

Awareness and information seeking behavior of B.Ed. students: A cyber study

Dhavalkumar A. Patel¹; Dr. Rajeshkumar R. Patel²

Research Scholar, Dept. of Lib. & Information Science, Shri Govind Guru University, Godhra, Gujarat, India¹; Guide, Dr. Rajeshkumar R. Patel, Librarian, M.M. Gandhi Arts and Commerce College, Kalol – Panchmahal, Gujarat, India²

dhavalp208@gmail.com

ABSTRACT

In today's digital age, with the increasing use of the internet, crimes are being committed along with the law. In the digital age the internet is used for financial, social as well as many commercial purposes. The Internet provides many benefits like fast communication, entertainment, online education etc. As the use of the internet has increased, criminal activities are carried out through the medium of internet which is called cybercrime. Cybercrime is any type of luring, cheating, intimidation, financial fraud, and use of offensive language, theft of password or other digital data through the internet through mobile, computer, laptop and tablet.

The main purpose of the present study is to find out the awareness about cybercrime among the students enrolled in B.Ed course and their need for information about it. B.Ed. students from Mahisagar district of Gujarat state – India have been included in this study. Through the questions asked to the students, it was found that the students have basic knowledge about cybercrime but not enough awareness about protecting their information and also not much awareness among the students against smart phone and internet crimes. Students need study related information through the internet and social media as well as competitive exam related information. To satisfy this information need, information is sought through the medium of the Internet. With the help of this research, students will be more aware of cyber security and can be protected against such crimes in the future.

KEYWORDS: Awareness, Information needs, Information seeking behavior, B.Ed. students, a cyber study

INTRODUCTION

Information Technology is an emerging profession in today's digital age. With its help there are many effects in the practical life of a person. When a person illegally uses the World Wide Web to commit crimes, it is called 'Cybercrime'. It has increased a lot nowadays. So it is very important to stay informed about these crimes. India was the most attacked country with 4.5 million attacks in July 2020. This makes it important to create awareness about cybercrime. Therefore, cyber security awareness means knowing about various cyber threats, ability to detect potential threats and taking appropriate measures to protect digital assets.

The present research tried to know about cyber security of hands on B.Ed students of Mahisagar district of Gujarat state - India. The main reason for this entry is that today's B.Ed student will be tomorrow's teacher and if he himself neglects cyber security, he will make school students aware of this crime. Thus, these types of crimes cannot be prevented but success can be achieved in protecting against them.

Brief knowledge about cyber crime: Main causes of cybercrime

Mentality of man

- **Fear** - Citizens or individuals are afraid to make financial payments and become victims of fraud.
- **Lure** - Citizens are often lured by photo messages or links like prizes, offers, etc. to provide information or make monetary payments.
- **Laziness** - Mostly due to laziness they become victims by giving PIN, OTP without messaging.

Technical error

Ransomware/Malware - Other than human error, technical errors can also lead to malware or malware entering our systems and becoming victims of cybercrime

Hacking - Hackers often enter the server without our knowledge and steal account details like email.

Types of Cybercrime

Cyber bullying

✓ In today's world of social media, almost every youth in India is active in different types of social media. Any person in such a condition mentally disturbs any boy or girl.

Such as abuse, sexual abuse, threats or trying to tarnish someone's image on social media. All these come under cyber threat which is cybercrime.

Hacking

✓ Hacking is a method by which a criminal steals your personal information without your permission, which he uses to harm you or sell your important information to others, apart from this, a hacker hacks your social media through software.

✓ Hacking mobile or computer and then using it for the wrong purpose. All this comes under hacking to get your bank information without your permission.

Social media fraud

✓ Nowadays people are using social media a lot. For business, for entertainment, for gossip, for making new friends, they are constantly in touch with each other through applications like WhatsApp, Facebook, Instagram, Twitter, YouTube.

✓ Creating fake profiles in other people's name on social media) to hack profile pages.

✓ Unauthorized uploading of another person's photo or video.

✓ It is a crime to spread foul language, literature or pornography, fake news or false rumors.

Financial fraud

- ✓ In the past, anti-social elements carried out looting with weapons like knives, but now there have been cases of extortion of crores of rupees by means of OTP (one time password) programmed in your debit card or credit card.
- ✓ By giving fake identity to the citizens of being a bank manager/employee or RBI official over the phone, the amount is withdrawn from the citizen's account by getting important information like debit/credit card in addition to the OTP on their mobile phone.

Data theft

- ✓ In very simple words, digital data is stolen from any person, organization, private company or government unit through a website, computer, pen drive, email ID, which is called data theft.

Malware / Ransomware

- ✓ Malware/Ransomware is a type of malicious software. This automatically comes to your computer from the internet and e-mail, due to which all the files on your computer get encrypted.

This virus finds some file or folder of your system, which you use daily, and changes the format of that file.

Some essential steps for cyber security:

- ✓ Do not give information like PIN No., OTP, CVV or QR code to unknown people.
- ✓ Avoid answering phone or messages for any card, SIM card validity, KYC renew, account open/close/active etc.
- ✓ Don't click unknown links without checking for temptations like free loan, free internet, and free gift.
- ✓ Think before accepting a video call or friend request from a stranger on social media.
- ✓ Keep the password secure, change it regularly, and look specifically for “https” in the website.

If they ask for information or rupees as friends on social media, do not give them.

Background of the study

In the present study regarding cyber security related awareness and information need behavior of B.Ed students of colleges located in Mahisagar district of Gujarat State have been selected as a sample. Definitions of key terms used in the study are summarized below.

Awareness

Awareness refers to the concept of knowing, understanding, or being aware of events. Cyber awareness here means a process of educating and training students about the dangers inherent in cyberspace. Including how to prevent threats, what to do for cyber security and security related measures etc.

Information seeking behavior:

Information behavior is a field of information science research. It involves understanding how people seek information and why they seek information and how they use it.

B.Ed. students

The full name of B.Ed is Bachelor of Education. It is a graduate academic degree course for students who wish to pursue academic disciplines related to a teaching career. The duration of this training is two years. After effective completion of this course learners will be eligible to become teachers. Students enrolled in this course are called students of B.Ed.

A cyber study

This study is conducted as an awareness course to educate the students on how to identify computer system vulnerabilities, how to identify and prevent digital exploitation, data theft, virus, extortion etc. It is called cyber security study also known as cyber study for short.

OBJECTIVE OF THE STUDY

- ✓ To identify awareness of cybercrime among B.Ed. students.
- ✓ To identify the information needs of B.Ed students regarding cybercrime.
- ✓ Identify information acquisition behavior of students.
- ✓ Gaining knowledge of factors affecting cyber security.

RESEARCH METHODOLOGY

A questionnaire based survey method was used to collect cyber security related information from B.Ed students. For this B.Ed in Mahisagar district of Gujarat state - India The questionnaire was distributed to 250 students using the college library. Out of which 239 completed questionnaires were returned which is a percentage of 95.6 %.

Research tools:

A self-constructed questionnaire was used for this study to obtain information about cyber security from B.Ed students.

Scope and limitation

- ✓ Data is collected using survey methods to obtain responses regarding cyber security awareness and information behavior of the students of this study.
- ✓ The scope of the present study is limited to B.Ed students of Mahisagar district of Gujarat state.
- ✓ In this study responses have been obtained from both male and female students.

This study is limited to the students of one course so the findings of this study cannot be applied equally to the entire students.

DATA ANALYSIS

When studying any subject, there is a huge amount of information gathered for it. As this data is very difficult to interpret, it is tabulated and where necessary graphically presented for easy analysis and interpretation and to help draw conclusions about the study.

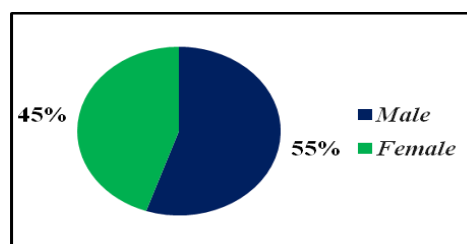
During the classification and analysis of the data obtained by the researcher in this study, an attempt has been made to show the statistics in percentages as well as presented through graphs.

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Student's Basic Information

Tables and Graphs – 1 : Table and graph showing caste of B.Ed Students

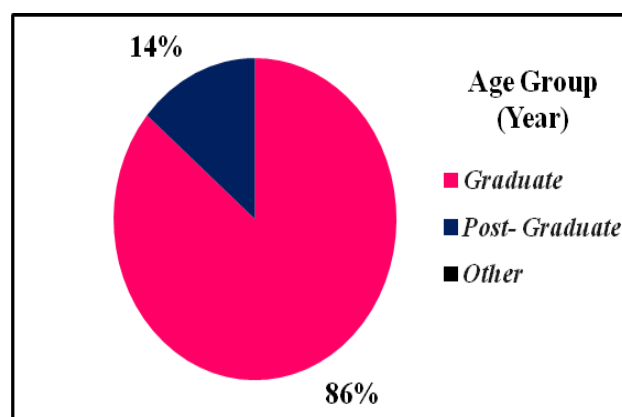
Sr. No.	Sex	Frequency	Percentage
1	Male	132	55.23 %
2	Female	107	44.77 %
Total		239	100.00 %



According to the information received in response to the question asked in question number 1, it can be said that the number of males enrolled in the B.Ed course is 132 (55.23%), while the number of females is 107 (44.77%). Thus, it can be said that males have given their value response regarding cyber security more than females.

Tables and Graphs – 2 : Table and graph showing Qualification of B.ed Students

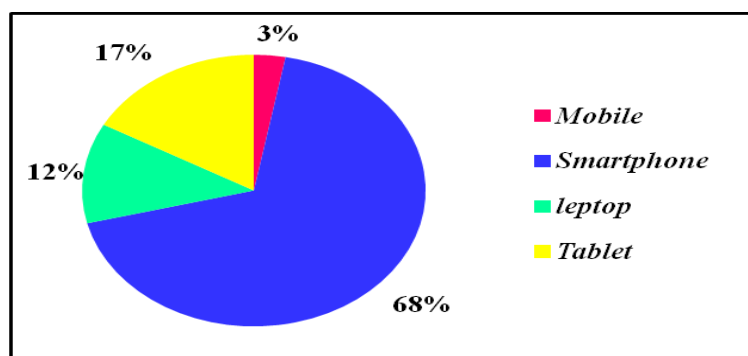
Sr. No.	Qualification	Frequency	Percentage
1	Graduate	206	86.19 %
2	Post-Graduate	33	13.81 %
3	Other	-	-
Total		239	100.00 %



According to the information received in response to the question asked in question number 2, it can be said that 206 (86.19 %) of the students enrolled for B.Ed. have educational qualification, 33 (13.81 %) have postgraduate educational qualification. Thus, it can be said that the number of people joining this course after post graduation is less.

Tables and Graphs – 3 : Tables and graphs showing gazette used by BED students

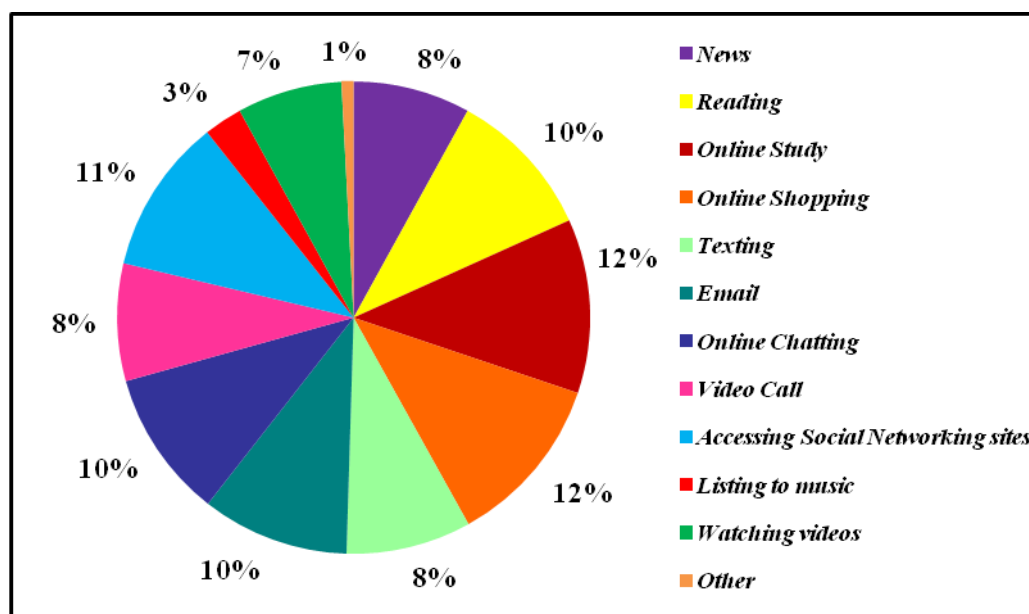
Sr. No.	Device information	Frequency	Percentage
1	Mobile	10	4.18 %
2	Smartphone	229	95.82 %
3	Laptop	40	16.74 %
4	Tablet	57	23.85 %



According to the information received in response to the question asked in question number 3, it can be said that 10 (4.18%) of B.Ed students have mobile, 229 (95.82%) smart phones, 40 (16.74%) laptops and 57 (23.85%) use electronic gadgets like laptops. Hence it can be said that almost all students are seen using smart phones.

Tables and Graphs – 4 : Tables and graphs showing Purpose of Electronic gadget usage

Sr. No.	Purpose of usage	Frequency	Percentage
1	News	58	24.27 %
2	Reading	74	30.96 %
3	Online Study	86	35.98 %
4	Online Shopping	85	35.56 %
5	Texting	62	25.94 %
6	Email	73	30.54 %
7	Online Chatting	73	30.54 %
8	Video Call	58	24.27 %
9	Accessing Social Networking sites	77	32.22 %
10	Listening to music	19	7.95 %
11	Watching videos	52	21.76 %
12	Other	6	2.51 %



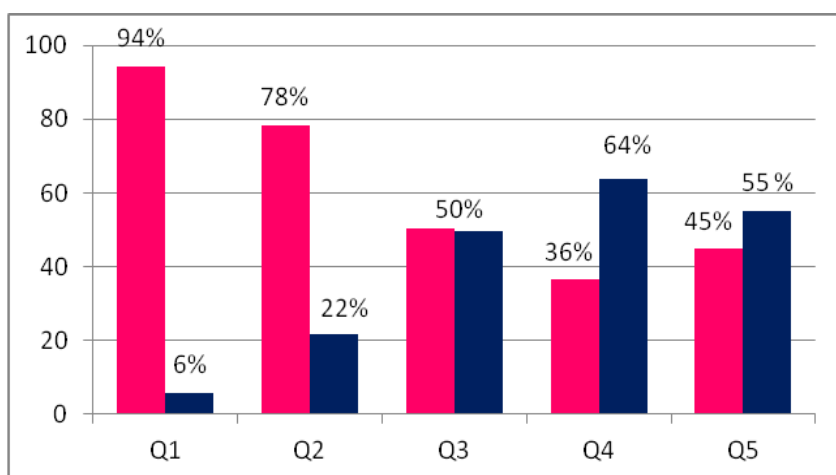
According to the information obtained in the response to the question asked in question number 4, it can be said that B.Ed students mostly have information needs for news, online study, online shopping, email, online conversation, video call and watching videos and to fulfill the information need. Part uses Electronics Gazette.

Cyber Awareness regarding information

Tables and Graphs – 5 : Tables and graphs showing basic Information about cyber security awareness of B.Ed students

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Que. No	Basic Information	Frequency (Percentage)			
		Yes	(%)	No	(%)
1	Have you ever heard of the term 'Cyber Security'?	225	94.14 %	14	5.86 %
2	Do you think smart phones need more security?	187	78.24%	52	21.76 %
3	Have you ever felt that your gadget is infected with a virus?	120	50.21%	119	49.79 %
4	Are you sure you are downloading the app?	87	36.40 %	152	63.60 %
5	Do you take regular backups of data?	107	44.77 %	132	55.23 %



Asking the B.Ed students a question regarding cyber awareness, it was found that almost all the students have heard the term 'Cyber Security'; maximum of them said that there is a need for more security in smart phones. Half of the responding students felt that their devices were infected with a virus, very few students were found to be checking and regularly backing up data,

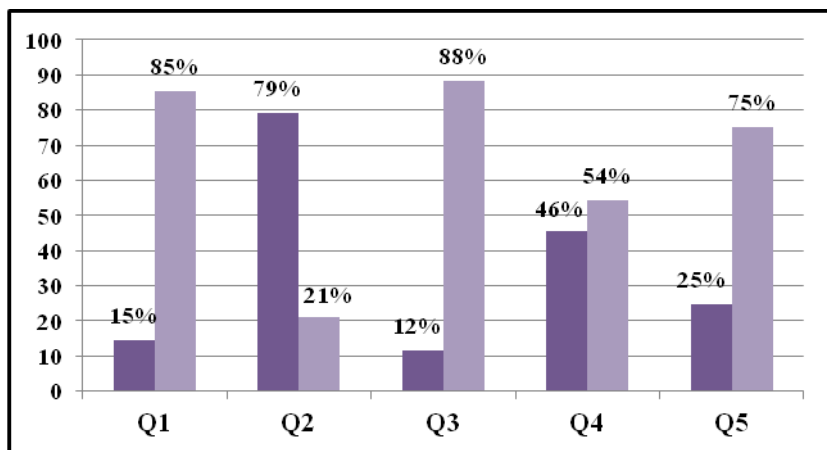
suggesting that there is a need for greater cyber security awareness among students.

Cyber security behavior on Malware/Ransomware

Tables and Graphs – 6: Tables and graphs showing Cyber security behavior on Malware/Ransomware of BED students

Que. No	Malware/Ransomware regarding information	Frequency (Percentage)			
		Yes	(%)	No	(%)
1	Do you use antivirus?	35	14.64 %	204	85.36 %
2	Do you keep your gadget up-to-date?	189	79.08 %	50	20.92 %
3	Do you consider computers more secure than mobile phones?	28	11.72 %	211	88.28 %
4	Are you checking if the website is secure or not?	109	45.61 %	130	54.39 %
5	Do you open unknown messages/emails without penance?	59	24.69 %	180	75.31 %

When students were asked about malware/ransomware virus attacks in terms of cyber security, it was found that only 35 (14.64%) students use anti-virus software, while most students keep their gazettes up-to-date, 28 (11.72%) students consider computers more secure than mobiles and many students open messages/emails without caution.

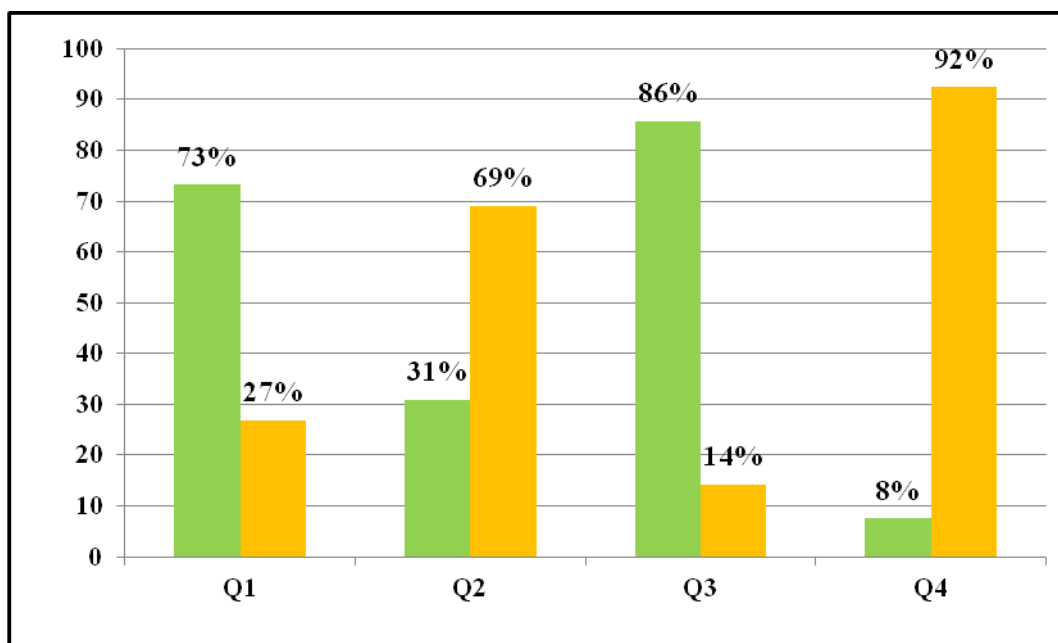


Hence it can be said that there is a need for more awareness among students about malware/ransomware cyber attacks.

Cyber security behavior on Password usage issues

Tables and Graphs – 7 : Tables and graphs showing Cyber security behavior on Password usage issues of BED students

Que. No	Password usage regarding information	Frequency (Percentage)			
		Yes	(%)	No	(%)
1	Do you create a strong password?	175	73.22 %	64	26.78 %
2	Do you change your password from time to time?	74	30.96 %	165	69.04 %
3	Do you save passwords?	205	85.77 %	34	14.23 %
4	Do you share your password with others?	18	7.53 %	221	92.47 %

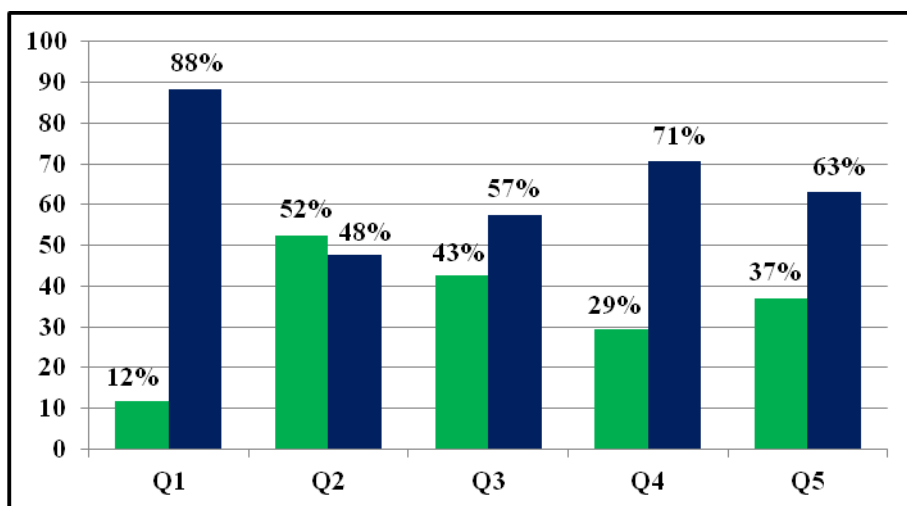


Asking students questions regarding passwords revealed that most students create strong passwords but do not change passwords from time to time and keep passwords saved. There is awareness among them about sharing passwords. Hence, it can be said that there is a need to develop awareness among B.Ed students in terms of password changes and saving.

Cyber security behavior on Social Media

Tables and Graphs – 8 : Tables and graphs showing Cyber security behavior on Social media of BED students

Que. No	Social Media Awareness regarding information	Frequency (Percentage)			
		Yes	(%)	No	(%)
1	Do you use two factor authentications?	28	11.72 %	211	88.28 %
2	Do you keep your profile locked?	125	52.30 %	114	47.70 %
3	Do you share personal information on social media?	102	42.68 %	137	57.32 %
4	Do you change your social media account password from time to time?	70	29.29 %	169	70.71 %
5	Do you accept friend requests from strangers?	88	36.82 %	151	63.18 %



When asked questions regarding information behavior for social media awareness, it was found that students rarely use two-factor authentication, with almost half of the responding students keeping their social media profiles locked. There is a need to create more awareness among students about sharing personal

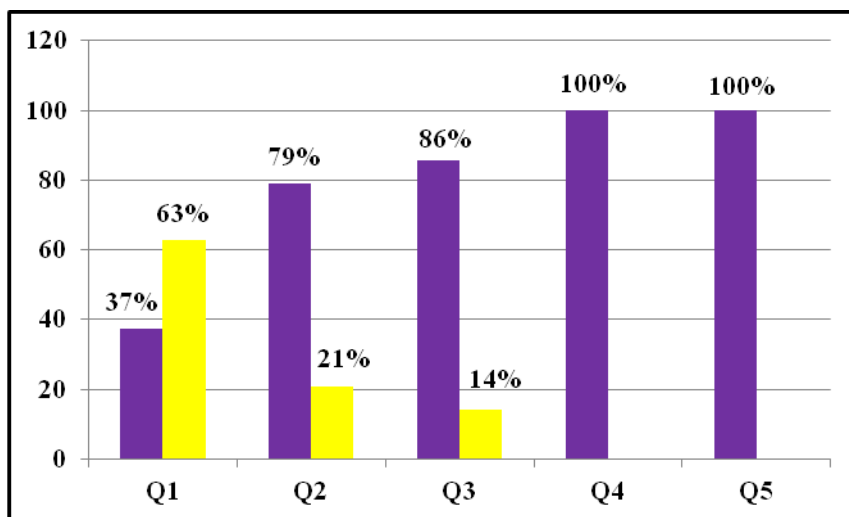
information in social media, changing the password of social media accounts from time to time and accepting friend requests from unknown persons so as to create awareness about cyber security and protect against cyber attacks.

Cyber security behavior on Online scam issues

Tables and Graphs – 9 : Tables and graphs showing Cyber security behavior on online scam issues of BED students

Que. No	online scam awareness regarding information	Frequency (Percentage)			
		Yes	(%)	No	(%)
1	Do you interact with strangers online?	89	37.24 %	150	62.76 %
2	Are you aware of online fraud?	189	79.08 %	50	20.92 %
3	Are you aware of the message asking for money?	205	85.77 %	34	14.23 %
4	Be careful of financial transactions.	239	100.00 %	-	-
5	Do not pick up fake calls.	239	100.00 %	-	-

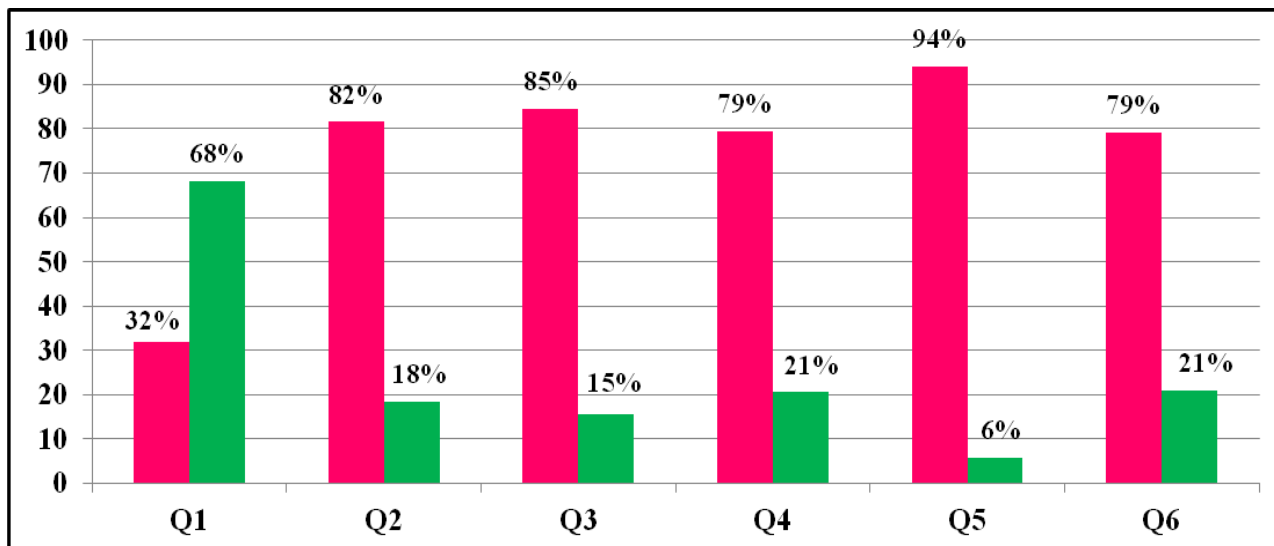
Questioning B.Ed students about cyber awareness regarding online fraud revealed that many genuine students interact with strangers using online mediums. From the data of the second question, it can be said that students have information about online fraud and are also aware of messages demanding money. Based on the questions in this section, it can be said that in financial transactions they show their cyber awareness like being careful and not picking up fake calls. Based on the overall findings, it can also be said that B.Ed students need more awareness in interacting with strangers online.



Tables and Graphs – 10 : A table showing the reasons that hinder students while searching for information related to cyber security

Sr. No	Obstructive causes	Frequency (Percentage)			
		Yes	(%)	No	(%)
1	Language	76	31.80 %	163	68.20 %
2	Inadequate education about cyber crimes	195	81.59 %	44	18.41 %
3	Lack of correct information about cyber security	202	84.52 %	37	15.48 %
4	College faculty are not informed about cyber crimes	190	79.50 %	49	20.50 %
5	There are no cyber crime awareness books in the library	225	94.14 %	14	5.86 %
6	Public awareness is not spread through TV or broadcast media	189	79.08 %	50	20.92 %

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The final section of the present study examined the various responsible aspects about the reasons for lack of cyber awareness information from B.Ed students. In which students state that inadequate education about cyber crime, not being informed about cyber crime by their teachers in the college, lack of collection of cyber crime awareness books in the college library and lack of public awareness through TV or online broadcasting. All these responsible reasons are barriers to awareness of security and students do not cite language as a barrier. Hence it can be said that to inculcate cyber security awareness among the students to protect the next generation from cyber crimes they should be given necessary education by their professors in the college itself and should be informed about cyber security. College libraries should stock awareness books about cyber crimes so that students can read these books regularly and keep themselves informed.

CONCLUSION

Through the medium of the present study, the cyber security related questions of the students studying in B.Ed. were obtained based on various questions. Interpreting the questions received by them, it is concluded that most of the students have basic knowledge about cyber crimes but most of the students show their insufficient skills in the security of gadgets like smart phones, computers and online, the responsible reason for all this is insufficient knowledge about cyber security. Many genuine students show great awareness in answering questions related to mobile security, social media security, protection against viruses and passwords. Students have insufficient information on password security and protection against viruses. Students studying in B.Ed. give various responsible reasons for information seeking behavior related to cyber security including insufficient education about cyber crimes, not being informed about cyber crimes by faculty in the college and books providing awareness about cyber crimes in the library as well. It says not populated.

Thus, at the end of the study it can be said that if there is to be protection against cyber crimes then it is necessary to make everyone aware of cyber crime from primary education to higher education so if students are given complete information by seminars, lectures and cyber experts in schools and colleges then these crimes in future It will help to get protection against. Government of Gujarat through cyber cell should also take the initiative to start a campaign to inculcate cyber security awareness among the students getting education and as part of this campaign various programs should be conducted to inform about cyber security.

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