82, which is strong.

Validity

The cyber-crime awareness scale has construct validity as items were selected having ‘t’ values equal to or greater than 1.75. The scale intrinsic validity was found to be 0.89, indicating that it is valid.

Hypothesis-1

There is no significant difference between male and female D.El.Ed college teacher trainees with respect to cyber-crime awareness.

Table-1

Mean, SD, t-value of male and female college teacher trainees with respect to cyber-crime awareness

Gender	N	Mean	S.D	't' Value	Level of significance
Male	60	68.99	12.14	**2.019**	**Significant 0.05**
Female	60	64.91	9.88		

Table-1 shows that the t-value 2.019 which is significant at 0.05 level. Hence the null hypothesis 'There is no significant difference between male and female D.El.Ed colleges' teacher trainees with respect to cyber-crime awareness' is rejected.

Hypothesis-2

There is no significant difference between urban and rural D.El.Ed teacher trainees with respect to cyber-crime awareness.

Table-2

Mean, SD, t-value of urban and rural D.El.Ed college teacher's trainees with respect to cyber-crime awareness

Locality	N	Mean	S.D	't' Value	Level of significance
Urban	60	92.91	11.73	**2.025**	**Insignificant**
Rural	60	89.02	9.16		

Table-2 shows that the t-value 2.025 which is significant at 0.05 level. Hence the null hypothesis 'There is no significant difference between urban and rural D.El.Ed teacher trainees with respect to cyber-crime awareness' is rejected.

Hypothesis-3

There is no significant difference between science and arts stream D.El.Ed teacher trainees with respect to cyber-crime awareness.

Table-3

Mean, SD, t-value of science and arts stream D.El.Ed college teachers trainees with respect to cyber-crime awareness

Stream	N	Mean	S.D	't' Value	Level of significance
Science	60	102.22	13.48	**0.764**	**Insignificant**
Arts	60	100.42	12.29		

Table-3 shows that the t-value 0.764 which is not significant at 0.05 level. Hence the null hypothesis 'There is no significant difference between science and arts stream D.El.Ed teacher trainees with respect to cyber-crime awareness' is accepted.

Conclusion

The present study is useful for understanding students' level of knowledge about cyber-crime. Cyber-security involves the technologies and processes designed to protect computers, networks, and data from unauthorized access and attacks by cyber criminals through the internet. It is essential for people to be aware of basic cyber-security measures.

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