

PROJECT PAPER

The Role Played by Parents in the Abrupt Transition to Online Education During the Covid-19 Pandemic.

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ABSTRACT

The Covid-19 pandemic saw an abrupt transition from classroom teaching to online education. The debatable question was the impact of this pandemic on the parents of the students. A survey was conducted on the parents of elementary and secondary school students who had this transition to online learning to determine the impact of the transition on parental role in their children's education.

AUTHOR KEY WORDS

Covid-19, pandemic, parental role in education, online education

INTRODUCTION

The past decade has seen a significant move towards online education and MOOCs. Not only are there MOOC programs such as Coursera and Udacity which offer more focused courses on subjects of interest but there are also esteemed Universities such as Georgia Institute of Technology, Harvard Online, Stanford etc., which now offer through an online delivery methodology their master's degree and in some cases Doctorate degrees in subjects as diverse as Computer Science, Cybersecurity, Bio-Informatics, Nursing, Education, Management etc. The evolution of the internet, greater computing abilities and faster transmission of information has created an endless possibility for distance learning. The Covid-19 pandemic and the resultant impossibility of continuing conventional on-premises education has further accelerated this trend. The debatable question is how the role of parents has evolved because of online education. This is an area

where very little research has been conducted especially since the Covid-19 pandemic is of recent origin and is continuing. This certainly makes this an excellent area of research given the fact that more strains of the Covid-19 virus are being discovered and online schooling might become the primary means of delivery of education.

RELATED WORK

The Covid-19 pandemic saw an abrupt transition to online learning (Jordan K., Phillips T., Pellini A. August 2020). This transition occurred not merely in developed countries but also underdeveloped ones such as Bangladesh (Sultana A., Ramji M.G., 2020). The debatable question here is how this impacted the role of parents in their child's education.

There has been a significant amount of research on the role of parents in conventional on-premises education especially primary education and early life education. Parents are the first teachers of a child. Their influence and the environment created at home by parents influence the child's approach to education (Ceka A. & Murati R., 2016). They also play a significant role in conventional on-premises primary education (Dor & Rucker-Naidu 2012, Mullis & et. al. 2009, Berthelsen & Walker 2008). Ms. Stutzel (2019) found a direct correlation between parental involvement and early childhood literacy development of the child. This was supported by Dor & Rucker-Naidu (2012) who found that family involvement leads to better attendance, higher scores on standardized tests, higher motivation to study, lower absenteeism, and improved behavior at home and at school. Imperato F. (2009) conducted experiments which suggested a direct correlation between parental involvement and increased reading levels of children. The studies conducted by Berthelsen & Walker (2008) further corroborated that parental involvement leads to better outcomes for children.

Parental role in a child's education in the on-premises model transforms as the child progresses from primary to secondary education. The role of parents now changes from being a direct educator towards a support figure providing moral, emotional, and financial support to their children for attaining their aspirations.

Shute V.J., Hansen E.G., Underwood J.S. and Razzouk R. (2011) state in their literature research that secondary education of children is positively impacted by three parental characteristics: - parents-children communication, parents holding high aspirations and educational standards for their children and an authoritative parenting style. Catsambis, S. (1998) states that while the influence of parental involvement is low in the case of grade 12 students, there is clear evidence that parental aspirations for their children's education and encouragement for their children's education do have a significant impact on the child's educational achievement. Another study in Nigeria corroborated that parental involvement in their secondary school going children's education in the form of having high educational aspirations for their children and providing a supportive environment to attain those aspirations had a direct positive impact on their children's educational achievements (Adeyemo D., 2005). There have also been studies which have shown the impact of race/ethnicity and/or income in the parental involvement with student achievement (Desimone L., 2010).

Thus, a significant amount of research has been conducted on the role of parents in a conventional on-premises channel of delivery. The debatable question is how the role of parents has evolved because of online education. This is an area where very little research has been conducted especially since the Covid-19 pandemic was of recent origin and is continuing. However, the limited amount of research that has been conducted does lead to some interesting conclusions. Online education does put a significant amount of burden on the parent (Dong C., Cao S. and Li H. 2020) (Novianti R., Garzia M., 2020). Not only are parents the first educators of the children, in the online education era, they are the primary educators of their children (Dong C., et. al 2020). In an online delivery channel, teachers are reduced to content experts, not educators. Day-to-day tasks which teachers conduct in conventional on-premises schools such as monitoring students' coursework, assessing and grading now must be performed by the parents (Borup et. al, 2015). The absence of peer-to-peer interaction and social interactions in an online setting now leads to the parent being the only motivator of the child and ensuring their social development (Keaton W., Gilbert A., 2020). Belair (2012) notes the significant amount of autonomy that online education

accords to the student. Such autonomy needs to be tempered by discipline. This is again where parents now come to play an important role ensuring their children are doing the necessary coursework at the pace that would have been the norm in a traditional on-premises program (Keaton W., Gilbert A., 2020) (Dong C., et al., 2020).

Findlow S. (2013) argues that the advent of online education in the Arab countries in the Middle East has helped women gain access to higher education thereby leading them to question chauvinistic beliefs in their countries. This leads to the question whether socio-cultural and ethnic differences influenced parental engagement during the Covid-19 pandemic.

Garbe A., Ogurlu U., Logan N. and Cook P. (2020) state the challenges faced by parents during the transition to online learning during the Covid-19 pandemic and the need for supporting structures and processes to enable parents to meet the heightened demands being made of them due to the transition to online learning. Sahu P. (April 2020) enumerated the challenges faced by students during the transition to online learning eg. – inadequate infrastructure, underdeveloped assessments, students' mental health issues. The debatable question is how these problems affect the parents.

There has also been some research into how the experiences of developed and underdeveloped countries was not entirely similar during the transition to online education during the Covid-19 pandemic (Qazi A., Naseer K., Qazi J., AlSalman H., Naseem U., Yang S., Hardaker G., Gumaei A. December 2020) (Ramji G., Sultana A., July 2020). Does this then mean that nationality also played a role in the role of parents in the transition to online learning during the Covid-19 pandemic? This is another debatable point and a ripe subject for research.

(Dhawan S., June 2020), (Brom C., Lukavsky J., Greger D., Hannemann T., Strakova J., Svaricek R. ,July 2020), (Putri R.S., Purwanto A., Pramono R., Asbari M.,Wijayanti L.M., Hyun C.C. ,2020), (Konig J., Jager-Biela D., Glutsch N., August 2020) have all delved to great depth on the experiences of parents in several countries such as Indonesia, Germany, the Czech Republic etc. during the transition to online learning during the Covid-19 pandemic. Burdette P., Greer D.

(2014) states how the role of the parents of disabled students has changed substantially because of the advent of online education during the Covid-19 pandemic.

It has also been established that parents' socio-economic situation does influence their children's academic performance in conventional on-premises education (Azhar M., Nadeem S., Naz F., Perveen F., Sameen A., 2014) (Okpala C., Okpala A., Smith F. ,2010) (Cheng S., Kaplowitz S. , 2016). The debatable point is whether socio-economic factors continued to be an influencing factor in online education.

The research elucidated in this paper was conducted in the backdrop of the above research that had already been conducted. The objective was to conduct a research across several countries to throw more light on the contentious and debatable points that had been raised by earlier authors – (a) Did parental role in children's education change during the Covid-19 pandemic? (b) Were there other factors such as socio-cultural and socio-economic factors which impacted the parental role during the pandemic? (c) Were there other trends in parental engagement during the Covid-19 pandemic that had not yet been discovered in other studies?

THE RESEARCH METHODOLOGY

The research methodology chosen for this project was surveys. The data being collected included private information such as household income. Hence, there was a constraint to use surveys given the anonymity that surveys confer on the respondents. Georgia Tech's survey tool PeerSurvey was used to build the questionnaire that formed the basis for the research that was conducted. The target audience for the survey was parents of elementary and secondary school students who had a transition to online education during the Covid-19 pandemic.

It was hypothesized that the transition to online education during the Covid-19 pandemic was extremely challenging for parents. Data was then collected from the afore-mentioned survey to investigate why the transition was so challenging. This data collected was of a qualitative nature. This qualitative data was then mined to determine quantitative trends.

The survey was popularized on Piazza, LinkedIn, Reddit, Craigslist, ksl.com, kijiji.com, Whatsapp groups and personal requests to family members, friends, and colleagues. Also, reached out to all the school districts in the state of Utah.

THE RESULTS

1. Parental Time Spent on Children's Education

The amount of time spent by parents on their child's education increased by an average of 117% , from 5.5 hours to 11.95 hours because of the transition to online education during the Covid-19 pandemic.

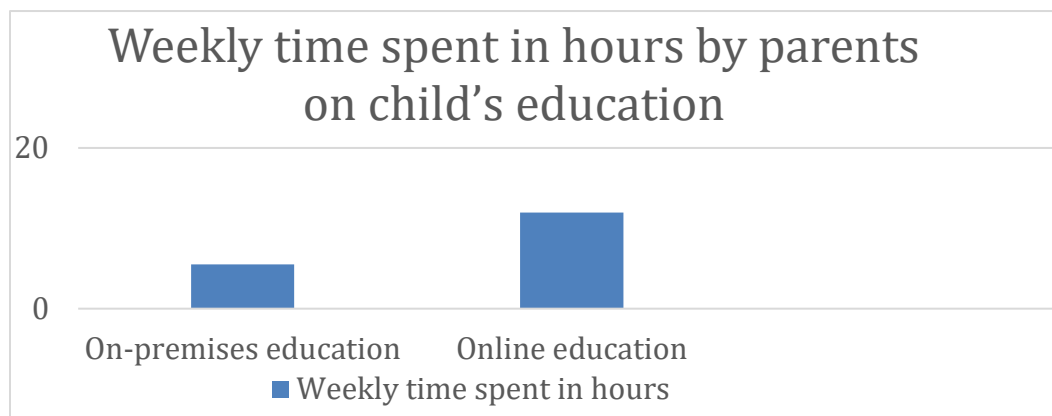


Figure 1. Weekly time spent in hours by parents on child's education in the on-premises and online models.

Only 10% of the parents reported an increase in the student's grades after the transition to online learning. 6.6% of the parents reported a decrease in the students' grades after the transition to online learning. A substantial majority 83.33% reported no change in the grades of the students.

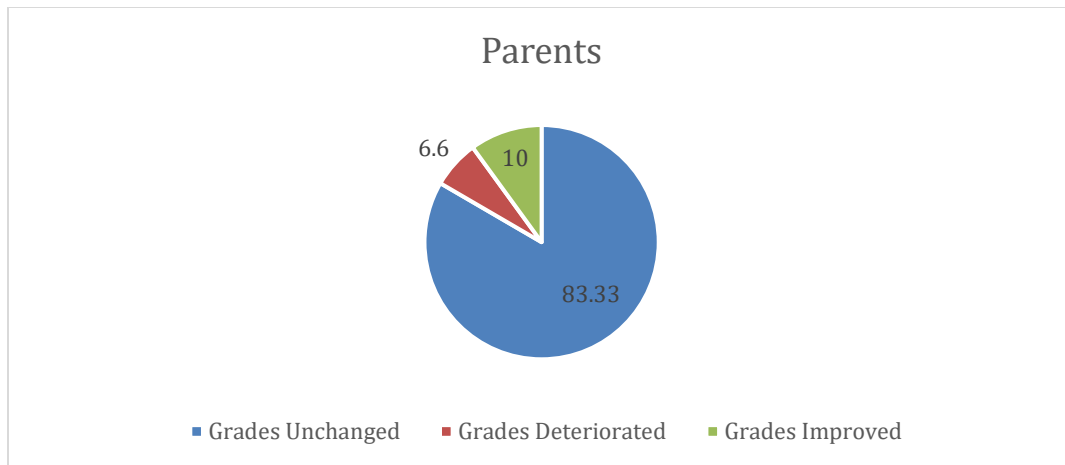


Figure 2. Parents reporting changes in student's grades in the online model.

Thus, it can be concluded that the additional effort being expended by parents is being used merely to maintain the students' current level of performance. This additional parental effort is not leading to improved student performance. Thus, parental effort has substantially increased because of the transition to online learning during the Covid-19 pandemic. This result corroborates the finding that online education does put a significant amount of burden on the parent (Dong C., Cao S. and Li H. 2020) (Novianti R., Garzia M., 2020).

2. Nature of parental engagement

Prior to the pandemic, 67% of parents claimed their primary engagement with their children's education was helping them with their homework.

During the pandemic, 50% of parents claimed their primary engagement with their children's education was actively teaching them.

This result corroborates the finding by Dong C., Cao S. and Li H. (2020) that in the online model, the parent replaces the teacher as the primary educator of the child. The teachers are reduced to content experts, not educators. Day-to-day tasks which teachers conduct in conventional on-premises schools such as monitoring students' coursework, assessing and grading now must be performed by the parents (Borup et. al, 2015).

3. Advantages and disadvantages of online education

50% of parents stated that flexibility is the biggest advantage of online education. 67% of parents stated that lack of interaction with other kids and their teachers is the biggest disadvantage of online education. Thus, parents desire the flexibility of online education. However, they also desire greater teacher involvement to reduce the burden imposed on them. These findings corroborate the conclusion reached by Garbe A., Ogurlu U., Logan N. and Cook P. (2020) that parents need significant support for the online model of education to succeed.

4. Parental Preference – Online/On-premises

Only a small percentage of parents (15%) would like to continue with online education for their children after the pandemic ends. A substantial percentage of parents (85%) would prefer their children to go back to the conventional on-premises educational model.

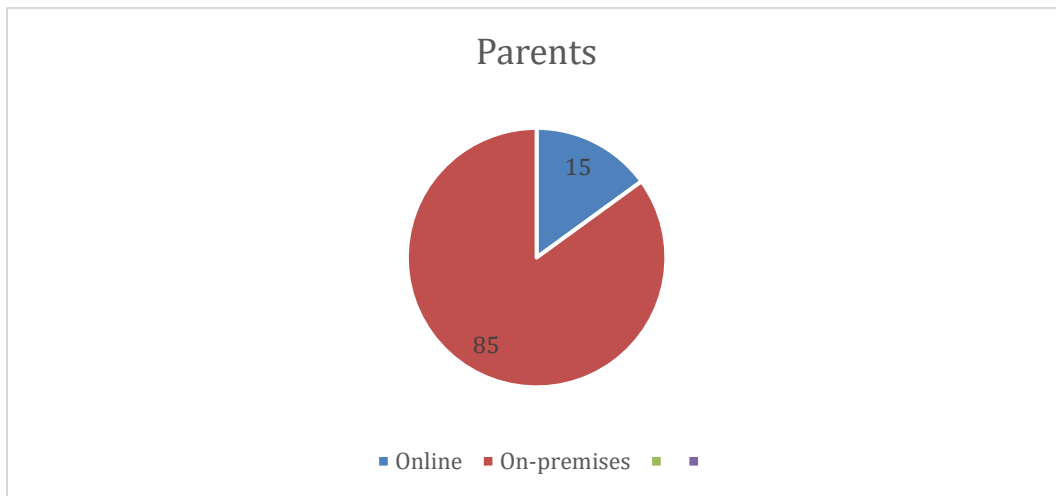


Figure 3. Parental Preference – On-premises vs. Online models.

5. Parental Engagement by Ethnicity

Table 1 - Parental engagement by ethnicity

Ethnicity	Average hours/week before pandemic (on-premises model)	Average hours/week during pandemic (online model)	% Change

Asian	6.7	14.5	116.41
Caucasian	3.78	13	243.91

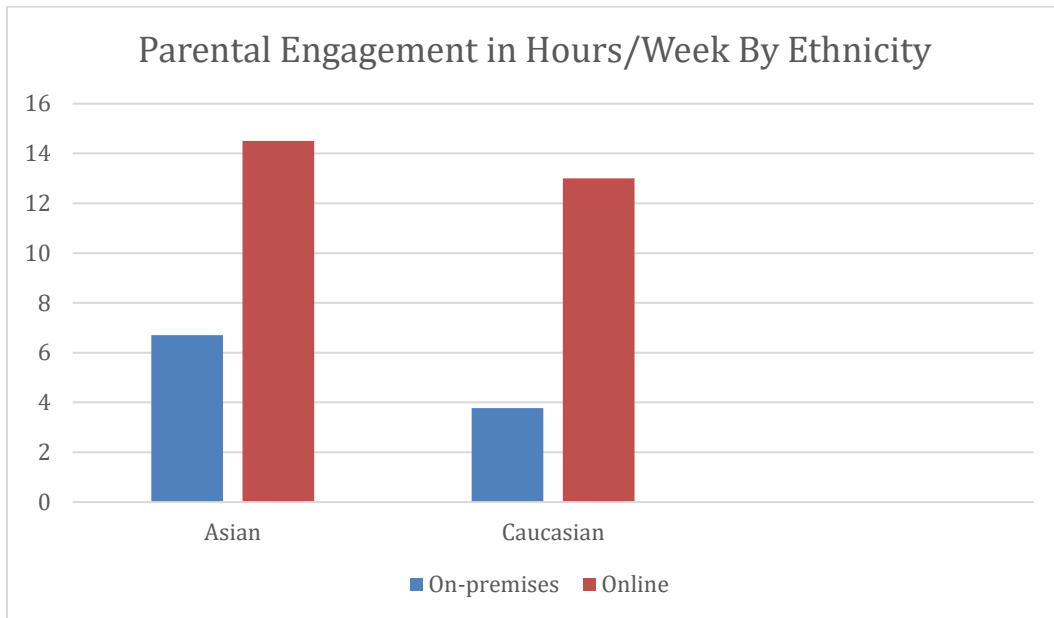


Figure 4. Parental engagement in hours/week by ethnicity

It is observed that parents with Asian and Caucasian ethnicities had a very substantial increase in their engagement after the transition to online education during the pandemic.

Other ethnicities were not included in the results as enough responses were not obtained from other ethnicities.

The results obtained corroborate the findings of Grace Kao (1995) that after controlling for the effects of family characteristics, Asians and Caucasians have similar high Mathematics and Reading scores.

6. Parental Engagement by Nationality

Table 2. Parental engagement by nationality

Country	Average hours/week before pandemic	Average hours/week during pandemic (online model)	% Change

	(on-premises model)		
USA	5.62	12.3	118.86

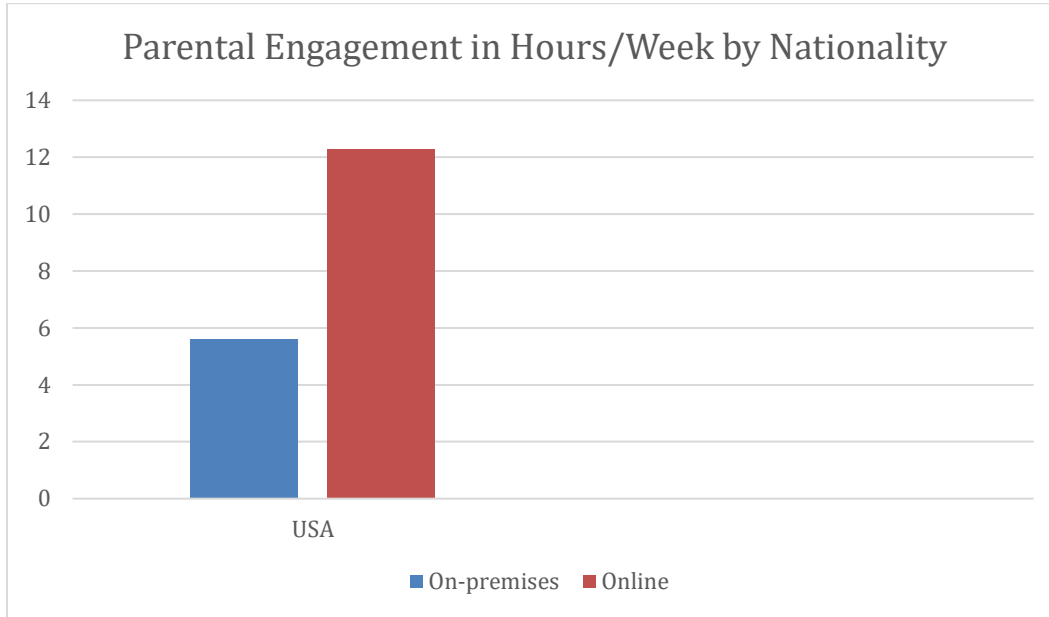


Figure 5. Parental engagement in hours/week by nationality

Sufficient data was not available for other nationalities and hence could not be included in this analysis. However, this graphical representation does indicate that American parents saw their engagement more than double because of the transition to online education during the pandemic.

7. Parental Engagement in USA by Annual Household Income

Table 3. Parental Engagement in USA by Annual Household Income

Annual Household Income (USD)	Average hours/week before pandemic (on-premises model)	Average hours/week during pandemic (online model)	% Change
100,000 – 200,000	6	12.19	103
200,001 – 499,999	5.75	13.5	134.8

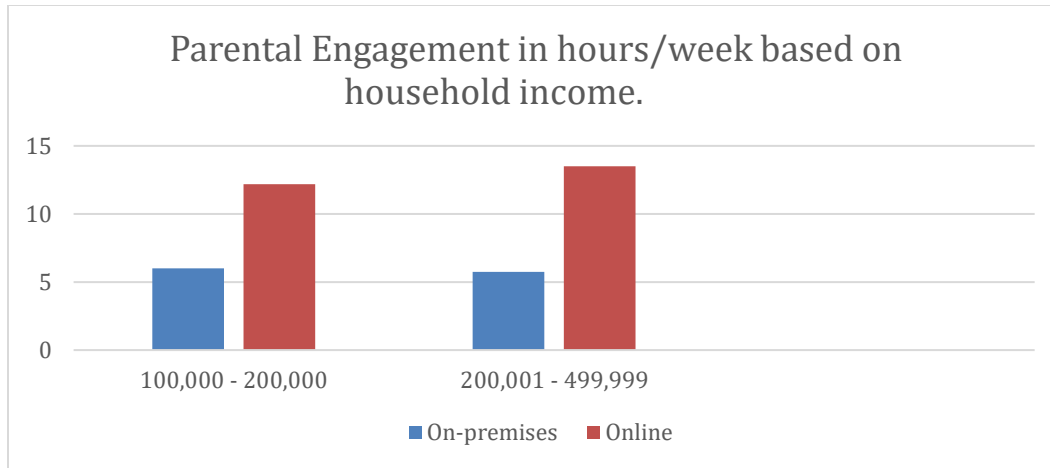


Figure 6. Parental engagement in USA in hours/week based on household income.

Thus, we observe that there was a substantial increase in the amount of time being spent by parents earning an annual household income in the range of \$100,000 - \$200,000 and \$200,001 - \$499,999. It is pertinent to note that parents in the two income categories spent a similar time on their children's education before the pandemic and continue to spend a similar amount of time after the pandemic. Without more data about those earning less than \$100,000 per annum and those earning more than \$499,999 per annum, it is not possible to reach a conclusion on the impact of income on parental engagement in children's education.

CONCLUSION

In this paper, we have attempted to determine the factors that impinge on parental engagement in online education and the impact of this engagement on student performance. We found that online education results in a substantial burden on parents. Parents end up becoming the primary educator of their children in the online model. While parents cherish the flexibility, which comes with online education, they resent the substantial increase in their workload and need assistance from the teaching community. We also found that Asian and Caucasian parents do spend a substantial amount of time and effort in the online model of education. Lastly, the vast majority of parents prefer the conventional on-premises model as opposed to the online model.

LIMITATIONS & FUTURE WORK

This research project has the following limitations: -

- The project focused on parents of elementary and secondary school students. The results may not be scalable to parents of college/University students.
- Limited number of respondents. An attempt has been made to reach conclusions despite the limited number of respondents. However, for the study to be conclusive, it is imperative that the research be carried on a much larger scale with a substantially greater number of respondents.
- Limited number of respondents from ethnic groups other than Caucasian and Asian.
- Limited number of respondents from countries other than USA.
- Limited number of respondents with a household income < 100,000 USD per annum and > 500,000 USD per annum.
- The fact that I reached out to my friends, colleagues, and Georgia Tech students to fill up the survey could have resulted in sample bias and skewed the results in favor of an educated, higher-middle class population.
- There was no mechanism to determine trends within groups eg. – How do parents in a lower income group in India engage in their children's online education as opposed to parents in a lower income group in USA?
- There are several unanswered questions – what has a greater impact on parental engagement in their child's online education? – ethnicity/ socio-economic factors / nationality?

Future Work

The future work will be to further examine the role of parents in the context of online education especially during the abrupt transition to online education during the pandemic. The research needs to be continued on a much wider scale with a substantially higher number of respondents from diverse countries. Also, a much wider range of socio-economic and socio-ethnic statuses needs to be included as research subjects. The research results can be deemed conclusive only after a substantial amount of data is obtained and analyzed. Finally, it might be necessary to move beyond surveys as the research methodology.

REFERENCES

1. Adeyemo D. (2005). Parental Involvement, Interest in Schooling and School Environment as Predictors of Academic Self-Efficacy among Fresh Secondary School Students in Oyo State, Nigeria. *Electronic Journal of Research in Educational Psychology*. No 5-3 (1), pp. 163-180.
http://repositorio.ual.es/bitstream/handle/10835/690/Art_5_40_eng.pdf?sequence=1
2. Azhar M., Nadeem S., Naz F., Perveen F., Sameen A. (2014). Impact of Parental Education and Socio-Economic Status on Academic Achievements of University Students. *European Journal of Psychological Research*, Vol. 1, No. 1, 2014.
<http://www.idpublications.org/wp-content/uploads/2014/11/IMPACT.pdf>
3. Belair M. (2012). The Investigation of Virtual School Communications. *TechTrends* 56, pp. 26-33.
<https://link.springer.com/article/10.1007%2Fs11528-012-0584-2>
4. Berthelsen D., Walker S. (Jan 2008). Parents' Involvement in their Children's Education, *Family Matters*, Pg. 34 – 41, Jan 2008.
<https://search.informit.org/doi/abs/10.3316/agispt.20091531>
5. Borup J., West R., & Thomas R. (Feb. 2015) The Impact of Text Versus Video Communication on Instructor Feedback in Blended Courses. *Educational Technology Research and Development* 63, pp. 161-184
<https://link.springer.com/article/10.1007%2Fs11423-015-9367-8>
6. Brom C., Lukavsky J., Greger D., Hannemann T., Strakova J., Svaricek R. (2020). Mandatory Home Education During the Covid-19 Lockdown in the Czech Republic: A Rapid Survey of 1st – 9th Graders' Parents. *Front.Educ.*
<https://doi.org/10.3389/feduc.2020.00103>
7. Burdette P., Greer D. (2014) Online Learning and Students with Disabilities: Parent Perspectives. *Journal of Interactive Online Learning*, Vol. 13, Number 2. (2014)
<https://www.ncolr.org/jiol/issues/pdf/13.2.4.pdf>

8. Catsambis S. (Dec. 1998). Expanding the Knowledge of Parental Involvement in Secondary Education: Effects on High School Academic Success. Report No. 27. Center for Research on the Education of Students Placed at Risk.
<https://files.eric.ed.gov/fulltext/ED426174.pdf>
9. Ceka A., Murati R. (2016). The Role of Parents in the Education of Children. *Journal of Education and Practice*, v7 n5 p 61-64, 2016.
<https://files.eric.ed.gov/fulltext/EJ1092391.pdf>
10. Cheng R. &, Garzia M. (2020). Parental Engagement in Children's Online Learning During Covid-19 Pandemic. *Journal of Teaching and Learning in Elementary Education*, Vol. 3, No. 2.
11. Cheng S., Kaplowitz S. (2016). Family Economic Status, Cultural Capital, and Academic Achievement: The Case of Taiwan. *International Journal of Educational Development*. Vol. 49, pp. 271-278, July 2016.
<https://doi.org/10.1016/j.ijedudev.2016.04.002>
12. David, R., Pellini, A., Jordan, K & Phillips, T. (2020). Education during the COVID-19 crisis. Opportunities and constraints of using EdTech in low-income countries. Policy Brief. EdTechHub.
<https://edtechhub.org/wp-content/uploads/2020/04/education-during-covid-19-crisis.pdf>
13. Dhawan S. (June, 2020). Online Learning: A Panacea in the Time of Covid-19 Crisis. Sage Publications. Vol. 49, Issue 1, 2020.
<https://doi.org/10.1177/0047239520934018>
14. Desimone L. (2010). Linking Parent Involvement With Student Achievement: Do Race and Income Matter? *The Journal of Educational Research*, April 2010.
<https://doi.org/10.1080/00220679909597625>
15. Dong C., Cao S., & Li H. (2020). Young Children's Online Learning During Covid-19 Pandemic: Chinese Parents' Beliefs and Attitudes. *Children and Youth Services Review*, Volume 118, November 2020.
<https://doi.org/10.1016/j.childyouth.2020.105440>

16. Dor A., Rucker-Naidu T. (2012). Teachers' Attitudes Towards Parents' Involvement in School: Comparing Teachers in the USA and Israel. *Issues in Educational Research*, 2012, Vol 22(3), 246-262
<http://iier.org.au/iier22/dor.html>
17. Findlow S. (2011). Higher Education and Feminism in the Arab Gulf. *British Journal of Sociology of Education*, pp. 112-131. October 2011.
<https://doi.org/10.1080/01425692.2012.699274>
18. Garbe A., Ogurlu U., Logan N., Cook P. (2020) Covid-19 and Remote Learning: Experiences of Parents with Children during the Pandemic. *American Journal of Qualitative Research*, Vol. 4, Issue 3, pp. 45 – 65
<https://doi.org/10.29333/ajqr/8471>
19. Grace Kao (1995). Asian Americans as Model Minorities? A Look at Their Academic Performance. *American Journal of Education*, Volume 103, Number 2, Feb. 1995.
<https://www.journals.uchicago.edu/doi/abs/10.1086/444094>
20. Imperato F. (2009). Getting Parents and Children Off to a Strong Start in Reading. *The Reading Teacher*, Volume 63, Issue 4., Pages 342-344, Jan 2009.
<https://doi.org/10.1598/RT.63.4.12>
21. Keaton W., Gilbert A. (Oct. 2020). Successful Online Learning: What Does Learner Interaction With Peers, Instructors and Parents Look Like? *Journal of Online Learning Research*, Volume 6, Number 2, October 2020.
<https://www.learntechlib.org/p/215616/>
22. Konig J., Jager-Biela D.J., Glutsch N. (2020). Adapting to Online Teaching During Covid-19 School Closure: Teacher Education and Teacher Competence Effects Among Early Career Teachers in Germany. *European Journal of Teacher Education*. (Aug. 10, 2020)
<https://doi.org/10.1080/02619768.2020.1809650>
23. Mullis, R. L., Mullis, A. K., Comille, T. A., Ritchson, A. D., & Sullender, M. S. (2004). Early literacy outcomes and parental involvement, Tallahassee, FL, Florida State University.

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.662.3746&rep=rep1&type=pdf>

24. Novianti R., Garzia M. (2020). Parental Engagement in Children's Online Learning During Covid-19 Pandemic. *Journal of Teaching and Learning in Elementary Education*, Vol. 3, No. 2 (2020).
<https://jtle.ejournal.unri.ac.id/index.php/JTLEE/article/view/7845>
25. Okpala C., Okpala A., Smith F. (2010). Parental Involvement, Instructional Expenditures, Family Socioeconomic Attributes, and Student Achievement. *The Journal of Educational Research*. Vol. 95, 2001 – Issue 2, pp. 110-115.
<https://doi.org/10.1080/00220670109596579>
26. Putri R.S., Purwanto A., Pramono R. Asbari M., Wijayanti L., Hyun C. (2020). Impact of the Covid-19 Pandemic on Online Home Learning: An Explorative Study of Primary Schools in Indonesia. *International Journal of Advanced Science and Technology*, Vol. 29, No. 5, pp. 4809 – 4818 (2020).
https://www.researchgate.net/profile/Masduki-Asbari/publication/341194197_Impact_of_the_COVID-19_Pandemic_on_Online_Home_Learning_An_Explorative_Study_of_Primary_Schools_in_Indonesia/links/60136c1345851517ef2262c7/Impact-of-the-COVID-19-Pandemic-on-Online-Home-Learning-An-Explorative-Study-of-Primary-Schools-in-Indonesia.pdf
27. Qazi A., Naseer K., Qazi J., AlSalman H., Naseem U., Yang S., Hardaker G., Gumaei A. (December 2020). Conventional to Online Education During Covid-19 pandemic: Do develop and underdeveloped nations cope alike? *Children and Youth Services Review*, Volume 119, December 2020, 105582
<https://doi.org/10.1016/j.chilyouth.2020.105582>
28. Ramji G., Sultana A., Preparedness of Online Classes in Developing Countries amid COVID-19 Outbreak: A Perspective from Bangladesh (July 2020)
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3638718

29. Sahu P. (April 2020). Closure of Universities Due to Coronavirus Disease 2019 (Covid-19): Impact on Education and Mental Health of Students and Academic Staff. *Cureus* , April 2020, 12(4): e7541. PMCID: PMC7198094. PMID: 32377489
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7198094/>
30. Shute V.J., Hansen E.G., Underwood J., and Razzouk R. (2011). A Review of the Relationship between Parental Involvement and Secondary School Students' Academic Achievement. *Education Research International*, Volume 2011, Article Id 915326.
<https://doi.org/10.1155/2011/915326>
31. Stutzel M. (2019) Impact of Parental Involvement on Literacy Skills in Early Childhood
https://nwcommons.nwciowa.edu/education_masters/143/