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Predictors of Technostress Level Among Intermediate Pupils

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A B S T R A C T

The rapid shift in educational modalities due to the COVID-19 pandemic has posed unique challenges to learners, including the development of technostress. This study investigates the technostress levels of Grades 4-6 pupils at St. Paul College Pasig, identifying predictors and providing recommendations tailored to their experiences. Utilizing a predictive correlational design, data were gathered from pupil-respondents selected through stratified random sampling. The research employed contextualized technostress questionnaires adapted for cultural relevance and age-appropriateness. Results revealed that while pupils generally experienced low levels of technostress, certain factors, such as perceived intrusion on personal time, emerged as significant stressors. Recommendations focus on establishing boundaries, coordinating tasks, and fostering time management skills to mitigate technostress and enhance the online learning experience.

RESUMO

A rápida mudança nas modalidades educacionais devido à pandemia da COVID-19 apresentou desafios únicos aos alunos, incluindo o desenvolvimento do estresse tecnológico. Este estudo investiga os níveis de estresse tecnológico de alunos do 4º ao 6º ano do St. Paul College Pasig, identificando preditores e fornecendo recomendações adaptadas às suas experiências. Utilizando um design correlacional preditivo, os dados foram coletados de alunos-respondentes selecionados por meio de amostragem aleatória estratificada. A pesquisa empregou questionários de estresse tecnológico contextualizados adaptados para relevância cultural e adequação à idade. Os resultados revelaram que, embora os alunos geralmente experimentassem baixos níveis de estresse tecnológico, certos fatores, como a intrusão percebida no tempo pessoal, surgiram como estressores significativos. As recomendações se concentram em estabelecer limites, coordenar tarefas e promover habilidades de gerenciamento de tempo para mitigar o estresse tecnológico e aprimorar a experiência de aprendizagem online.

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Introduction

The world for a while stood still as COVID-19 moved hazardously and pushed the whole humanity and economy into chaos. The whole global industrial scene exhausted all the technological advances that they got to be able to transfer the whole economy online just to keep afloat. As deadly as it is, the virus also threatened to jeopardize the academic interactions of the learners as the school year 2019-2020 was about to end.

Facing these challenges, schools cut the final quarter of the school year to make sure that pupils and educators would be safe from the virus. It was on the 17th of March that the Department of Education finally released the different modalities that can accommodate learners even amidst the quarantine (deped.gov.ph, 2020).

In the local scenario, the Schools Division Office of Pasig allowed private institutions to operate only if they would be able to submit a learning continuity plan. St. Paul College, Pasig (SPCP), being part of SDO-Pasig, also underwent the submis-sion of the aforementioned plan.

In this learning continuity plan, the SPCP stated that it is to adopt an online teaching type of distance learning wherein pupils and teacher would meet and imple-ment synchronous and asynchronous sessions via online platforms.

St. Paul College Pasig is one of the few schools that has been implementing Educational Technology programs prior to the COVID-19 pandemic, to help pupils adapt to the technological needs of the modern society. Pupils are used to being ex-posed to different technologies and online platforms. Hence, this kind of modality is not an entirely new world to the learners. However, as evidenced by the shift from face-to-face instruction to full online teaching, pupils and teachers found the new set-up chal-lenging.

According to Turel (2018), introduction of new technologies can pose a threat to both teachers and pupils through misuse, abuse, and overuse, resulting in technostress. Technostress was first conceptualized in the early 1980s as “a modern disease of adaptation caused by the inability to cope with new technologies in a healthy manner” (Brod, 1984).

In a research by Walton (2019), entitled Relationship Between Technostress Dimensions and Employee Productivity, technostress is an indicative of an employee’s low self-efficacy. With approximately 12% of variance in employees’ productivity, the result of the study made showed that the relationship of technostress in an employee’s productivity is significant.

In another study made by Carlotto et al., (2017), entitled Technostress, Career Commitment, Satisfaction with Life, and Work-Family Interaction among Workers in Information and Communication Technologies, it was revealed that work-family and family-work negative relationship is greatly a by-product of increased techno-fatigue and techno-anxiety. Furthermore, it is also a factor that affects the career re-silience of an individual. Based on the given results of both studies, it can be noted that technostress does affect the total psychological wellbeing of employees. Now that in the advent of COVID-19, even schools

would be subjected to technostress as education-al institutions now shift to online teaching.

As studies are now geared towards knowing the factors affecting technostress, it becomes more essential than ever. Research regarding technostress is limited, espe-cially those that involve and include data collected during the span of the COVID-19 pandemic. In addition, most of the studies also included participants outside the field of education.

This is a research gap that the researchers aimed to bridge to be able to under-stand the effect of the new online modality to the technostress level of the intermediate pupils at St. Paul College, Pasig. Impact of the study can bridge knowledge gap on the Technostress of Older Children under the Basic Education where research is limited. Specifically, this study aimed to measure the technostress level of the pupils, identify which predictors have a significant relationship with their technostress level and give recommendations on how to cope with the technostress.

As pupils further migrate to online forms of learning, understanding how tech-nostress can affect them is vital in enhancing the institution's distance learning pro-gram. Educators should see this as an opportunity to test the ingenuity of the administrators in answering certain situations such as this. The advent of COVID-19 and the utilization of the new modalities are research grounds that can foster pool of new discoveries on how to deal with technostress.

With these premises, the proponents conducted the sought to find answers to the following research questions: What is the profile of the respondents in terms of grade level? What is the technostress level of the pupils per grade level? Which predictor contributes the most to each grade level's technostress? Is there a significant relationship between the technostress predictors and the technostress level of the pupils?

Hypothesis:

Ho - There is no significant relationship between the technostress predictors and the technostress level of the pupils?

Ha - There is a significant relationship between the technostress predictors and the technostress level of the pupils?

Methodology

This study employed a predictive correlational design to investigate the relationships between five technostress predictors—techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty—and the technostress levels of Grades 4-6 pupils at St. Paul College Pasig.

Sample and Sampling Procedure: A total of 250 respondents were selected through stratified random sampling, ensuring proportional representation across grade levels.

Specifically, 74 respondents were from Grade 4, and 88 each were from Grades 5 and 6. Stratification was based on the total population of intermediate pupils.

Data Collection and Instruments: The study utilized a contextualized technostress questionnaire adapted from the original instruments developed by Tarafdar et al. (2007) and Wang (2020). These instruments were reviewed and modified for cultural relevance and age-appropriateness to ensure they were suitable for Filipino children in Grades 4-6. Reliability of the contextualized questionnaires was established through Cronbach's alpha scores, with values of 0.84 for the Technostress Instrument and 0.83 for the P-E Fit Scale, indicating good reliability according to Nunnally's (1978) scale. Pilot testing was conducted with 10% of the sample (25 Grades 4-6 pupils not part of the main study) to refine the instruments and eliminate potential data contamination, adhering to Treece and Treece's (1982) recommendation.

Data Analysis: Collected data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics were used to determine the mean technostress levels across grades. Multiple regression analysis was performed to identify significant predictors of technostress.

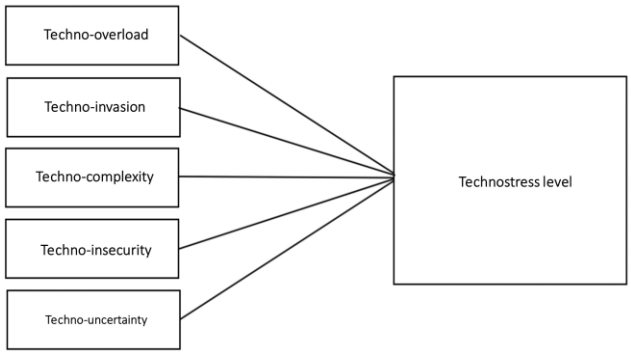
Conceptual Framework

The conceptual framework shows the direct relationship between the independent variables (Techno-overload; Techno-invasion; Techno-complexity; Techno-insecurity; and Techno-uncertainty) and dependent variable (Technostress Level). These technostress factors as described and labelled by Tarafdar et al. (as cited by Grummeck- Braamt et al., 2021), are the factors that directly contribute to the level of technostress of people. In this study, the same factors were scrutinized using the Tech-nostress Questionnaire and P-E Fit of Technostress Scale. The total mean score of the respondents' answers in the aforementioned questionnaires revealed the Technostress Level of the respondents per grade level and for the whole intermediate level.

Figure 1.

Conceptual Framework of the Study

Predictors of Technostress Level Among Intermediate Pupils of St. Paul College Pasig



Techno-overload; Techno-invasion; Techno-complexity; Techno-insecurity; and Techno-uncertainty were the predictors chosen to comprehensively represent the total technostress level of the pupils in the intermediate level. Techno-overload in the study and in the questionnaire given focuses on the relationship of the number of tasks that the teachers are giving during the online class. Techno-invasion as presented in the questionnaire is geared towards the easy access of the teacher to the pupil's personal time as they were expected to be always available online. Techno-complexity as used concentrates on the pupils' skills and knowledge on using the online platforms and other technological tools needed for the distance learning. Techno-insecurity on the other hand, as included in the questionnaire aimed to bring about the pupils' perception on how the difficulty of learning new technologies make them feel. Lastly, Techno-uncertainty as used highlighted the fears of the pupils on the advancements and changes in the technology and if they would still be able to adapt to it.

Analysis of predictors which garnered the highest rate from the respondents helped the researcher in concluding whether the pupils have accumulated technostress because of Techno-overload; Techno-invasion; Techno-complexity; Techno-insecurity; or Techno-uncertainty.

Data Gathering Procedure

Comentado [MOU1]: Methodology should explain the procedure, mention the author of the orinal questionnaires, statistical analysis, the questionnaires and others.

Systematically this study was divided into three stages to bring about a thorough data collection, analysis, interpretation, conclusion building and intervention recommendation.

Stage 1

The first stage was done by requesting for the parents' consent on the inclusion of their child in the research study. Before data were collected, consent forms were given to the school administrators and to the parents of the participants. Permission letters were also sent to the original authors of the questionnaires for the use of their instruments. Subsequently, data were collected through a 5-point Likert scale of the contextualized Technostress questionnaire. It was given to all 250 participants chosen through a stratified sampling technique, with 74 of the respondents coming from Grade 4, 88 from Grade 5, and 88 from Grade 6. The instrument was given, answered, and retrieved from the participants using an online platform called Microsoft Forms.

Stage 2

The second stage involved the analysis of the relationship between the predictors and technostress level and the identification of the predictor which mostly contribute to the stress level of the pupils. Collected data from Stage 1 were tallied and treated using multiple regression via the Statistical Product and Service Solutions (SPSS) software. Results were then analyzed, interpreted, and presented through tables.

Stage 3

The third stage included the creation of summary of findings, conclusions, and recommendations to be given based on the relationship of the predictors and technostress level of the pupils.

Results

This study was conducted in St. Paul College Pasig, an all-girls, Catholic School in Pasig City, with participants coming from Grades 4-6. The table below gives the profile of the respondents in terms of their grade levels.

Table 1.

Respondents' Profile in Terms of Grade Level

Grade Level	No. of Respondents
Grade 4	74
Grade 5	88
Grade 6	88
Total	**250**

As shown in table 1, the respondents were composed of 74 Grade 4 pupils, 88 Grade 5 pupils, and 88 Grade 6 pupils. The number of respondents per Grade Level was computed

using the stratified random sampling technique. The said number of participants were chosen from a total population of 711 intermediate pupils in St. Paul College Pasig.

Pupils' Technostress Level

The researchers administered a Technostress survey to the grades 4-6 pupils of St. Paul College Pasig and calculated for the mean of each group to bring about the levels of their technostress using the five (5)-level mean score scale developed by Ahmad (2010).

Table 2.

Five (5)-Level Man Score Scale of Ahmad (2010)

Mean	Level
1.0-2.19	Very Low
2.20-3.39	Low
3.40-4.59	Moderate
4.60-5.79	High
5.80-7.0	Very High

Based on the mean scores gathered from the intermediate pupils, Grade 4 with mean score of 2.73 has low technostress level, same with Grades 5 and 6 with mean scores of 2.63 and 2.70 respectively. Overall, their result garnered a mean score of 2.70 which can also be interpreted that in totality, the intermediate pupils are experiencing low levels of technostress.

Table 3.

Technostress Level of the Intermediate Pupils of SPCP

Grade Level	**Mean**	**Interpretation**
Grade 4	2.73	Low Technostress
Grade 5	2.63	Low Technostress
Grade 6	2.70	Low Technostress
Total	**2.70**	**Low Technostress**

According to Bhattacharyya (2017), low technostress level indicates that they are less likely to experience physical, mental and emotional symptoms brought by technostress such as headaches, difficulty concentrating, and irritability. Since pupils in the intermediate level are experiencing only low level of technostress, not much negative implications can be noted as of the time the data were gathered.

Relationship of the Technostress Predictors to the Pupils' Technostress Level

a. Grade 4 Pupils' Analysis of Technostress Predictors to their Overall Technostress

To be able to have an in depth-analysis of the pupils' technostress level, the researchers computed for the multiple regression B Coefficients from the administered contextualized Technostress Questionnaire given to the 74 Grade 4 Pupils. Table 4 below manifests the result of the regression analysis.

Table 4.

Regression Analysis for Technostress of Grade 4 Pupils

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	2.397	2.589		.926	0.382
Techno-Overload	-.066	.664	-.079	100	.000
Techno-Invasion	.702	.758	.793	926	.000
Techno-Complexity	.168	.922	.159	182	.000
Techno-Insecurity	.171	.366	.154	468	.000
Tecno-Uncertainty	-.027	.658	-.030	040	.000

Dependent variable: Technostress

R-Squared = 0.992; F-Value = 202.823; p-value = .000; alpha = 0.05

As depicted in Table 5, the multiple regression analysis garnered an overall R-Squared value of 0.992 or 99.2% and a significant regression equation (F-value) of 202.823. On the other hand, Techno-overload gathered a B coefficient of -0.066, while Techno-invasion is with 0.702, Techno-complexity is with 0.168, Techno-insecurity is with 0.171, and Techno-uncertainty is with -0.027.

Analyzing the results, the multiple regression revealed an overall R-squared of 0.992 or 99.2%. This means that 99.2% of the observed variation can be explained by the model inputs (Fernandoo, 2020), with the remaining 0.8% was considered as an external factor.

With an F-value of 202.823 and p-value of 0.000, a significant regression equation revealed that with R-squared of 0.992 or 99.2% of the overall results can be attributed to the five (5) aforementioned predictors.

Going further with the results, using the B coefficients of the variables, an equation of determination was formed showing that Overall result = 2.397 + -0.066 (Techno-overload) + 0.702 (Techno-invasion) + 0.168 (Techno-complexity) + 0.171 (Tehno-insecurity) + 0.027 (Techno-uncertainty). This means for every one-point increase in Techno-overload is equals to a -0.066 increase in the technostress level; while one-point increase in Techno-invasion means a 0.702 increase in the technostress level; a one-point increase in Techno-complexity corresponds to a 0.168 in the technostress level; a one-point increase in Techno-insecurity equals to 0.171 in the technostress level; and a one-point increase in the Techno-uncertainty yields a 0.027 increase in the technostress level.

Of the five predictors, Techno-invasion has the most effect on the technostress of the grade 4 pupils with percentage effect of 70.2%, followed by Techno-insecurity (17.1%), Techno-complexity (16.8%), Techno-uncertainty (-2.7%), and Techno-overload (-6.6%). This implies that the Grade 4 pupils feel that their personal life is being invaded by this connotation in school that they somehow need to be constantly online and reachable.

b. Grade 5 Pupils' Analysis of Technostress Predictors to their Overall Technostress

Table 6.

Regression Analysis for Techno Stress of Grade 5 Pupils

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	3.420	5.314		0.644	0.644
Techno-Overload	1.112	.892	-5.841	-.571	-.571
Techno-Invasion	1.212	1.052	1.346	1.152	1.152
Techno-Complexity	-.273	.880	-.258	-.310	-.310
Techno- In-security	-.347	.849	-.321	-.409	-.409
Tecno-Uncertainty	.206	.837	.223	.246	.246

Dependent Variable: Techno Stress

R-Squared = 0.985; F-Value = 147.971; p-value = .000; alpha = 0.05

On the other hand, the multiple regression analysis for the Grade 5 pupils unveiled that 98.5% (R-squared= 0.985) of the observed variation can be explained by the model inputs

(Fernando, 2020), with the remaining 1.5% was considered as an external factor. Likewise, with an F-value of 147.971 and p-value of 0.000, this solidifies that the significant regression equation with R-squared of 0.985 or 98.5% of the overall Grade 5 pupils' technostress can be attributed to the five (5) aforementioned predictors.

In addition to this, using the B coefficients of the variables, an equation of determination was formed showing that Overall result = 3.420 + 1.112 (Techno-overload) + 1.212 (Techno-invasion) + -0.273 (Techno-complexity) + -0.347 (Techno-insecurity) + 0.206 (Techno-uncertainty). This presents that for every one-point increase in Techno-overload is equals to a 1.112 increase in the technostress level; while one-point increase in Techno-invasion means a 1.212 increase in the technostress level; a one-point increase in Techno-complexity corresponds to a -0.273 in the technostress level; a one-point increase in Techno-insecurity equals to -0.347 in the technostress level; and a one-point increase in the Techno-uncertainty yields a 0.206 increase in the technostress level.

Interpreting these data further, of the five predictors, Techno-invasion has the most effect on the technostress of the grade 5 pupils with percentage effect of 121.2%, followed by Techno-overload (111.2%), Techno-uncertainty (20.6%) Techno-complexity (-27.3%), and Techno-insecurity (-34.7%).

Same with the result of the Grade 4 survey, teachers and pupils need to be oriented on up to when they are expected to be online, and they can be contacted online.

c. Grade 5 Pupils' Analysis of Technostress Predictors to their Overall Technostress

Table 7.

Regression Analysis for Techno Stress of Grade 6 Pupils

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	4.015	3.495		1.149	.284
Techno-Overload	.581	.616	.625	.943	.373
Techno-Invasion	-.589	.722	-.698	-.817	.438
Techno-Complexity	.807	.702	.911	1.149	.284
Techno-Insecurity	.154	.757	.136	.204	.843
Tecno-Uncertainty	.026	.501	.021	.051	.960

Dependent Variable: Techno Stress; R-Squared = 0.990; F-Value = 160.238; p-value = .000; alpha = 0.05

As seen in Table 7, after rendering a multiple regression analysis, it was revealed that the responses received an overall R-Squared value of 0.990 or 99.0% and a significant

regression equation (F-value) of 160.238. This shows that 99% of the model inputs are the observed predictors and 1% are the external factors. The result also harvested B coefficients of 0.581 for Techno-overload, -0.589 for Techno-invasion, 0.807 for Techno-complexity, 0.154 for Techno-insecurity, and 0.026 for Techno-uncertainty.

Though the two Grade levels (Grades 4 and 5) reveals similarity in statistical significance, the regression analysis for Grade 6 on the contrary, revealed that the result is statistically non-significant with p-values of 0.373 for Techno-overload, 0.438 for Techno-invasion, 0.284 for Techno-complexity, 0.843 for Techno-insecurity, and 0.960 for Techno-uncertainty. This shows that having p-values higher than 0.05, the result bears no statistical significance.

In addition, this means that though there are relationships among the predictors and the technostress of the pupils in the grade level, with Techno-complexity affecting the technostress the highest at 80.7%, followed by Techno-overload at 58.1%, Techno-insecurity at 15.4%, techno-uncertainty at 2.6% and Techno-invasion at -58.9%; these results are all just a product of chance and there is not enough evidence to support these claims.

Significant relationship between the technostress predictors and the technostress level of the pupils

Based on Table 5 and Table 6, all predictors (Techno-overload, Techno-invasion, Techno-complexity, and Techno-insecurity) for Grades 4 and 5 rendered identical significance levels of 0.00 but it does not mean that they are all equal. Since the significance levels of the predictors are 0.00, and are lower than the alpha level of 0.05, it can be said that there is significant relationship among the predictors and the dependent variable in both Grades 4 and 5 regression analysis results.

On the other hand, multiple regression significance results for the Grade 6 pupils shows that it is not statistically significant with all predictors having p- values higher than the alpha level of 0.05 (Techno-overload, 0.373; Techno-invasion, 0.438; Techno-complexity, 0.284; Techno-insecurity, 0.843; and Techno-uncertainty, 0.960).

Recommendation to school administrators

Looking into the results of the study, the following interventions, plans, programs, and activities can be recommended to the school administrators:

School administrators should strictly impose observance of holidays, weekends, and vacations, as day/s of rest for the learners and no school activities or tasks should be given asynchronously. As reflected in the questionnaire, learners answered that they feel that they need to be constantly online even during vacations and weekends so as not to miss-out any

announcement. Assignment or posting of tasks during wee hours of the day or weekends should likewise be avoided.

Teachers should be made aware of the impact of the assignment of tasks to their learners' technostress. This can be done during faculty meetings with the help of guidance counselors and experts.

Teachers should reflect on the difficulty and the estimated maximum of time it needs for the learner to answer the activity, in creating lessons and activities.

Intervention programs and webinars can be implemented by guidance counselors, in coordination with the advisers, to teach learners proper time management.

Pupils should be given time-management lectures and activities by the class advisers and guidance counselors to teach them how to manage their time effectively and efficiently so as they would not feel that their personal time is being invaded by doing schoolwork.

Constant checking of pupils' well-being should be done by class advisers and subject teachers since everyone is still adjusting in this new modality. To create a caring environment, monitoring checkups should be employed.

Subject teachers should coordinate with each other in giving assignments and activities to lessen the number of requirements that the pupils need to accomplish. Inter-disciplinary activities should also be discussed and created during area meetings and assemblies.

Conclusion

Based on the given findings above, the following conclusions were derived:

The Grades 4-6 pupils of St. Paul College Pasig are experiencing only low technostress level.

Techno-invasion has the most effect in the Technostress level of the Grades 4 and 5 pupils.

Grades 4 and 5 pupils think that their personal time is being invaded because they feel that they need to constantly be online.

Results in the Grade 6 level revealed that there is no significant relationship among the predictors and the technostress level of the pupils. There is a probability that the results happened by chance and there is not enough evidence to support the relationship claims.

Recommendations

Results of the data gathered and analyzed had been beneficial in uncovering the current scenario and standing of the intermediate pupils in their online classes. This stand as a good basis for further development of the online program of the school and the actions that it can offer for the welfare of the pupils.

Based on the results of the Grades 4-6 perceived technostress level and Techno-invasion as the predictor that contributes to it the most, the following recommendations can be made:

School administrators should look into setting boundaries up to until when the pupils should be online and can be communicated with.

Guidelines on giving asynchronous tasks should be set in terms of the quantity and the maximum estimated time it needs for the pupils to answer it. This would alleviate overloading of tasks that results to learners feeling that even their personal time with themselves and their family are being invaded.

Further studies involving the technostress level of teachers and its relationship to student technostress should be done since teachers are also exposed to technology during the implementation of online classes. Likewise, the study can be replicated utilizing respondents from the tertiary level.

Recommendations

Embarking on the given conclusions, the following recommendations can be noted:

Develop intervention programs to address techno-invasion stress experienced by pupils in Grades 4 and 5.

Establish clear boundaries between school and personal time for pupils.

Provide time management lectures and activities through class advisers and guidance counselors.

Regularly monitor pupils' well-being to ensure a caring environment during the adjustment period.

Enforce strict observance of holidays and weekends as rest days, avoiding asynchronous tasks during these times.

Educate teachers on the impact of task assignments on pupils' technostress during faculty meetings.

Encourage teachers to carefully plan tasks, considering their difficulty, quantity, and completion time.

Conduct intervention programs and webinars on effective time management for pupils.

Coordinate assignment schedules among subject teachers to reduce the workload for pupils and promote interdisciplinary activities.

Extend research to examine the technostress levels of teachers and their influence on student technostress during online classes.

Limitations

This study is limited to intermediate pupils from a single institution in the Philippines, focusing on a private school setting during the COVID-19 pandemic. The perspectives gathered

reflect the experiences of Grades 4-6 pupils during this period, which may not be generalizable to other populations or contexts. Future research should expand to include public schools, diverse age groups, and varying socio-economic settings to provide a broader understanding of technostress. Additionally, investigating technostress among teachers and its relationship to student experiences would offer valuable insights into systemic factors influencing online education.

Ethics Statement

Participants of this study have provided their informed consent on the data gathering, data management, and data disposal procedure to be implemented in undertaking the research.

REFERENCES

Ahmad, Ungku & Amin, Salmiah. (2010). The Dimensions of Technostress among Academic Librarians. Procedia - Social and Behavioral Sciences. 65. 266–271. 10.1016/j.sbspro.2012.11.121.

Ayyagari, R. (1970, January 01). TECHNOSTRESS : Technological Antecedents and Implications. Retrieved December 02, 2020, from https://www.semanticscholar.org/paper/TECHNOSTRESSTECHNOLOGI CAL-ANTECEAyyagari/c94cdff675a7727964d1034e102cb352a3403344

Barley, S., Huising, R., Orlikowski, W., Mazmanian, M., & Leonardi, P. (2010, September 30). E-mail as a Source and Symbol of Stress. Retrieved December 02, 2020, from https://pubsonline.informs.org/doi/10.1287/orsc.1100.0573

Beins, Bernard C. (2014). APA Style Simplified: Writing in Psychology, Education, Nursing, and Sociology (Wiley Custom Edition). John Wiley and Sons Inc.

Blokhin, A. (2020, September 16). What Is the Difference Between Linear and Multiple Regression? Retrieved December 08, 2020, from https://www.investopedia.com/ask/answers/060315/what-difference between- linear-regression-and-multiple-regression.asp

Brillhart, P. (2004). Technostress in the Workplace: Managing Stress in the Electronic Workplace. Retrieved De cember 02, 2020, from https://www. scirp.org/(S(351jmbntvnsjt1aadkposzje))/reference/ReferencesPa pers.aspx?ReferenceID=1741566

Carlotto, M. (2017). Technostress, Career Commitment, Satisfaction with Life, and Work-Family Interaction among Workers in Information and Communication Technologies. Retrieved 2020, from https://www. scielo.sa.cr/scielo.php?script=sci_abstract&pid=S2215-35352017000100091&lng=en&nrm=iso

Chiappetta, M. (2017, April). The Technostress: Definition, symptoms and risk prevention. Retrieved December 08, 2020, from https://www. researchgate.net/publication/325031719_The_Technostress_defini tion_symptoms_and_risk_prevention

Chuang, A., Shen, C., & Judge, T. (2015, March 01). Development of a Multidimensional Instrument of Person– Environment Fit: The Perceived Person–Environment Fit Scale (PPEFS). Retrieved December 02, 2020, from https://iaapjournals.onlinelibrary.wiley.com/doi/10.1111/apps.12036

Clute, R. (1998). Technostress: A Content Analysis. Retrieved 2020, from https://files.eric.ed.gov/fulltext/ED423911.pdf

Deterding, S., Khaled, R., Nacke, L., & Dixon, D. (2011). Interaction Lab: Gamification: Toward a Definition. Retrieved December 02, 2020, from http://hci.usask.ca/publications/view.php?id=219

Elizabeth Scott, M. (2020, August 03). How Is Stress Affecting My Health? Retrieved December 08, 2020, from https://www.verywellmind.com/stress-and-health-3145086

Fernando, J. (2020, November 18). R-Squared. Retrieved December 08, 2020, from https://www.in vestopedia.com/terms/r/r-squared.asp

Franco, M., & Merced, B. (2015). Technostressors and the Coping Mechanism of Academic Librarians in Davao City, Philippines (Doctoral dissertation, University of the Philippines Mindanao, Mintal, Tugbok District, Davao City, Philippines, 2015) [Abstract].

Frost, J. (2020, July 16). Interpreting Correlation Coefficients. Retrieved December 02, 2020, from https://statis ticsbyjim.com/basics/correlations/

Frost, J. (2017, May 05). Predictor variables. Retrieved December 08, 2020, from https://statisticsbyjim.com/glos sary/predictor-variables

Frost, J. (2020, July 16). How to Interpret the F-test of Overall Significance in Regression Analysis. Retrieved December 08, 2020, from https:// statisticsbyjim.com/regression/interpret-f-test-overall-significance-re gression/

Frost, J. (2020, July 16). How to Interpret the F-test of Overall Significance in Regression Analysis. Retrieved December 08, 2020, from https:// statisticsbyjim.com/regression/interpret-f-test-overall-significance-re gression/

Glen, S. (2020, September 16). Stratified Random Sample: Definition, Examples. Retrieved December 08, 2020, from https://www.statisticshowto .com/stratified-random-sample/

Hayes, A. (2020, September 16). Reading Into Stratified Random Sampling. Retrieved December 08, 2020, from https://www.investopedia .com/terms/stratified_random_sampling.asp

Holmbeck, G. (2008). Person-Environment Fit. Retrieved December 08, 2020, from https://www.sciencedirect.com/topics/psychology/person-environment

Ibrahim, M., & Abdelreheem, M. (2014, July 28). Prevalence of anxiety and depression among medical and phar maceutical students in Alexandria University. Retrieved December 02, 2020, from https://www. Sciencedirect.com/science/article/pii/S2090506814000591

Kirtman, L. (2008, November 30). Online versus In-Class Courses: An Examination of Differences in Learning Outcomes. Retrieved December 02, 2020, from https://eric.ed.gov/?id=EJ858508

Mcleod, S. (2019). Values and Statistical Significance: Simply Psychology. Retrieved December 08, 2020, from https://www.simplypsychology.org/p-value.html

Navarro, P., & Shoemaker, J. (2009, September 24). Performance and perceptions of distance learners in cyberspace. Retrieved December 02, 2020, from https://www.tandfonline.com/doi/abs/10.1080/08923640009527052?journalCode=hajd20

Osli, O. (2015). The Influence of the Visual Modality on LanguageStructure and Conventionalization: Insights From Sign Language and Gesture. Retrieved December 02, 2020, from https://onlinelibrary.wiley.com/doi/epdf/10.1111 /tops.12127

Pastores, Z., Palicpic, P., Maladaga, K., & Beltran, M. (2018). LEVEL OF TECHNOSTRESS OF GRADE 10 STUDENTS AND ITS PERCEIVED EFFECTS IN THEIR ACADEMIC PERFORMANCE: BASIS FOR TECH-NO-STRESS BROCHURE. Retrieved 2020, from https://www.coursehero .com/file/45122419/FOR-LAYOUT-ZPKM-Technostress-V2docx/

Person–Environment Fit. (2011, January 12). Retrieved December 08, 2020, from https://iloencyclopae dia.org/component/k2/item/14-person%E2%80%93 environment-fit

SM, P. (2011). Relationships between work-home segmentation and psychological detachment from work: The role of communication technology use at home. Retrieved December 02, 2020, from https://pub med.ncbi.nlm.nih.gov/ 21728434/

Solheim, I., & Stolen, K. (2007, March). Technology research explained. Retrieved December 08, 2020, from https://www.researchgate.net/publication/ 312473089_Technology_research_explained

SPSS Inc. Released (2017) Statistical Package for Social Sciences. IBM SPSS Statistician for Windows, Version 20.0

Tarafdar, M., Tu, Q., Ragu-Nathan, B., & Ragu-Nathan, T. (2014). The Impact of Technostress on Role Stress and Productivity. Retrieved December 02, 2020, from https://www.tandfonline.com/doi/abs/10.2753/MIS0742-1222240109

Teo, T. (2008). Beliefs about teaching and uses of technology among pre-service teachers. Retrieved 2020, from https://www.researchgate.net/publication/232893563_Beliefs_about_teaching_and_uses_of_technology_among_pre-service_teachers

Turel, O., & Gaudioso, F. (2018). https://www.researchgate.net/publication/322704993_Techno-stressors_distress_and_strain_the_roles_of_leadership_and_competitive_climates. Retrieved from https://www.re searchgate.net/publication/322704993_Techno-stressors_distress_and_strain_the_roles_of_leadership_and_competitive_climates'

Walton, K. (2019). Relationship Between Technostress Dimensions and Employee Productivity. Retrieved December 02, 2020, from https://scholarworks. waldenu.edu/dissertations/7768/

Wang, X., Tan, S., & Li, L. (2020). Measuring university students' technostress in technology-enhanced learning: Scale development and validation. Retrieved December 02, 2020, from https://ajet.org.au/in dex.php/AJET/article/ view/5329

Weil, M., & Rosen, L. (1999). Don't Let Technology Enslave You. Retrieved December 02, 2020, from https://www.questia.com/magazine/1P318/don-t-let-technology-enslave-you

You, J., & Kang, M. (2014, August). The role of academic emotions in the relationship between perceived aca demic control and self-regulated learning in online learning: Request PDF. Retrieved December 02, 2020, fromhttps://www.researchgate.net/publication/262490620