

EXONERATING LEARNERS' PITFALLS IN LEARNING MATHEMATICS: PARENTS-TEACHERS PARTNERSHIP DURING THE COVID-19 PANDEMIC RESTRICTIONS

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ABSTRACT

This qualitative study employing phenomenology aimed at determining the strategies employed by parents to help their children towards their quest to learn mathematical concepts. It involved 10 parents for the in-depth interview. Results revealed that the strategy they employed was that parents provided the needs of their children. Their partnership enabled for the forging by parents and teachers which resulted to the timely submission of the self-learning modules and close monitoring on children's progress. Parents suggested that there should have a conduct of home visitation, parental participation, and constant communication learners' progress.

KEYWORDS: Mathematics, Parents Teachers Partnership, Self-learning, Pitfalls

INTRODUCTION

Rationale

Amidst this Corona Virus Disease global pandemic, the Department Education assured that the learners will continue with their education despite the many challenges during this new normal. The department is providing Self – Learning Modules (SLMs) for the alternative learning with different modalities to be offered for various type of learners across the Philippines. One of the Alternative Delivery Mode is the Modular – Based Learning, it involves individualized instruction that allows learners to use self – learning modules in print or digital format/electronic copy, etc. Distance learning modality is most viable for independent learners, and learners supported by periodic supervision of parents and guardians.

It is widely recognized that parents and families are the primary educators of children and are responsible for laying down the social and intellectual foundations for their learning and development (West, Noden, Edge, & David, 1998). There is a clear message from the literature that parental support benefits children's learning, including their numeracy development (Cairney, 2000). For example, Fan and Williams (2010) showed that the frequency with which parents engage with extracurricular activities, for example, sports events and holidays, is positively related with children's self-efficacy toward mathematics and their subsequent achievement; and Chiu and Xihua (2008) showed that provision of learning resources and activity at home, for example, books, music, and discussion of everyday facts, is likewise associated with improvement in children's mathematics achievement.

However, a positive correlation was found between parental involvement in homework and children's achievement in reading, the effect of parental involvement on children's achievement in mathematics was negative. This may relate to another finding of this meta-analysis concerning differential effects of different forms of parental involvement in homework. When parents were directly involved in the content of homework, then there was a positive effect on children's achievement. However, when involvement consisted of simply monitoring homework completion,

there was a negative effect. Research from elsewhere in the literature (Peters, Seeds, Goldstein, & Coleman, 2008) suggests that parents may find it more difficult to provide support and help with children's mathematics homework than in other subject areas, such as reading and writing, because of their own attitudes toward, and levels of achievement in, mathematics.

Although these research studies agree that parents have an important influence on children's mathematics learning, they focus on relatively young children. When children start school, parental involvement can become more complex. There is agreement among researchers and policy makers that parental involvement in children's school learning is a positive influence on academic (Desforges & Abouchaar, 2003) and affective (Fan & Williams, 2010) outcomes, but evidence suggests that interventions to raise levels of parental involvement are rarely successful in raising attainment (Gorard & Huat See, 2013). Meta-analysis of parental involvement interventions found limited evidence for any positive effect. In fact, in the higher quality studies, findings showed that interventions had negative effects on pupil attainment. Similarly, a recent meta-analysis of the effects of parental involvement in children's mathematics homework raises some concerns.

The aforementioned reasons had motivated the researcher to conduct this study in order to determine the experiences of the students relative to the support given to them by their parents in this time of the pandemic. Moreover, this study will open the doors of opportunities of Mathematics teachers to partner with parents in educating the minds of the young citizens.

Purpose of the Study

The purpose of this qualitative study employing phenomenology was to determine the strategies employed by parents to help their children towards their quest to learn mathematical concepts. In the same vein, it will identify their suggestions which will improve the partnership.

Research Questions

- What are the strategies employed by parents in helping their children learning mathematics?
- How does teacher-parent partnership help students in learning mathematics?
- What can parents suggest to improve their partnership with teachers in helping their children learning mathematics?

Research Design

This study is qualitative-phenomenology. Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that makes the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them (Denzin & Lincoln, 2005).

Phenomenology is a commonly employed approach in clinical psychology, and in this context, it is associated with a unique set of methods and procedures (Moustakas, 1994). Many of the ideas within the phenomenological field are

embedded within qualitative inquiry in general; much qualitative research is phenomenological in nature in that it attempts to understand individuals' lived experiences and the behavioral, emotive, and social meanings that these experiences have for them. For instance, the notion of open-ended questions and conversational inquiry, so typical in qualitative research, allows research participants to talk about a topic in their own words, free of the constraints imposed by fixed-response questions that are generally seen in quantitative studies.

Data Collection

To conduct this research, I followed the protocols; (1) is to send written communication to authorities to conduct this study, (2) written informed consent to the informants for their participation in the research was given to them prior to the conduct of the interview for their full understanding of the nature and the purpose of the study (3) the interview guide question underwent the validation of the panel experts.

In addition, a consent was taken from the IPMR of the Municipality of Magpet. Conversely, the informants were chosen using the purposive sampling guided by the criteria which will be the bases for the selection. Meanwhile, the informants were informed about their rights as participants of the study.

During the interview process, an ample time was given to the informants for their response to ensure that relevant information will be related and recorded properly. As the researcher, it was my responsibility to give something in return to all the informants as a token of appreciation for the time they spared for the interview. The record interview was transcribed in a verbatim manner. The analyzation of data was done by the data analyst by extracting the significant themes. Results were presented in tabular and textual forms.

Locale of the Study

This study was conducted among the secondary schools in the Municipality of Magpet, Cotabato. It is one of the towns in the second district. Because of its geographical area, this offers the picturesque beauty of Mt. Apo. Clean and Crystal water flow through the Kabacan River and Bantac River. On the other hand, there are two districts in the municipality of Magpet. At one hand there are 9 IP Schools namely: Ilian High School, Sallab High School, Manobisa High School, Bangkal High School, Manobo National High School, Imamaling High School, Don Panaca High School, Kinarum High School, Kisandal High School.

Research Participants

The participants of this study were parents of high school students in the Municipality of Magpet. They were composed of the Key Informants ss such, they were chosen through criterion-based sampling. In particular they must be:

- Parents of High School Students;
- With at least 2 children enrolled in a secondary school; and
- Presently living in the Municipality of Magpet.

Data Analysis

Thematic analysis was employed in the analysis of the data (Clarke & Braun, 2014). This was used to extract the themes from the responses of the informants. Colaizzi's (1978) phenomenological method was used in analyzing the data.

Trustworthiness

I utilized Lincoln and Guba (1985) concept on trustworthiness of credibility, confirmability, transferability, and dependability. One of the key criteria addressed by positivist researchers is that of internal validity, in which they seek to ensure that their study measures or tests what is actually intended. Thus, the specific procedures employed, such as the line of questioning pursued in the data gathering sessions and the methods of data analysis, should be derived, where possible, from those that have been successfully utilized in previous comparable projects.

In order to address the dependability issue more directly, the processes within the study should be reported in detail, thereby enabling a future researcher to repeat the work, if not necessarily to gain the same results. Thus, the research design may be viewed as a “prototype model”. Such in-depth coverage also allows the reader to assess the extent to which proper research practices have been followed. So as to enable readers of the research report to develop a thorough understanding of the methods and their effectiveness (Curtin & Fossey, 2007).

The role of triangulation in promoting such confirmability must again be emphasized, in this context to reduce the effect of investigator bias. Miles and Huberman (1994) consider that a key criterion for confirmability is the extent to which the researcher admits his or her own predispositions. To this end, beliefs underpinning decisions made and methods adopted should be acknowledged within the research report, the reasons for favoring one approach when others could have been taken explained and weaknesses in the techniques actually employed admitted. In terms of results, preliminary theories that ultimately were not borne out by the data should also be discussed.

It is easy for researchers to develop a preoccupation with transferability. Ultimately, the results of a qualitative study must be understood within the context of the particular characteristics of the organization or organizations and, perhaps, geographical area in which the fieldwork will be carried out. In order to assess the extent to which findings may be true of people in other settings, similar projects employing the same methods but conducted in different environments could well be of great value (Miles, Huberman, & Saldaña, 2018).

Ethical Considerations

In this study, I adhered to the ethical standards set by the institution in treating the informants and participants. I hid their identities by assigning them pseudonyms. After the data were transcribed and encoded, I will destroy the audio-recorded. It was also my duty to ask their full consent before they were interviewed.

RESULTS

EMERGENT THEME1: Parents’ Schemes to Exonerate Children in Mathematics

Parents need to help their children in this time of the pandemic. Nobody can support the quest for a higher learning but with their undying love by providing their needs and by collaborating with the teachers of their children.

Cluster Theme 1: Providing the Needs of their Children

Giving the needs of their children could make a difference in the learning process. They are the source of inspiration and a motivating factor which allow the learners to pursue with their studies. As mentioned during the interview, parents said that:

“Usa pa ana, adunapudakoyanakna gamay pa, busa ang akongihimongatabang kay ang pagprovide ug home prepaid

wifi ug cellphone alangsapagtuonsaakonganakarondili kayo siyamalisdan. Kung nay mga topic sa math ngalisodsabton, akousabginapaningkamotan ug tuonarunakosiyangmatudluan ug mapasabot. Gamitusab ang mgakaraanglibronakosa mathematics sauna saakongpagtuon, nahimokininiyangreference samga topic ngamedyolisodna. Gidownloadanusabnakug application nga brainly iyahang cellphone arondidtoniyamacheck kung tama ang prosesosapag answer niyasaiyangmodyul.” (I provide my son with a home prepaid wifi and a cellphone which he could use in his studies. When there are topics in Mathematics that are difficult for him to understand, I myself studied and helped him to have the grasp of the bodies of knowledge. We also used the old books in Mathematics. More so, I downloaded applications on his phone so that he himself could check whether his answer is correct, Informant 4).

Likewise, it was shared that:

“Ang tabanglangjudnga among nahatagsa among anak kay ang paghatag ug kwartaaronmakaresearchsiyasainternetan. Bahalag 10 kas a sausaka adlaw ang mahagbongnilasa peso wifi basta kaymakaresearch lang bahala ug pit os kayo among kahimtangamogyudsiyangginasuportaran kay wala man kami alamsailang lesson.” (I gave him money which he could use to connect on the internet where he could search for his tasks, Informant 7).

EMERGENT THEME 2: Parents-Teachers' Collaboration to Learners' Quest in

Mathematics

In facing the problems brought by the COVID 19 pandemic, the partnerships between teachers and parents resulted to the timely submission of the self-learning modules. In the same vein, they were able to monitor closely the progress of the learners.

Cluster Theme 1: Timely Submission of the Self-Learning Modules

Before the initiated contact between the parents and teachers, problems surfaced relative to the students who failed to submit their self-learning modules. Due to the problems that were caused by the pandemic, the learners lost their interest in studies. Hence, the collaborative efforts of parents and teachers provided them a new learning environment which resulted for the submission of their task.

During the interview, it was verbalized that:

“Ang pagtubagsamgamodyulssamgabata kay medyonapadalitungodsapagtinabangaysaginanakanan ug teacher.” (The cooperation between parents and teachers lead to the early submission of the self-learning modules, Informant 3).

Cluster Theme 2: Close Monitoring on Children's Progress

Monitoring the progress of the children in Mathematics helped both parents and teachers to underscore the best possible strategies that they could design. More so, they found out that this strategy strengthened their relationships as well as in checking the progress so that they could have the find better solutions to the problems being experienced by the learners.

Informant 9 stated that:

“Pinaagisapagsigeniya ug monitor saakonganak, mas nasuodnako ang teacher ug dilinakomaglisod ug approach saiyaha ug naa mi mgaproblemabahinsapagtuonsaakonganak.” (Through her close monitoring, I was able to build a good relationship with the teacher).

Also:

“Dali lang ang pakighimamatsa teacher kung nay kinahanglan kay mayo naman ang pagtagadnamusausagusa kay medyonasuodnapudnakosiya kay sasigeniya ug monitor saakonganak.” (It was easy to deal with the teacher especially when we have needs because I was able to build a good relationship with her, Informant 10).

EMERGENT THEME 3: Parents’ Counsel to Improve Partnership with Teachers

The parents believed that in order to strengthen their partnership with the teachers, there should have home visitation, parental participation, and constant communication on the progress of their children.

Cluster Theme 1: Conduct of Home Visitation

The conduct of home visitation could strengthen the partnership between parents and teachers. Conversely, they may be able to see the situation and even the progress of the learners. Hence, they can make immediate response to their needs. The informant suggested that:

“Kung pwede lang, magconductunta ug scheduled home visitation ang teacher arunmamonitor ang progress sabata ug makainquire ang ginikanansamgabutangngamaglisodpudsila ug tubaghilabinasa lessons sa mathematics.” (If possible teachers have to conduct a scheduled home visitation to monitor progress...,Informant 1)

Moreover, is.

“Dapatmagconduct ug home visitation ang teache.r” (There should have a home visitation, Informant 10).

Cluster Theme 2: Parental Participation

The participation of the parents in this pandemic is important. As teachers of their children, they have a gargantuan role to fulfill. As mentioned during the interview, the informant said that:

“Dapat ang parents muparticipategyudsapag answer sa module sailangmgaanak para maassist ug maguidejudsila.” (The parents must guide and assist their children in answering their self-learning modules, Informant 3).

Cluster Theme 3: Constant Communication on Learner’s Progress

The communication with the teachers must be continued. It was known that this process strengthens the value of openness and camaraderie towards achieving the common goal. As shared by the informants:

“Makigkonatakanaygyudsa teacher samgakinahanglanicomplysaeskwela ug mangutanasamga lessons nganalisdan ang anak. Dili pasagdan ang anakngamao ray mokontaksateacher”(We have to communicate with the teachers with regards to the tasks to be complied...,Informant,5).

In addition:

“Constant jud ang communication sa teacher ug parents through text, chat or pwedeusab ang pakigkitagyudsausagusa.” (There should have a constant communication and if possible they have to meet, Informant 4).

DISCUSSIONS

EMERGENT THEME1: Parents’ Schemes to Exonerate Children in Mathematics

The parents believed that it is important for them to provide the needs of their children. For them, it is the best strategy that

they have done so far to ensure that learning will continue amidst the threat of the virus. They see to it that they support their children in all facets of life so that they could be able to hurdle the test of time.

Cluster Theme 1: Providing the Needs of their Children

The provisions of the needs of their children are manifestation that the parents are concerned on the education. They wanted to empower them so that they could stand by their own feet. In the same manner, it will provide them the edge whereby they could become independent learners who know how to fight and savor the fruition of success. This also implies that they are just showing the sense of responsible parenthood.

The study of Toseeb, Asbury, Fox, and Deniz (2020) confirmed that parents support to the educational endeavor of their children could be the source of inspiration which pushed them to do better in school. Aside from that, they could also know the performance of their children in school. Perhaps, parents who are supportive to the needs of their children are those who see the importance of education into their lives

EMERGENT THEME 2: Parents-Teachers' Collaboration to Learners' Quest in Mathematics

The partnership built between teachers and parents gives a brighter color in the future of the students. In addition, they could be able to determine the performance of the children and make a necessary step so that problems will easily be responded and be given enough attention.

Cluster Theme 1: Timely Submission of the Self-Learning Modules

Parents-teachers participation resulted to the timely submission of the self-learning modules. They could push the learners to make their best so that they have the drive to do their task and submit them on time. Through this, they themselves monitor their own progress and find better strategies in solving mathematical problems without any difficulties.

The partnership found out to be important since children are able to submit their task in a timely manner. They were not able to miss any single activity unsubmitted. This further connotes that they have the control over their time as learners (Brom, Lukavský, Greger, Hannemann, Straková, & Švaříček, 2020).

Cluster Theme 2: Close Monitoring on Children's Progress

The idea that the partnership allows open communication. Also, the parents could report to the teacher on the progress of their children at home. More so, having the close monitoring determines the strengths and weakness of their children and could design an intervention that would push them to move further.

Parenting is not an easy job, with responsibilities that seem to change every day. The daily tasks and roles you perform as a parent are bound to change as your child gets older. However, there is one task that is always important: monitoring your child's contact with his or her surrounding world. Parents need to be aware of their children's activities and interactions through every age and stage of growth (Hu & Wu, 2020).

EMERGENT THEME 3: Parents' Counsel to Improve Partnership with Teachers

Parents have shared their words of wisdom that could enhance their participation with the teachers. In this time of the pandemic, their role is indeed crucial in solving educational problems. This will stop the number of cases of learners who dropped from attending home school because they lost their interest to pursue for their dreams in life.

Cluster Theme 1: Conduct of Home Visitation

Home visitation would provide teachers the first-hand experience on the situation of their learners. By doing so, they may be able to design strategies that could strengthen their pedagogical practices aside from the delivery and retrieval of the self-learning modules. This strategy emphasizes the assurance they could talk to the learners with regards to their struggles. Furthermore, they could have the bird's eye view of the approaches that they could design in reaching their learners.

Home visits help to establish strong, positive communication between our coordinators and our sponsored children's parents and guardians. They can also motivate parents to get involved or become more involved at their kids' schools and activities when a school administrator takes time out of their day to visit their homes, showing their concern for the children's well-being (Pascua & Dulos, 2020).

Cluster Theme 2: Parental Participation

The participation of the parents to the welfare of their children makes a big difference. They are known to be the partners of the teachers in honing the full potentialities of their children. Aside from this, they are also the first sources of motivation which would push the learners to continue with their studies. Giving the needs of their children is a constant reminder that parents are the true heroes who could remove the shackle of ignorance.

Wolf (2020) stated that to comply with the system of integrated support for their students', schools need to build partnership with parents and develop mutual responsibility for children's' success in the educational system. In this way, parental involvement is increased, parents' effort to support schools are encouraged, and they are directly making a positive impact to a successful educational system.

Cluster Theme 3: Constant Communication on Learner's Progress

Constant communication between teachers and parents could help them track the progress of the learners. They may be able to feel that they empowered enough to participate in the learning progress of their children. Equally important, they can improve their support by embracing the sense of openness and the love of their profession as parents and teachers.

This suggested that it build a great opportunity to communicate with each other and they will be able to track the child's performance academically and socially. In the same manner, both of them would also determine the issues and concerns that need immediate attention and action. This tailors approach to building the confidence to the child (McDaniel & Schuele, 2021).

Implications for Practice

As a Mathematics teacher, I saw the need for parents to sustain the learning abilities of their children in this time of the pandemic. The responsibilities should not only be on the shoulders of the teachers. They too must have shown their roles as parents. Teachers alone cannot achieve the meaning of success without their full cooperation.

Home visitation can be crucial in modifying and strengthening partnership with them. Constant talk with the children with regards to their studies will result to positive academic performance. More so, constant communication with parents can instill the real essence of partnerships with teachers.

Furthermore, this study implies that there is no impossible thing in this world as long as there is cooperation. Everything can be solved when everyone has a vision which serve as their guide to achieve the greater glory. Lastly, the

parents could feel that they are empowered as they become partners in rekindling the fires in their hearts to transform the society.

Implications for Future Research

This qualitative-phenomenology used the Colizzi approach the analysis of the themes. It was done because of the difficulties of doing the Focus Group discussion (FGD). Through the help of my adviser, we came up of using this approach. However, to future researchers, they could use the approach of Creswell in identifying the themes.

On the contrary, to those students who wished to study the same topic they may be include other ethnolinguistic groups in the Province of Cotabato and do not focus only among the Obo-Manobo. Hence, a triangulation and comparison could be drawn. In addition, the themes could be used as dimensions to determine the quantitative degrees of responses of the respondents.

Concluding Remarks

This study opens my interests in research. I was guided properly by my adviser. He always pushed me to my limits that I can do better. During the interview of the informants, I faced a lot of challenges. There were those parents who were skeptical with regards to the purpose of the study. Others were ashamed to share their stories.

My realization is that parents as integral tools in the development of the child clearly manifest their efforts for the education of their children, Truly, their actions are worth to be emulated. They served as a role model to all parents since they served as the torch to the path of their children where the former could find the true light and find their own purpose in the society.

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