

SEL Infused Digital Citizenship and Cyber Ethics - Addressing Risks and Understanding Responsibilities

– Gunjan Tomar*

Activities and Service as Action Coordinator, DPS International Gurugram
✉ gunjantomar@outlook.com  <https://orcid.org/0000-0002-4482-8702>

– Vineeta Garg

Head IT Department, SRDAV Public School, New Delhi
✉ vineetagarg123@gmail.com  <https://orcid.org/0000-0003-3845-7201>



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ABSTRACT

Purpose: Right from the birth of a child parents always look for ways to teach their child to be ethical. The majority of values we have as an adult were established in us during our early years. With the advancement of technology, it has become more crucial than ever to teach our children cyber ethics in the same manner that we teach real-world ethics. The term “cyber ethics” refers to a set of guidelines for appropriate and responsible online behaviour. Children must understand that accessibility of cyberspaces or devices is their privilege as well as rights but with rights come responsibilities too. If responsibilities are not taken care of, they may lead to unethical use of cyberspace and at the time being a victim of cyber-crimes/ bullying and compromising academic integrity. Although an important part of life, teachers often struggle to fit cyber ethics into their content-rich classes. This research aims to study the relationship between digital citizenship and cyber literacy to help students evolve as digital citizens who perform ethical practices.

Research/Methodology/Approach: The study adopted the quantitative research methodology particularly survey research. The random sampling method was used. 121 respondents filled out the survey.

Findings: The result from this study provided an insight into the urgent need to address digital citizenship and cyber literacy by integrating the same in disciplinary learning too.

Originality/Value: SEL infused Digital Citizenship model has been proposed to establish a culture of cyber well-being and responsible online behaviour in an increasingly networked society

Paper Type: Empirical Research Paper

KEYWORDS: Digital Citizenship | Social Emotional Learning | Ethical Behaviour | Responsibility

*Corresponding Author (Gunjan Et. Al)

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Introduction

Children learn their first lesson in ethics at home. Parents guide children to differentiate between what is right and what is not to navigate through life experiences to help them develop a conscience. Teachers further groom them to become well-rounded, compassionate, happy and resilient learners. They learn basic ethics such as treating others with respect, not cheating or harming others, and so on. Despite the fact that learning ethics in everyday life is emphasized, online ethics is virtually overlooked. It is all the more crucial to teach children about cyber ethics in the information age when kids are learning to use technology before they can even walk. Long before children learn how to handle real-life situations ethically, technology puts ethical dilemmas at the forefront. The digital gap between parents and children and between teachers and students has led to youngsters failing to practice ethical behaviour online and being immersed in the world of technology without having developed cyber ethics.

Cyber Ethics is a set of guidelines for responsible online behaviour. While there is great discussion over what is “good” and “wrong”, the basic notion of treating others with decency applies both online and in real life. Cyber ethics plays a consistent role in suggesting how to use technology appropriately and responsibly.

The expansion of data and cyber use without an ethical awareness of technology blinds us to unintended consequences and leaves us exposed to attacks by predators. This paper examines the need to reassess cyber ethics and presents a model integrating cyber ethics with SEL to establish a culture of cyber well-being and responsible online behaviour in an increasingly networked society.

Literature Review

The term cyber ethics is made up of two words cyber and ethics. The word cyber is a prefix used to describe people, things or ideas that are connected to the computer and the internet (Wilczenski and S. M. Coomey, 2006). As stated in (Kaddu,2007), ethics is a branch of philosophy that is concerned with human conduct, more specifically the behaviour of individuals in society. Cyber ethics according to (Mentle, 2008) is defined as the discipline dealing with what is good and bad, and with moral duty and obligation as they pertain to online environments and digital media. Another definition of cyber ethics as defined in (Singh and Tiwari, 2020) states Cyber ethics is the study of ethics pertaining to computers, covering user behaviour and what computers are programmed to do, and how this affects individuals and society. Freestone and Mitchell (2004), explained the unethical use of the internet as “abnormal behaviour” (Freestone and Mitchell, 2004).

Making ethical decisions when using the Internet is one of the most significant challenges that today’s youth confront. Individuals and organizations are concerned about the growing amount of unethical activity associated with internet use. As technology is being incorporated into every part of our lives, computer ethics is becoming increasingly important. According to a prior study (North, George and North, 2008), computer ethics education is required to improve the awareness of users in the academic setting, particularly students. This would increase their awareness of computer ethics and prepare them to be ethical individuals later in their careers (McCarthy, Halavi and Aronson, 2008).

Methodology

Research Model:

In this study, we adopted the quantitative research methodology particularly survey research. A structured questionnaire with 26 questions was designed and shared with students. The questions were divided into the following sections-

Section 1	Digital Citizenship and Cyber literacy	(Q1-Q5)
Section 2	Affordable and easy Internet Connection	(Q6-Q10)
Section 3	Easy Accessibility of Devices	(Q11-Q13)
Section 4	Increase in the hours spent on the internet during the pandemic	(Q14-Q19)
Section 5	Compromised Academic Integrity	(Q20-Q26)

Each section had questions related to the headings given. Details of section-wise questions are given in Appendix-I. The questions made use of a 3-point Likert Scale, ranging from 1 (Disagree), 2 (Neutral) and 3 (Agree).

The random sampling method was used. Sample from the study was drawn from students of grades 9-10 and 11-12 of public schools in the Delhi NCR region.

121 respondents filled out the survey. Out of the total respondents, 58.7% of students were of grades 11-12 and 41.3% of students were of grades 9-10.

In the data collected through the survey, there were 60.8% female respondents and 39.2% male respondents.

Data analysis of the data collected was done on the basis of gender and two clusters of grades i.e., grades 9-10 and 11-12 students.



Results and Findings

The result of the data analyzed under different sections is as follows.

a) Question-wise responses of males and females in the Junior and Senior Category

In section 3, the percentage of males and females in juniors as well as seniors, the responses for juniors vary between AGREE and NEUTRAL which was not the case in Seniors. A similar pattern was observed for most of the questions for seniors.

Table 1: Question-wise responses of males-females in the Junior category

		Section 1					Section 2					Section 3					Section 4					Section 5					
Co	Co	col3	col4	col5	col6	col7	col8	col9	col10	col11	col12	col13	col14	col15	col16	col17	col18	col19	col20	col21	col22	col23	col24	col25	col26		
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26
M	Disagree	0%	0%	0%	0%	0%	6%	0%	0%	4%	4%	2%	0%	2%	2%	4%	2%	2%	2%	2%	0%	2%	2%	0%	0%	2%	
F	Disagree	0%	0%	0%	2%	6%	8%	4%	0%	6%	0%	6%	2%	2%	0%	0%	6%	8%	6%	2%	8%	8%	8%	2%	2%	36%	8%
M	Neutral	4%	8%	4%	6%	4%	2%	6%	2%	4%	4%	2%	4%	4%	6%	0%	0%	2%	0%	2%	4%	4%	4%	2%	2%	6%	0%
F	Neutral	12%	8%	12%	10%	14%	46%	26%	26%	24%	26%	12%	26%	20%	24%	14%	26%	28%	28%	10%	24%	34%	24%	28%	18%	20%	20%
M	Agree	12%	8%	12%	10%	12%	8%	10%	14%	8%	8%	12%	12%	10%	8%	12%	14%	12%	14%	12%	10%	10%	12%	14%	10%	14%	
F	Agree	72%	76%	72%	72%	64%	30%	54%	58%	54%	58%	66%	56%	62%	60%	70%	52%	48%	50%	72%	52%	42%	52%	54%	64%	28%	56%

Table 2: Question-wise responses of males-females in the Senior category

		Section 1					Section 2					Section 3					Section 4					Section 5						
Co	Co	col3	col4	col5	col6	col7	col8	col9	col10	col11	col12	col13	col14	col15	col16	col17	col18	col19	col20	col21	col22	col23	col24	col25	col26			
S	M	Disagree	1%	1%	3%	1%	0%	8%	4%	0%	1%	4%	0%	1%	3%	3%	1%	4%	3%	4%	1%	3%	6%	3%	0%	0%	14%	7%
	F	Disagree	0%	0%	0%	3%	0%	10%	10%	4%	3%	4%	3%	4%	1%	3%	1%	1%	4%	1%	1%	0%	3%	1%	1%	13%	1%	
	M	Neutral	4%	3%	6%	11%	8%	21%	25%	11%	10%	11%	14%	18%	15%	11%	13%	13%	14%	8%	6%	8%	17%	11%	10%	17%	15%	8%
	F	Neutral	1%	3%	6%	10%	10%	17%	15%	13%	15%	14%	8%	13%	10%	10%	20%	17%	11%	14%	10%	10%	8%	11%	8%	8%	13%	14%
	M	Agree	51%	52%	48%	44%	48%	27%	27%	45%	45%	41%	42%	37%	38%	42%	42%	39%	39%	44%	49%	45%	34%	42%	46%	39%	27%	41%
	F	Agree	42%	41%	38%	31%	34%	17%	18%	27%	25%	25%	32%	27%	32%	31%	23%	25%	28%	28%	32%	32%	35%	30%	34%	34%	18%	28%

Each question was sorted according to the responses of males and females in Junior (represented as J- for grades 9-10) and Senior Categories (Represented as S- for grades 11-12)

The data interpretation of section 1 is that the percentage of males and females in juniors as well as seniors was maximum for the option AGREE, which indicates that students believe that digital citizenship and cyber literacy helps them to explore cyberspaces responsibly and ethically. There was a significant increase indicated in the count of responses for the option AGREE.

The data interpretation of section 2 is the percentage of males and females in juniors as well as seniors the responses for juniors can be interpreted as there is a variation in response chosen between AGREE and NEUTRAL in the questions/ parameters under section 2.

For Section 4 the responses selected by juniors as well as senior males and females are mostly either AGREE or NEUTRAL with AGREE being significantly high in some of the parameters.

Section 5 interpretation of data collected from junior males and females shows less increase in the option of AGREE as compared to the senior males and females which show a significant increase in the option of AGREE for some questions/ parameters under this section.

b) Descriptive analysis of each question based on gender and grades of the respondents

To understand the nature of the data gathered a descriptive analysis was done for each question/parameter based on the gender and grades of the respondents. The description of each question/parameter can be accessed in Appendix-I. The result of gender descriptive analysis on each question/ parameter is as follows-

Table 3: Descriptive analysis for each parameter/question based on gender
Descriptive Statistics

	Q1		Q2		Q3		Q4		Q5		Q6		Q7		Q8		Q9	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Valid	73	47	73	47	73	47	73	47	73	47	73	47	73	47	73	47	73	47
Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean	2.904	2.851	2.918	2.830	2.863	2.787	2.753	2.745	2.726	2.830	2.219	2.319	2.425	2.447	2.616	2.809	2.548	2.723
Std. Deviation	0.296	0.416	0.277	0.433	0.346	0.508	0.521	0.488	0.534	0.380	0.692	0.755	0.705	0.619	0.568	0.398	0.625	0.540
Minimum	2.000	1.000	2.000	1.000	2.000	1.000	1.000	1.000	1.000	2.000	1.000	1.000	1.000	1.000	1.000	2.000	1.000	1.000
Maximum	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000

Note. Excluded 1 rows from the analysis that correspond to the missing values of the split-by variable Gender

Descriptive Statistics

	Q10		Q11		Q12		Q13		Q14		Q15		Q16		Q17		Q18	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Valid	73	47	73	47	73	47	73	47	73	47	73	47	73	47	73	47	73	47
Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean	2.603	2.596	2.699	2.723	2.589	2.638	2.712	2.596	2.685	2.660	2.685	2.681	2.548	2.681	2.507	2.638	2.562	2.702
Std. Deviation	0.571	0.681	0.594	0.498	0.597	0.529	0.513	0.614	0.524	0.600	0.497	0.594	0.602	0.594	0.669	0.605	0.601	0.623
Minimum	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Maximum	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000

Note. Excluded 1 rows from the analysis that correspond to the missing values of the split-by variable Gender

Descriptive Statistics

	Q19		Q20		Q21		Q22		Q23		Q24		Q25		Q26	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Valid	73	47	73	47	73	47	73	47	73	47	73	47	73	47	73	47
Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean	2.781	2.809	2.603	2.745	2.575	2.532	2.562	2.702	2.671	2.787	2.740	2.723	2.000	2.277	2.589	2.660
Std. Deviation	0.479	0.495	0.618	0.530	0.599	0.654	0.645	0.548	0.528	0.463	0.501	0.452	0.866	0.800	0.620	0.668
Minimum	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	2.000	1.000	1.000	1.000	1.000
Maximum	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000

Note. Excluded 1 rows from the analysis that correspond to the missing values of the split-by variable Gender

The descriptive statistics help further understand the relation of the respondents' view of cyber ethics. To interpret the respondents' views we used the mean, standard deviation and range. We started by observing the minimum and maximum standard deviations for the questions asked.

Question 2 of the female responses shows very cohesive responses as the standard deviation is minimum across all the questions/ parameters. The minimum and maximum are also between 2 and 3 while in the same questions/ parameters responses by males are much higher comparatively. This can be interpreted as male responses to question/ parameter 2 show more scattered opinions.



The above description can be interpreted as the females were clear about parameter 2 understanding as their responses were either they agreed or didn't agree whereas male responses were between agreeing or being neutral. This indicates that instead of choosing the response that they either knew or didn't know about the parameter, they chose to go for neutral.

The highest standard deviation is in a question/ parameter 25. Here both females and males had the highest standard deviation of 0.866 and 0.800 respectively. This shows that their responses were not cohesive.

The above analytics can be interpreted as the respondents might not have adequate knowledge of this parameter as a result of which the responses chosen varied to a great extent.

When we observed the descriptive statistics, we found the minimum standard deviation for questions. This data gives an insight into the variance of responses chosen between Juniors (J-Grades 9-10) and seniors (S-grades 11-12).

Table 4: Descriptive analysis for each parameter/question based on grade

Descriptive Statistics

	Q1		Q2		Q3		Q4		Q5		Q6		Q7		Q8		Q9	
	J	S	J	S	J	S	J	S	J	S	J	S	J	S	J	S	J	S
Valid	50	71	50	71	50	71	50	71	50	71	50	71	50	71	50	71	50	71
Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean	2.840	2.915	2.840	2.915	2.840	2.831	2.800	2.704	2.700	2.817	2.240	2.254	2.600	2.310	2.720	2.676	2.520	2.662
Std. Deviation	0.370	0.327	0.370	0.327	0.370	0.447	0.452	0.545	0.580	0.390	0.687	0.751	0.571	0.709	0.454	0.555	0.677	0.559
Minimum	2.000	1.000	2.000	1.000	2.000	1.000	1.000	1.000	1.000	2.000	1.000	1.000	1.000	1.000	2.000	1.000	1.000	1.000
Maximum	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000

Descriptive Statistics

	Q10		Q11		Q12		Q13		Q14		Q15		Q16		Q17		Q18	
	J	S	J	S	J	S	J	S	J	S	J	S	J	S	J	S	J	S
Valid	50	71	50	71	50	71	50	71	50	71	50	71	50	71	50	71	50	71
Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean	2.620	2.577	2.700	2.718	2.660	2.577	2.680	2.662	2.660	2.676	2.780	2.620	2.580	2.592	2.500	2.606	2.560	2.662
Std. Deviation	0.567	0.647	0.614	0.512	0.519	0.601	0.551	0.559	0.519	0.580	0.507	0.544	0.642	0.599	0.678	0.621	0.644	0.584
Minimum	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Maximum	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000

Descriptive Statistics

	Q19		Q20		Q21		Q22		Q23		Q24		Q25		Q26	
	J	S	J	S	J	S	J	S	J	S	J	S	J	S	J	S
Valid	50	71	50	71	50	71	50	71	50	71	50	71	50	71	50	71
Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean	2.800	2.789	2.560	2.732	2.420	2.634	2.520	2.662	2.620	2.789	2.760	2.718	2.020	2.183	2.600	2.606
Std. Deviation	0.495	0.476	0.644	0.533	0.673	0.591	0.677	0.584	0.567	0.445	0.476	0.484	0.869	0.833	0.670	0.643
Minimum	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Maximum	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000

Question1 and 2 show similar responses as the standard deviation is minimum across all the questions but there is not much variation between the responses by juniors and seniors.

The highest standard deviation is in question 25. Here both juniors and seniors had the highest standard deviation of 0.869 and 0.833 respectively. This shows that their responses were not cohesive.

The above analytics can be interpreted as the respondents might not have adequate knowledge of this parameter as a result of which the responses chosen varied to a great extent.

b) Investigating the impact of questions chosen on each other

To investigate the impact of questions chosen on each other Granger's Causality test was done. Here are the findings of Granger's Causality Test for the questions that have a p-value less than 0.1 and are highly significant.

Table 5: Granger Causality Test

Null Hypothesis:	F-Statistic	Prob.
Q22 does not Granger Cause GRADE	11.0479	0.00004
Q26 does not Granger Cause Q13	8.36909	0.0004
Q14 does not Granger Cause Q12	7.89243	0.0006
Q2 does not Granger Cause Q23	7.46013	0.0009
Q1 does not Granger Cause Q3	7.29133	0.001
Q26 does not Granger Cause GRADE	7.02347	0.0013
Q21 does not Granger Cause GRADE	6.94433	0.0014
Q6 does not Granger Cause Q12	6.18339	0.0028
Q1 does not Granger Cause Q22	5.90254	0.0036
Q4 does not Granger Cause Q13	5.8941	0.0037
Q2 does not Granger Cause Q12	5.78481	0.004
Q13 does not Granger Cause Q15	5.76292	0.0041
Q15 does not Granger Cause Q10	5.7287	0.0043
GRADE does not Granger Cause Q23	5.55192	0.005
Q23 does not Granger Cause Q11	5.05748	0.0079
Q26 does not Granger Cause Q11	4.95574	0.0086
Q14 does not Granger Cause Q6	4.63684	0.0116
Q1 does not Granger Cause Q5	4.43497	0.014
Q4 does not Granger Cause Q12	4.41829	0.0142
Q15 does not Granger Cause Q6	4.39417	0.0145
Q17 does not Granger Cause Q13	4.29238	0.0159
Q13 does not Granger Cause Q10	4.25817	0.0165
Q24 does not Granger Cause Q18	4.11632	0.0188

Null Hypothesis:	F-Statistic	Prob.
Q2 does not Granger Cause Q11	4.04271	0.0201
Q11 does not Granger Cause Q14	3.95221	0.0219
Q6 does not Granger Cause Q7	3.94525	0.022
GENDER does not Granger Cause Q17	3.90699	0.0228
Q13 does not Granger Cause Q14	3.90173	0.023
Q21 does not Granger Cause Q14	3.90118	0.023
Q20 does not Granger Cause GRADE	3.78502	0.0256
Q3 does not Granger Cause Q15	3.78184	0.0257
Q1 does not Granger Cause Q6	3.73235	0.0269
Q24 does not Granger Cause Q13	3.6967	0.0278
Q1 does not Granger Cause Q20	3.65452	0.029
GRADE does not Granger Cause Q25	3.52768	0.0326
Q18 does not Granger Cause Q6	3.49738	0.0336
Q9 does not Granger Cause Q21	3.41278	0.0364
Q11 does not Granger Cause Q15	3.397	0.0369
Q14 does not Granger Cause Q10	3.38613	0.0373
Q13 does not Granger Cause Q6	3.32854	0.0394
Q5 does not Granger Cause Q7	3.3218	0.0396
Q6 does not Granger Cause Q24	3.31662	0.0398
GRADE does not Granger Cause Q20	3.25758	0.0421
Q14 does not Granger Cause Q23	3.17855	0.0454
Q17 does not Granger Cause Q7	3.17212	0.0456
Q17 does not Granger Cause Q25	3.13429	0.0473
Q1 does not Granger Cause Q11	3.12797	0.0476



The above granger causality test can be interpreted as-

Table 6: Granger Causality Test Interpretation

Question Cause	Effect on Question	Interpretation
1	3,22, 5,6,20,11	<p>This means parameter / question 1 is the cause of parameter/ questions 3, 22, 5,6,20 and 11. This can be understood as the students who believed that Digital citizenship and cyber literacy has helped them to understand and use cyberspaces responsibility were also aware of</p> <ul style="list-style-type: none"> • Taking ethical decisions regarding cyberspaces • The fact that in absence of cyber awareness sources were not properly referenced or cited for the research done for assignments and assessments • The fact that cyber literacy and digital citizenship helped them understand and practice netiquette • The information that affordable and easy internet connections were an invitation to potential cyber threats • The fact that in the absence of knowledge of cyber ethics, the assessments and assignments were plagiarized to a great extent • The information that easy accessibility of devices in the absence of appropriate cyber literacy can lead to vulnerability or being a victim in cyberspace
11	14, 15	<p>This means that the students were aware of the information that easy accessibility of devices in the absence of appropriate literacy can lead to vulnerability or being a victim in cyberspace were also informed about-</p> <ul style="list-style-type: none"> • The information that increased hours spent on the internet during pandemic led to an irresponsible exploration of cyberspaces • The fact that increase in hours spent on the net also led to increase in the chances of getting bullied or cheated by using social media and connecting with virtual friends
13	15,10,14,6	<p>This means that the students who were aware of the information that easy accessibility of devices in absence of netiquette led to performing actions or divulge information, without the knowledge of the consequences also knew that-</p> <ul style="list-style-type: none"> • An increase in the hours spent on the net during pandemic also led to, increase in the chances of getting bullied or cheated by using social media and connecting with virtual friends • The number of devices connected with the internet increases the chances of confidential data being hacked • Increased hours spent on the internet during pandemic led to an irresponsible exploration of cyberspaces • Affordable and easy internet connections is an invitation to potential cyber threats

14	10,23	<p>This means that students who believed that increased hours spent on the internet during pandemic led to an irresponsible exploration of cyberspaces were also aware of-</p> <ul style="list-style-type: none"> • The fact that the number of devices connected with the internet increases the chances of confidential data being hacked • The information that plagiarism cases increased exponentially during the pandemic
15	10,23	<p>This means that students who understood that increase in hours spent on net during pandemic also led to increase in the chances of getting bullied or cheated by using social media and connecting with virtual friends were also -</p> <ul style="list-style-type: none"> • Aware of the information that the number of devices connected with the internet increases the chances of confidential data being hacked • Informed that plagiarism cases increased exponentially during pandemic
17	13,7,25	<p>This means that the students who were aware of the fact that with the sudden shift from physical to virtual spaces, there was no time to understand the code of conduct while using cyberspaces also agreed upon-</p> <ul style="list-style-type: none"> • The fact that easy accessibility in absence of netiquette led to performing actions or divulging information, without the knowledge of the consequences. • The information that affordable and easy internet connection can lead to being a victim of cybercrime or unethical use of cyberspace and social media. • The statement that in absence of adequate knowledge and understanding of the relevance of original software students indulged in downloading pirated software in order to work on the assignments and projects as they were easily available
18	6	<p>This means that the students who were aware of the fact that increase in hours spent on the internet resulted in mindless explorations to do assignments and assessments which led to explorations of unsafe websites leading to cyber threats at times were also informed about-</p> <ul style="list-style-type: none"> • The fact that affordable and easy internet connections is an invitation to potential cyber threats
2	23,12,11	<p>This means that the students who were aware of the information of digital citizenship and cyber literacy helped them to differentiate between safe and unsafe cyberspaces were also aware of:</p> <ul style="list-style-type: none"> • The information that in absence of cyber literacy and digital citizenship awareness plagiarism cases increased exponentially. • The information that easy accessibility of devices created opportunities for accessibility of devices to masses without being getting oriented to use them responsibly • The fact that easy accessibility of devices in absence of appropriate cyber literacy led to vulnerability or being a victim in cyberspaces.



21	14	<p>This can be interpreted as the students who were aware that academic integrity was compromised during virtual assessments and assignments because of lack of awareness of digital citizenship and cyber literacy were also informed about</p> <ul style="list-style-type: none"> • The information that the increased hours spent on the internet during pandemic led to an irresponsible exploration of cyberspaces
23	11	<p>This means that Plagiarism cases increased exponentially during pandemic is a cause for</p> <ul style="list-style-type: none"> • Easy accessibility of devices in the absence of appropriate literacy can lead to vulnerability or being a victim in cyberspace
24	11,18, 13	<p>This means that Lack of awareness of giving credits to music/ data/ information used from the internet increased copyright issues to a great extent is a cause for-</p> <ul style="list-style-type: none"> • Easy accessibility of devices in the absence of appropriate literacy can lead to vulnerability or being a victim in cyberspace • Mindless explorations done to do assignments and assessments led to explorations of unsafe websites leading to cyber threats at times. • Easy Accessibility in absence of netiquette leads to performing actions or divulging information, without the knowledge of the consequences.
26	13	<p>This means that Free/ affordable pirated Software led to data corruption and hacking of devices is a cause for-</p> <ul style="list-style-type: none"> • Easy Accessibility in absence of netiquette leads to performing actions or divulging information, without the knowledge of the consequences.
3	15	<p>This means that students who believed that Digital citizenship and cyber literacy aids to making ethical decisions regarding cyberspaces also believed that-</p> <ul style="list-style-type: none"> • The increase in the hours spent on the net during Pandemic also led to, increase in the chances of getting bullied or cheated by using social media and connecting with virtual friends
4	13,12	<p>This means that students who were aware of the fact that Digital citizenship and cyber literacy work as shields to save them from potential cyber threats and vulnerability also understood that-</p> <ul style="list-style-type: none"> • Easy Accessibility of devices in absence of netiquette led to performing actions or divulging information, without the knowledge of the consequences. • Affordability of devices created opportunities of accessibility of devices to masses without being oriented to use them responsibly
5	7	<p>This means that students who were aware of the information that Digital Citizenship and cyber literacy help to understand and practice netiquette also believed that-</p> <ul style="list-style-type: none"> • Affordable and easy internet connection can lead to being a victim of cybercrime or unethical use of cyberspace and social media.

6	12,7,24	<p>This means that the students who believed that Affordable and easy internet connections is an invitation to potential cyber threats were also informed about-</p> <ul style="list-style-type: none"> • The information that affordability of devices created opportunities of accessibility of devices to masses without being oriented to use them responsibly • The fact that affordable and easy internet connection can lead to being a victim of cybercrime or unethical use of cyberspace and social media. • The information that lacks of awareness of giving credits to music/data/information used from the internet increased copyright issues to a great extent
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From the Granger Causality test, it is evident that students believed that knowledge and understanding of Digital citizenship and cyber literacy aids to empower students to use technology ethically and responsibly. This data was collected from grades 9-12. This indicated the need to weave digital citizenship as well as cyber literacy in the curriculum as much as the world is thinking about addressing the social-emotional needs of the students.

During Covid, the technology enhancement and virtual platforms to address learning and other needs have improved exponentially. This extent of improvement was not seen in past decades. We need to make use of this enhanced technology to its fullest even after the pandemic by educating our learners as soon as they get access to the technology.

Suggestions


Here is our proposed SEL and Digital Citizenship Model to promote Cyber Ethics and to empower each learner to

become a digital citizen who cares and values the cyberspaces and the power of technology in hand.


According to ISTE's CEO Richard Culatta, the five competencies of Digital Citizenship are [9]:

1. **Inclusive (I am open to hearing and respectfully recognizing multiple viewpoints, and I engage with others online with respect and empathy.)**
2. **Informed (I evaluate the accuracy, perspective, and validity of digital media and social posts.)**
3. **Engaged (I use technology and digital channels for civic engagement, to solve problems and be a force for good in both physical and virtual communities.)**
4. **Balanced (I make informed decisions about how to prioritize my time and activities online and off.)**
5. **Alert (I am aware of my online actions, and know how to be safe and create safe spaces for others online.)**

Table7: SEL and Digital Citizenship Model


SEL & CYBER WELLBEING	K-2	3-5	6-8	9-12
 <p>Self-Awareness</p> <p>"Look outside and you will see yourself. Look inside and you will find yourself"</p> <p>— Drew Gerald</p>	<p>TECH FEEL</p> <ul style="list-style-type: none"> • Understanding basics of tech platforms while using technology such as raising a hand to speak, emotion check-ins, labelling emotions with tech use correctly, and inferring the same for others too. • Reflect and identify which online activities make them happy, sad, or angry and why (Being Informed) 	<p>RESPONSIBLE ONLINE BEHAVIOUR</p> <ul style="list-style-type: none"> • Recognize and establish the connection between behaviours and emotions. • Understand how their online behaviours can impact themselves and others. • Reflect on what it means to have netiquette. • evaluate the accuracy, perspective, and validity of digital media and social posts (Being Informed) 	<p>WATCH YOUR DIGITAL FOOTPRINT</p> <ul style="list-style-type: none"> • Identify and reflect on how social media and cyberspaces impact their emotions, behaviours, and identity. • Being mindful of posting and commenting on social media and cyberspaces posts • evaluate the accuracy, perspective, and validity of digital media and social posts (Being Informed) 	<p>YOUR IDENTITY ON SOCIAL MEDIA AND CYBERSPACES</p> <ul style="list-style-type: none"> • Identify and define positive use of technology by using it responsibly and how can technology contribute towards self-efficacy. • Analyse and evaluate appropriate and safe social media and cyberspace behaviour. • Evaluating the benefits and drawbacks of one's action. • evaluate the accuracy, perspective, and validity of digital media and social posts (Being Informed)



 <p>Self-Management</p> <p>"Making appointments with yourself and scheduling other things around them is key to proactive self-management."</p> <p>- Michael Hyatt</p>	<p>TECH WILL</p> <ul style="list-style-type: none"> • Understanding technology as a part of life and NOT Life and developing a strategy to regulate their feelings when they are with or without tech devices. • Regulating their emotions to handle transitions between online and offline activities (Creating Balance). 	<p>LIFE TECH BALANCE</p> <ul style="list-style-type: none"> • Identify and reflect on how media choices we make impact our wellbeing • Devise their own definitions of media balance by setting their personal Tech Balance goals (Creating Balance). 	<p>FORMING GOOD DIGITAL HABITS</p> <ul style="list-style-type: none"> • Identify and evaluate the online activities that contribute to their social-emotional well-being. • Exhibiting self-discipline and, self-control to strike balance between being online and offline by keeping themselves constructively engaged on these platforms (Creating Balance). 	<p>STRIKING THE RIGHT BALANCE</p> <ul style="list-style-type: none"> • Devise and develop strategies to create a balance between on-screen and off-screen time (Creating Balance). • Understand and evaluate applications, websites, and cyberspaces that are safe and unsafe and show courage and initiative to devise ways to deal with these scenarios maturely and effectively • Planning and organizing tasks to strike the right balance between on-screen and off-screen time.
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 <p>Social Awareness</p> <p>"Self-awareness is the ability to take an honest look at your life without any attachment to it being right or wrong, good or bad."</p> <p>- Debbie Ford</p>	<p>WATCH YOURSELF</p> <ul style="list-style-type: none"> • Learning to use appropriate ways and communication to meet and greet online (Being Inclusive) • Communicating and listening patiently and developing a habit of turn-taking while communicating online. 	<p>CHOOSE YOUR WORDS AND BEHAVIOUR CAREFULLY</p> <ul style="list-style-type: none"> • Showing concerns for the feelings of others and demonstrating appropriate behaviour online. (Being Inclusive) • Reflect on the impact that words can have on others when communicating online. • Understand what cyberbullying is and identify ways to raise a voice against it when they witness or experience cyberbullying. 	<p>DEALING WITH DIGITAL MEDIA</p> <ul style="list-style-type: none"> • Demonstrating empathy and compassion for others while being online or using cyberspaces (Being Inclusive) • Understand how irresponsible communication online can be a cause of conflict and cyberbullying. • Identify and practice strategies to be respectful for self and others while being online or using cyberspaces 	<p>RESPONSIBLE ONLINE SOCIAL BEHAVIOUR</p> <ul style="list-style-type: none"> • Understanding the influences of organizations/systems on behaviour and responding appropriately (Being Inclusive) • Develop a culture of awareness and use appropriate communication and behaviour while communicating online or using cyberspaces.
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 <p>Relationship Skills</p> <p>“Relationships are at the heart of schooling.”</p> <p>—Mark Twain</p>	<p>BE KIND AND APPRECIATIVE</p> <ul style="list-style-type: none"> • Understand the importance of being kind to others when online and offline to develop positive relationships with others (Being Engaged) • Reflect on things they can do or behaviour they can display to be kind and respectful to others online (e.g., putting their device away when someone is talking to them or if a friend invites them to play). 	<p>RELATIONSHIP MATTERS</p> <ul style="list-style-type: none"> • Being able to take and understand other people’s perspectives into consideration when communicating or playing online (Being Engaged). • Identify and devise ways to neutralize or step away from online and offline conflicts 	<p>FRIENDSHIP AND SOCIAL MEDIA</p> <ul style="list-style-type: none"> • Learn to be a responsible communicator and influencer to develop positive relationships with others while being online and offline (Being Engaged) • Understand and adopt appropriate ways to balance online connectivity with peers and others to nurture relationships 	<p>KNOWING BOUNDARIES</p> <ul style="list-style-type: none"> • Identify and deal with potential social stressors (like numbers of likes, followers, etc.) • Identify and display qualities of healthy online relationships • Understanding their boundaries while communicating on social media with peers and others (Being Engaged)
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 <p style="text-align: center;">Responsible Decision Making</p> <p style="text-align: center;">“Between stimulus and response, there is space. In that space is our power to choose our response. In our response lies our growth and our freedom.”</p> <p style="text-align: center;">—Viktor E. Frankl</p>	<p style="text-align: center;">STAY SAFE</p> <ul style="list-style-type: none"> Know how to stay safe when going online (e.g., asking for permission from a grownup when using a device or going online, not talking to strangers). Understanding and sharing the stressors while being online for adult intervention and learning to deal with situations (Being Alert) 	<p style="text-align: center;">RESPONSIBLE DECISION MAKER</p> <ul style="list-style-type: none"> know how to be safe and create safe spaces for others online. Understand the responsibilities that come with owning or having access to a device (Being Alert). Understand the difference between private and public information and how to keep private information safe. Giving credits to the source of information and practicing academic integrity Understand the importance of Academic Integrity and ensure that they don't indulge in any kind of activity that is not ethical e.g., sharing work and copying work from peers (Peer Plagiarism) 	<p style="text-align: center;">PAUSE, REFLECT & ACT</p> <ul style="list-style-type: none"> Giving credits to the source of information and practicing academic integrity Identify the risks and potential opportunities of connecting with people online and display appropriate ethical behaviour (Being Alert) Understanding what Academic Integrity is and displaying ethically right behavior while working on the tasks or being online Anticipating and evaluating the consequences of one's actions online and offline. 	<p style="text-align: center;">REFLECT AND THEN ACT</p> <ul style="list-style-type: none"> Understanding what Academic Integrity is and displaying ethically right behavior while working on the tasks or being online Citing sources of information and displaying ethical behaviour by choosing to be right Reflect on their responsibilities when posting information about others online. Understand how their digital footprint can impact their reputation and that of others. Anticipating and evaluating the consequences of one's actions online and offline (Being Alert).
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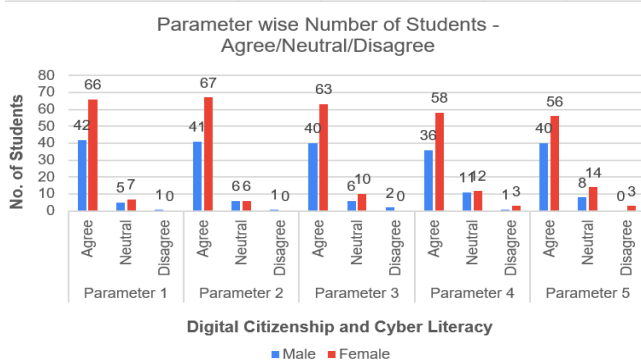
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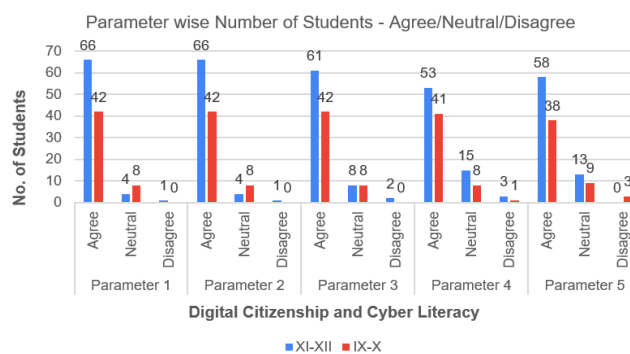


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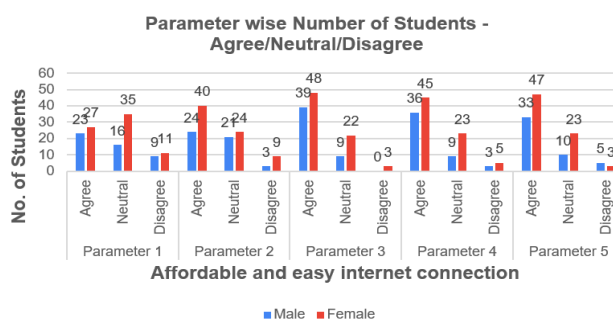
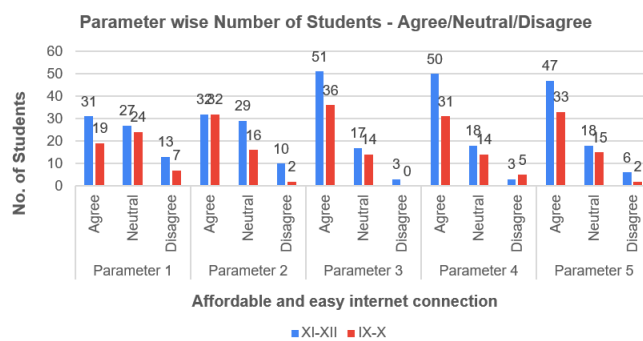
Appendix- I



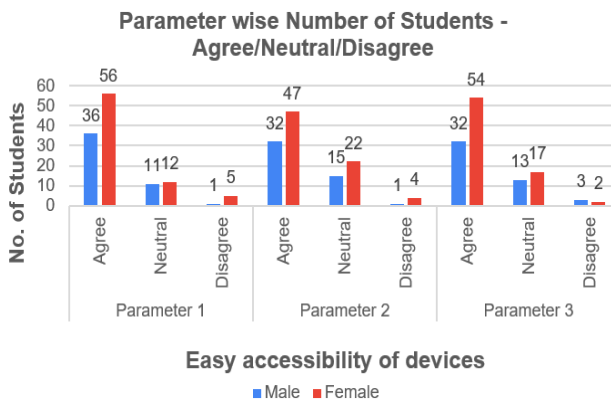
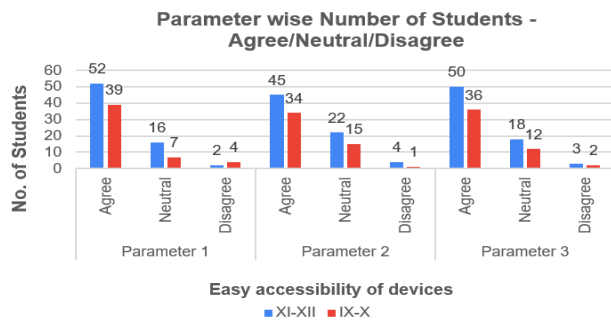
S.No	Questions
	Please select your grade (class)
	Please select your gender
Digital Citizenship and Cyber Literacy	
1.	It helps me to understand and use cyberspaces responsibly
2.	It helps me to differentiate between safe and unsafe cyberspaces
3.	It aids me to make ethical decisions regarding cyberspaces
4.	It works as a shield to save me from potential cyber threats and vulnerability
5.	It helps me to understand and practice netiquette



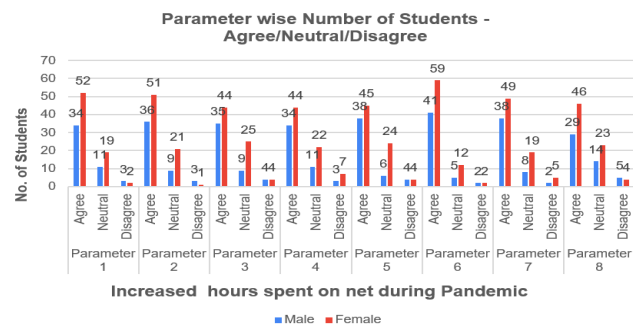
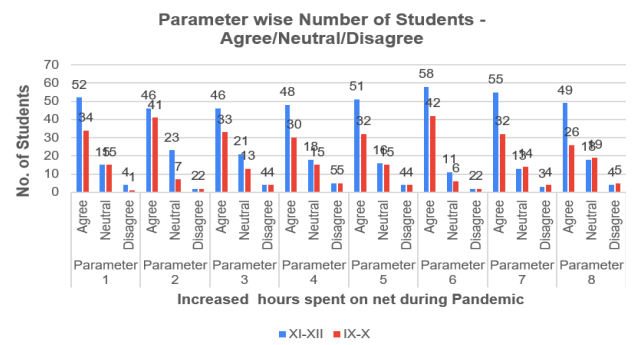
	Affordable and easy internet connection
6.	Affordable and easy internet connections are an invitation to potential cyber threats
7.	It can lead to being a victim of cybercrime or unethical use of cyberspace and social media.
8.	The rate of exploration of cyberspaces and social media has increased exponentially leading to cyber threats, bullying, and other such potential threats in the absence of knowledge about the same
9.	Free open internet spaces are also a FREE inevitable invitation to cyber threats
10.	The number of devices connected to the internet increases the chances of confidential data being hacked



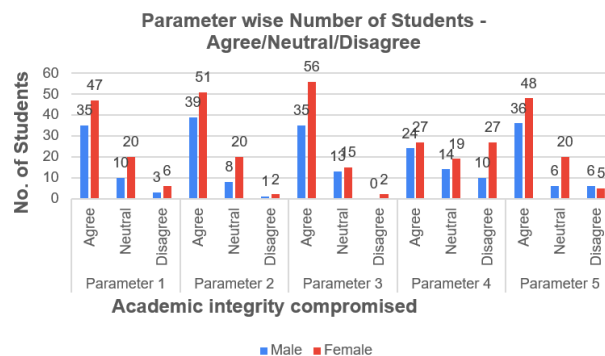
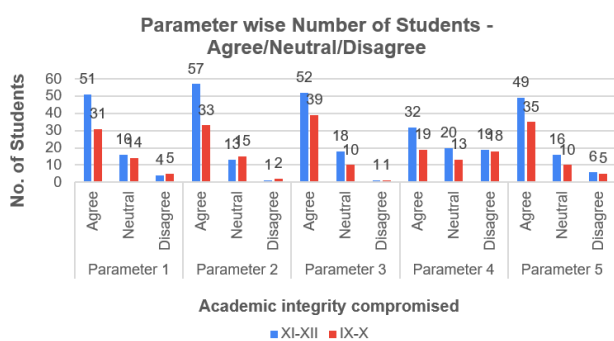
Easy accessibility of devices	
11.	Easy accessibility of devices in the absence of appropriate literacy can lead to vulnerability or being a victim in cyberspace
12.	Affordability of devices created opportunities for accessibility of devices to masses without being oriented to use them responsibly
13.	Easy Accessibility in absence of netiquette leads to performing actions or divulging information, without the knowledge of the consequences.



Increase in the hours spent on the net during the Pandemic	
14.	Increased hours spent on the internet during the pandemic led to an irresponsible exploration of cyberspaces
15.	This also led to an increase in the chances of getting bullied or cheated by using social media and connecting with virtual friends
16.	Virtual classrooms created opportunities for academic dishonesty in absence of an appropriate understanding of cyberspaces
17.	With the sudden shift from physical to virtual spaces, there was no time to understand the code of conduct while using cyberspaces
18.	Mindless explorations done to do assignments and assessments led to explorations of unsafe websites leading to cyber threats at times.
19.	The absence of knowledge of having antivirus in the system led to cyber-attacks and threats to device data.



Academic integrity compromised	
20.	In absence of knowledge of cyber ethics, the assessments and assignments were plagiarized to a great extent.
21.	Academic Integrity was compromised during assessments and assignments
22.	In absence of cyber awareness sources were not properly referenced or cited for the research done for assignments and assessments
23.	Plagiarism cases increased exponentially during the pandemic
24.	Lack of awareness of giving credit to music/ data/ information used from the internet increased copyright issues to a great extent
25.	In absence of adequate knowledge and understanding of the relevance of the original software I downloaded pirated software to work on the assignments and projects as they were easily available
26.	Free/ affordable pirated Software led to data corruption and hacking of devices



GJEIS Prevent Plagiarism in Publication

The Editorial Board had used the Ouriginal – a Swedish anti-plagiarism software tool which is a fully-automatic machine learning text-recognition system made for detecting, preventing and handling plagiarism and trusted by thousands of institutions across worldwide. Ouriginal by Turnitin is an award-winning software that helps detect and prevent plagiarism regardless of language. Combining text-matching with writing-style analysis to promote academic integrity and prevent plagiarism, Ouriginal is simple, reliable and easy to use. Ouriginal was acquired by Turnitin in 2021. As part of a larger global organization GJEIS and Turnitin better equipped to anticipate the foster an environment of academic integrity for educators and students around the globe. Ouriginal is GDPR compliant with privacy by design and an uptime of 99.9% and have trust to be the partner in academic integrity (<https://www.ouriginal.com/>) tool to check the originality and further affixed the similarity index which is {7%} in this case (See below Annexure-I). Thus, the reviewers and editors are of view to find it suitable to publish in this Volume-14, Issue-1, Jan-Mar 2022.

Annexure 14.1

Submission Date	Submission Id	Word Count	Character Count
13-Jan-2022	D155041459 (Ouriginal)	4284	18256

Analyzed Document	Submitter email	Submitted by	Similarity
1.1 ERPI_Gunjan_GJEIS Jan to Mar 2022.docx (D155041459)	gunjantomar@outlook.com	Gunjan Tomar	7%

Ouriginal

Sources included in the report

SA	Educational Significance of Cyber Ethics in Cyber Space.1docx.docx Document Educational Significance of Cyber Ethics in Cyber Space.1docx.docx (D105424537)	2
SA	protocol.pdf Document protocol.pdf (D62596847)	1
W	URL: https://theethicalweb.wordpress.com/what-is-ethical-on-the-internet Fetched: 2023-01-06 19:25:00	1
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SA	NCC Cyber Etiquette Scale.docx Document NCC Cyber Etiquette Scale.docx (D128860970)	1

Reviewers Memorandum



Reviewer's Comment 1: The research is quite significant in nature. Despite the fact that learning ethics in everyday life is emphasized, online ethics is virtually overlooked. It is all the more crucial to teach children about cyber ethics in the information age when kids are learning to use technology before they can even walk. This research examines the need to reassess cyber ethics and presents a model integrating cyber ethics with SEL to establish a culture of cyber well-being and responsible online behaviour in an increasingly networked society.

Reviewer's Comment 2: Probability sampling is done in the paper which is mentioned as random sampling. Sharing the definition here also- Probability sampling is a sampling method that involves randomly selecting a sample, or a part of the population that you want to research. It is also sometimes called random sampling could have been used in the research for better generalization of the results. Also a Sample size is clearly mentioned i.e. 121 respondents and also the two categories and gender description is given. Request you to have a look at the same.

Reviewer's Comment 3: The findings from this study provided an insight into the urgent need to address digital citizenship and cyber literacy by integrating the same in disciplinary learning too. Also SEL infused Digital Citizenship model has been proposed to establish a culture of cyber well-being and responsible online behaviour in an increasingly networked society.



Gunjan Tomar and Vineeta Garg
"SEL Infused Digital Citizenship and Cyber Ethics -
Addressing Risks and Understanding Responsibilities"
Volume-14, Issue-1, Jan-Mar 2022. (www.gjeis.com)

<https://doi.org/10.18311/gjeis/2022>
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i10-Index: 964

Source: <https://scholar.google.co.in/citations?user=S47TtNkAAAAJ&hl=en>



Conflict of Interest: Author of a Paper
had no conflict neither financially nor academically.

Editorial Excerpt



The article has 7% of plagiarism which is the accepted percentage as per the norms and standards of the journal for publication. As per the editorial board's observations and blind reviewers' remarks the paper had some minor revisions which were communicated on a timely basis to the authors (Gunjan & Vineeta), and accordingly, all the corrections had been incorporated as and when directed and required to do so. The comments related to this manuscript are noticeably related to the theme "SEL Infused Digital Citizenship and Cyber Ethics" both subject-wise and research-wise. With the advancement of technology, it has become more crucial than ever to teach children cyber ethics in the same manner that we teach real-world ethics. The present study focuses on studying the relationship between digital citizenship and cyber literacy to help students evolve as digital citizens who perform ethical practices. Overall, the paper promises to provide a strong base for further studies in the area of ingrained approach of social emotional learning and digital citizenship. After comprehensive reviews and the editorial board's remarks, the manuscript has been categorized and decided to publish under the "Empirical Research Paper" category.

Acknowledgement



The acknowledgment section is an essential part of all academic research papers. It provides appropriate recognition to all contributors for their hard work and effort taken while writing a paper. The data presented and analyzed in this paper by (Gunjan and Vineeta) were collected first handily and wherever it has been taken the proper acknowledgment and endorsement depicts. The author is highly indebted to others who had facilitated in accomplishing the research. Last but not least endorse all reviewers and editors of GJEIS in publishing in a present issue.

Disclaimer



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