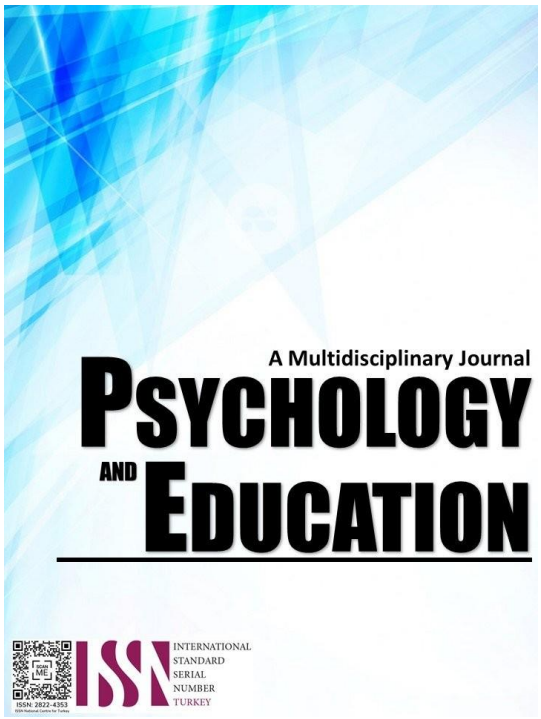
HOME VISITATION: ITS EFFECT TO LEARNERS' MATHEMATICAL PERFORMANCE IN MODULAR PRINTED LEARNING DELIVERY MODALITY



PSYCHOLOGY AND EDUCATION: A MULTIDISCIPLINARY JOURNAL

2023
Volume: 13
Pages: 73-77
Document ID: 2023PEMJ1141
DOI: 10.5281/zenodo.8313449
Manuscript Accepted: 2023-1-9

Psych Educ, 2023, **13**: 73-77, Document ID:2023 PEMJ1141, doi:10.5281/zenodo.8313449, ISSN 2822-4353
Research Article

Home Visitation: Its Effect to Learners' Mathematical Performance in Modular Printed Learning Delivery Modality

Linny J. Segura*
For affiliations and correspondence, see the last page.

Abstract

This action research was conducted to improve the mathematical performance of learners while at home amidst this pandemic during the modular printed learning delivery modality through home visitation. This innovation serves as a teaching and learning strategy to enhance learning. Thus, this research aimed to determine the effectiveness of home visitation on learners mathematical performance. The participants of the study were the 13 struggling Grade 6-Cattleya learners of Gines Elementary School School for the S.Y. 2020-2021. Researcher-made learning activity sheets composing four fundamental mathematical operations were utilized in the study during home visitation. The pre-test and post test scores were used to gather the data. Mean and Wilcoxon-signed rank test were employed in the study. The findings revealed that home visitation improved the post test scores of the learners in mathematics. Significant differences existed in the pre-test and post test scores of the learners before and after the intervention. It was concluded that home visitation improved the mathematical performance of the learners. It was recommended to utilize home visitation as strategy in enhancing learners' mathematical performance especially during this pandemic as we utilized the modular printed learning delivery modality in delivering quality education among our learners.

Keywords: *learners, home visitation, mathematical performance, learning delivery modality*

Introduction

The Philippine educational system is one of the highly affected sectors of the government in the wrath of COVID-19. The readiness of the schools was a challenge that brought the educational sector into a different mode in the delivery of continued education in all key stages. From this, the Department of Education implemented different learning delivery modalities where pupils are not required to report to school instead modules are distributed and studies are done at home with the assistance of the parents and significant others.

In this case, home visitation is one of the strategies that bridge the gap between the school and home for students, families and teachers. A growing amount of research points to the importance of parents supporting their children's learning at home. Parent-teacher conferences, phone calls, sending letters and progress reports are part of the communication system to follow up students especially those who are academically at-risk to monitor their school performance and daily classroom behaviors (Tan, 2019).

Furthermore, Home visitation supports and encourages parents to take more of an active role in the learning activities of their children. The Parents as Teachers Program (Parents as Teachers National Center, 2008) recognizes parents as the primary teachers of children, and bring resources to parents in order to help them to develop into effective parent-teachers. Through home visits, schools can help establish positive relationships with the families, leading to more involvement with the schools and better student success. Teachers who make these home visits can take with them simple materials that can be left with the child, such as crayons and paper, or a child's book. They can make suggestions for ways the parents can help the child prepare for school. Schools can also use a hand-off procedure in which teachers might take initial home visits, but if there is a need for ongoing support in the home, either other school staff can take over, or the school can link with other community agencies that might be staffed for more intensive home visiting services.

During the modular printed learning delivery modality, teachers follow up pupils through text, call, chat or video calls in order to communicate and assist learners on how have they go with their lessons as well as on what difficulties they encounter upon working on the modules. This is concluded by Gestwicki (2012) who states that the purpose of home visits is to establish relationships and communication and thus, home visitation programs developed over the past several decades focus specifically on teachers educating and supporting parents and children in the home.

More so, knowing that face to face instruction is impossible during this time of pandemic, the teacher, in this case the researcher thinks of the possible outcome of the pupils' learning especially in

Mathematics subject. At this scenario, teacher home visits are a fast, inexpensive and replicable strategy for engaging families, educators and students as a team, triggered the curiosity of the researcher on how this intervention affect the mathematical performance of the grade six learners of Gines Elementary School. Thus, the researcher was challenged on how home visitation affect learners mathematical performance because as what Flannery (2014) explained that the unique perspective that the home visits provide for a classroom teacher is by visiting a student's home, where teachers develop a stronger understanding of the factors contributing to a student's behavior in the classroom, as well as overall school performance. This appreciation of a student's background and influences on behavior allows a teacher to modify his or her approach to working with the student, thus this allow a more meaningful relationship between teacher and student. Aligned with this, the relevance of the study was based on the fact that it has been observed form the previous Catching-UP, Abridging Activity, Remediation, Enrichment and Summative Test Program of the school that learners shows interest and motivation to study their modules and in answering mathematical activities upon knowing that their teacher will be visiting them of whom they can ask queries regarding their lessons.

Action Research Questions

This study aimed to ascertain the effect of home visitation to learners' mathematical performance in modular printed learning delivery modality. Specifically, the study sought to answer the following questions:

1. What is the mathematical performance of Grade 6 learners before and after conducting home visitation?
2. Is there a significant difference in the mathematical performance of learners before and after the intervention?
3. What actions shall be undertaken after conducting the study?

Innovation, Intervention and Strategy

In this intervention, its objective is to connect with pupils and parents which was concluded by (Coleman, 2012) that teachers needs to socialize and build positive family-teacher partnerships that includes sharing of information about classroom, completing forms and reviewing children's educational progress through home visits.

In this study, the researcher conducted daily home visitation to 13 struggling grade 6 learners in Mathematics. During the conduct, minimum health and safety protocols were followed by both the teacher and learners such as wearing of facemask and face shield, sanitizing and maintaining physical distancing.

The teacher-researcher gave 2-item test of 3 by 2 digit numbers with or without regrouping in every mathematical operation. After which, the researcher checked the exercises whether the learner reach the 80% passing score. The learners who reached the passing score at the first try were directly given enrichment activities and were checked immediately.

However, the learners who didn't reach the passing score were presented with the step by step method on how to answer the different operations until the learner catch it up. Upon mastering the exercises, the teacher gave enrichment activities for further practice. Another home visitation was conducted to learners that showed slow progress until improvement became visible.

Before and after the intervention, a 40-item researcher made test were given to the learners to assess the effect of home visitation to their mathematical performance in modular printed learning delivery modality.

Methodology

Participants and Other Sources of Data and Information

The participants of the study were the 13 struggling grade 6 learners in Mathematics of Gines Elementary School for the school year 2020-2021. The participants were purposively selected since they were the learners identified as struggling learners based on their performance in Mathematics 6 during the first quarter. Likewise, the participants were the learners handled by the researcher.

Data Gathering Method

This study gathered the pretest and posttest scores of Grade 6 struggling learners to determine the effect of home visitation to their mathematical performance in modular printed learning delivery modality. Two equivalent sets of 40-item test (one for the pretest and one for the posttest) that includes addition, subtraction, multiplication, and division of 3 by 2 digit numbers with or without regrouping was prepared by the researcher. This test was validated by three mathematics teacher of the District of Lambunao East.

Psych Educ, 2023, **13**: 73-77, Document ID:2023 PEMJ1141, doi:10.5281/zenodo.8313449, ISSN 2822-4353
Research Article

This test was pilot tested to the grade 6 learners who did not participate to the study. KR-20 was used to test the reliability and was found out to be .926. The study was conducted during the 3rd to 4th quarter for school year 2020-2021. The pretest was conducted prior to the conduct of the study while the posttest was administered after the intervention.

Data Analysis Plan

The following statistical tools were used to analyze the data collected.

Mean. It was used to determine the level of performance of grade 6 learners in mathematics before and after the intervention.
Standard Deviation. It was used to determine the level of homogeneity or heterogeneity of the scores of the participants.
Wilcoxon Signed Rank Test. It was used to determine the significant difference between the pretest and posttest scores of the learners in mathematics. The alpha was set at .05. All statistical computation was availed of via Statistical Package for the Social Sciences (SPSS) software and/or Microsoft Office Excel.

Ethical Issues

To be ethical, is knowing the difference between what you have right to do and what is right to do (Potter Stewart). In research, ethical considerations was observed all throughout the conduct of the study and this was concluded by Kvale (1996) which states that ethical consideration do not belong to a specific stage of research, but are relevant throughout the entire process.

Since the researcher needs the cooperation and understanding of the parents during the intervention (Home Visitation) process, the researcher secured first the participant's consent as well as parent's consent asking permission to the parents whether they will permit their children to be engaged in the study or not. Second, the learners were oriented on their participation in the research, its procedure and benefits, and most of all its purpose before the conduct of the study. Third, during the intervention process, the learners and parents remained anonymous in order to retain confidentiality. Fourth, the approval was secured from the office of the school principal up to the office of the Schools District Supervisor before the study was conducted. And lastly, health and safety standards was observed every time the home visitation was done.

Results and Discussion

Pre-test and Post test Scores of Grade 6 Learners in Mathematics

Table 1 showed that the Grade 6 learners had pre-test score (M= 23.31, SD = 7.10) and post test score (M= 39.69, SD = 0.48). It showed that the post test score is higher compared to the pretest score. Based on this result, it revealed that the post test scores of the participants improved after exposing to home visitation. This supports the study of (Tan, 2019) that home visitation is one of the strategies that bridge the gap between the school and home for students, families and teachers to follow up students especially those who are academically at-risk to monitor their school performance. This implies that home visitation can support formal education and improved the performance of the students in Mathematics.

Table 1. *Pre-test and Post test Scores of Grade 6 Learners in Mathematics*

Mean		*Std. Dev.*	
Pre-test	*Post test*	*Pre-test*	*Post test*
23.31	39.69	7.10	0.48

Significant Difference in the Pre-test and Post test Scores of Grade 6 Learners in Mathematics

The analysis showed that there is a significant difference in the pre-test and post test scores of Grade 6 learners before and after exposing to intervention Z=-3.186, p= .001. Based on this result, it revealed that the post test score of the participants significantly improved after exposing to home visitation strategy. This supports the study of Flannery (2014) that the unique perspective that the home visits provide for a classroom teacher is by visiting a student's home, where teachers develop a stronger understanding of the factors contributing to a student's behavior in the classroom, as well as overall school performance. Thus, this implies that home visitation strategy as used in this study improved the performance of the learners in Mathematics.

Table 2. *Significant Difference in the Pre-test Score and Post test of Grade 6 Learners in Mathematics*

Z-value	p-value
-3.186	.001

Conclusion

(1)The use of Home visitation as strategy increased the post test scores of the grade 6 learners in Mathematics. (2) Home visitation significantly increased the post test scores of the learners, thus improving the performance in Mathematics. (3) Home visitation can be used to improve the performance of learners in Mathematics.

(1) Use home visitation strategy to aid teaching and learning in distance learning modality. (2) Select topics that suit to learner's context. (3) Conduct further studies on home visitation as strategy in teaching the other subject areas.

Acknowledgement

The researcher wish to express her profound gratitude to all those who in one way or another had facilitated the accomplishment of this action research. Their greatest acknowledgement and professional appreciation are extended to the following:

Above all to the Greatest Creator who guided the researcher to become righteous, resilient and capable for the completion of this study; Sir Roden H. Toreno, 3rd Congressional District Assistant Research Coordinator, for accepting and endorsing the research proposal; Dr. Anthony Macaya, my TWG, for the guidance and technical assistance during the research process; Mrs. Jean S. Larroder, for the encouragement and expertise shared to me every time I need help. Mrs Emily S. Pablico, School Principal for the full support, guidance, trust and encouragement; Mr. Charlie S. Lasconia for the help during the pilot testing;

To the Barangay Captains of the five catchment barangays of Gines Elementary School, Hon. Kenneth John Lenaming, Hon. Freddie Leagarda, Hon. Rhodery Paez, Hon. John Latumbo, and Hon. Jessie Lenisen for the support and assistance through out the duration of the study; To Grade 6-Cattleya parents, for the cooperation and support and; Gines Elementary School Faculty and Staff, for the unending support and encouragement.

References

A Meta-analysis of Home Visiting Programs for At-risk Families. (2005). Retrieved from https://files.eric.ed.gov/fulltext/ED499307.pdf

A program for home visitation for the class room teacher. (1954). Retrieved from https://scholarworks.umt.edu/cgi/viewcontent.cgi?article=7040&context=etd

Coleman, N. (2012). Empowering Family-Teacher Partnerships: Building Connections within Diverse Community Page 251.

Flannery, M. E. (2014, October 28). All in the family: How teacher home visits can lead to school transformation. Retrieved from http://neatoday.org/2014/10/28/all-in-the-family-how-teacherhome-visits-can-lead-to-school-transformation/

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2011). How to Design and Evaluate Research in Education. New York: Mc. Graw Hill

Gestwicki, C. (2015). Home, School, and Community Relations, Page 440.

Home Visitation for Families with Young Children. (2010). Retrieved from https://www.everycrsreport.com/reports/R40705.html

Home Visits 101. (2017). Retrieved from https://www.edutopia.org/article/home-visits-

Home Visiting Programs and Their Impact on Young Children's School Readiness. (2012). Retrieved from http://www.child-encyclopedia.com/home-%20visiting/according-experts/home-visiting-programs-and-their-impact-young-%20childrens-school

How to Develop Effective Teacher Home Visits. (n. d.). Retrieved from https://www.projectappleseed.org/teacher-home-visits

Kvale, S. (1996). Inter-Views: An introduction to qualitative research interviewing. Thousand Oaks, CA: Sage. Reasons for home visits. (n.d.) retrieved from https://whsaonline.org/wp%20content/uploads/2015/05/Robinsin_Reasons-for-home-visits-points.pdf

SRI International, Center for Education and Human Services, USASeptember 2012, Rev. ed.

Tan, D.A., Cordova, C.C., Saligumba, I.P.B., Segumpan, L.L.B. (2019). Development of Valid and Reliable Teacher-made Tests for Grade 10 Mathematics. International Journal of English and Education, 8(1), January 2019, 62-83.

Teacher Home Visits: The Importance of Sharing a Meal. (2014). Retrieved from https://www.edweek.org/leadership/opinion-teacher-home-visits-the-importance-%20of-sharing-a-meal/2014/03

Teacher visits hit home. (n.d.). Retrieved from https://www.educationworld.com/a_admin/admin/admin241.shtml

Teachers' Motivation, Home Visitation and Performance of Academically At-risk Students. (n.d.). Retrieved from https://www.researchgate.net/publication/333450567_Teachers'_Motivation_Hom%20e_Visitation_and_Performance_of_Academically_Atrisk_Students/link/5cee812c%2092851c53956fecaf/download

The Effects of Teacher Home Visits on Student Behavior, Student Academic Achievement, and Parent Involvement. (n.d.). Retrieved from https://www.adi.org/journal/2018ss/WrightEtAlSpring2018.pdf

The Impact of Home Visit in Students' Perception of Teaching. (2003). Retrieved fromhttps://files.eric.ed.gov/fulltext/EJ852376.pdf

What is Home Visitation?. (n.d.) . Retrieved fromhttps://www.ahvna.org/home-%20visitation/what-is-home-visitation/

WHY HOME VISITS?. (n. d.). Retrieved from http://www.pthvp.org/what-we-do/why-%20home-visits/

Affiliations and Corresponding Information

Linny J. Segura
Gines Elementary School
Department of Education - Philippines