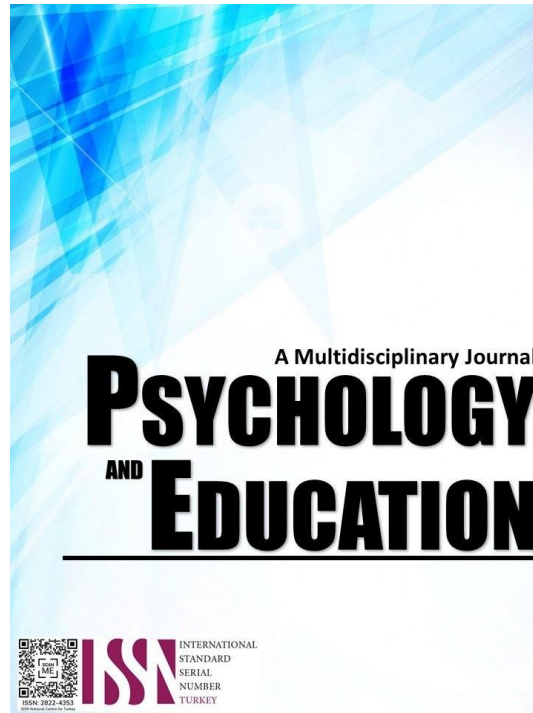


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FOR TRACKING THE PERFORMANCE OF  
SELECTED GRADE 8 STUDENTS IN  
MATHEMATICS AMIDST  
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## Utilization of Trio Group Chat (GC) For Tracking the Performance of Selected Grade 8 Students in Mathematics Amidst the Pandemic

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### Abstract

This action research was made to utilize the TRIO GC for tracking the students' performance in Mathematics 8. This was conducted on 120 students from selected Grade 8 students with difficulties in performing well in class. To assess students' mathematical performance, the researchers got the mean grade of the first semester and correlated it to the second semester after giving intervention. The researchers used a mixed-method research design. Both parents and students answered the questionnaires using the Likert scale. An interview was also conducted with the students for triangulation. The result showed that the respondents demonstrated significant growth in their mathematical performance after using the TRIO GC from a mean of 81% in the first semester to 85% in the second semester. This was proven by getting the significance using t-test correlation-dependent samples where the computed T value of 10.244 was greater than the tabular T value of 1.98 two-tailed at 0.05 level of significance. The computed value is outside the acceptance area so the null hypothesis is rejected, which means that there is a significant difference after the treatment. Thus, the result was further supported by the follow-up interview to the students about the survey questionnaire wherein they cited commendable remarks on their experiences while using TRIO GC.

**Keywords:** *Ubiquitous learning, TRIO GC, Mathematics Education*

### Introduction

In the last quarter of the Academic Year 2019-2020, President Rodrigo Roa Duterte implemented a lockdown in the National Capital Region (NCR) to avoid the spread of the COVID-19 virus. In connection to this outbreak/public health issue, classes were suspended immediately. The Department of Education acted to it by giving guidelines into how, where, and when the next school year will be conducted.

For the Academic Year 2020-2021, the Distance Learning System was implemented. The Deped No. 18 s2020 Policy on Guidelines for the Provision of Learning Resources in the Implementation of the Basic Education Learning Continuity Plan took effect. Now, we, the stakeholders, were faced with the biggest challenge in the Education System in the Philippines not having face-to-face classes. Everyone must find ways and means to deliver quality education to our students amidst the pandemic. The top management of the Office of Schools Division of Pasig conducted different webinars on how teachers can reach students in different modalities to deliver quality education for all Pasiguenos. Thus, teachers underwent different training and upskilling webinars to further equip teachers to conduct online classes.

The use of AHA messenger (text-based instruction that was initiated by one of the learning centers in Makati) was adopted and cascaded to all teachers as part of the platform in delivering lessons online since FB messenger was used by many Filipinos in almost all Android gadgets. Now distance learning in different modalities is delivered to our learners in Rizal High School since the Local Government Unit provided every student of Pasiguenos a tablet that they can use in this new norm. Self-Learning Modules (SLMs) and Video Lessons were also created and downloaded to the tablet's Google Drive.

This pandemic period, the teaching and learning process happened at home. Therefore, our learning partners are the parents. Furthermore, the success of distance learning education depends on collaborative effort among teachers, parents, and students. Feedback matters for everyone in this distance learning. Tracking the performance of students played a vital role among concerned parties. Since we were implementing distance learning, all parties should use appropriate platforms that would be comfortable, easy, and accessible to all. Hence, the researchers would like to explore further the utilization of this FB messenger to help those parents or guardians who were not familiar in using Google Classroom, Microsoft Teams, and others, as a platform for communicating and feedback, especially about the performance of the selected Grade 8 students in the area of Mathematics for the Academic Year 2020-2021.

## Research Questions

This action research was conducted to determine the effects of TRIO GC in feedback on the performance of selected Grade 8 students in Mathematics for the Academic Year 2020-2021. Specifically, it attempted to answer the following questions:

1. What is the level of assessment of parents for the TRIO GC in terms of accessibility, monitoring, feedbacking, immediacy, and permanency about their child's performance in Math 8 Class?
2. What is the level of assessment of students for the TRIO GC in terms of accessibility, monitoring, feedbacking, immediacy, and permanency about their child's performance in Math 8 Class?
3. What is the Mathematical performance of the students in their grades for 2 periods (First and Second semesters)?
4. Is there a significant difference in the Mathematical performance of the students after the treatment?

## Literature Review

### *Ubiquitous Learning*

Ubiquitous learning deals with the use of technology to implement learning processes which then results to learning that may happen anywhere and at any time. Learning is gained from students completing various activities that have been given to them. This educational paradigm prevails in societies that use ICTs as pedagogical devices and didactic tools, institutions that create and enhance virtual scenarios to access information and exchange opinions and ideas.

As opposed to traditional rote learning, which treats the student as a passive subject who receives information, ubiquitous learning places the student at the center of the information they manage. According to an article of Educational Technology Today (2020, Feb 7), the most obvious advantage of ubiquitous learning is that learners can be anywhere. Like in the previous implementations of learning using technology in education, learners were not tied to a certain location. With this, students have 24-7 access to a learning environment since students often have their phones with them. Now, distance learning isn't tied to typical places where desktop computers are located such as in a school or even at home or office. Smartphones have enabled teachers and students to communicate with each other instantly.

Teachers nowadays are finding different ways how to deliver quality education accessible to all despite challenges in Distance Learning Education. The collaborative effort of both teachers and parents as partners in the performance of each learner means a lot. A virtual class was started using FB Messenger GC created by the teacher. It is a useful platform in giving instructions as well as delivering the lesson. At the start of the Academic Year, the adviser's FB account and list of students per class were posted to the Guidance FB page of the school to be accessed by the learners and parents. Through this process, the parents or students were able to communicate with the adviser using this application. The Adviser in turn prepared the different GCs for the different subjects for virtual classes. He then added all his advisory students to these Group Chats, naming this GC by its Section and subject. Another GC was created for all his advisory's parents. After all the students are added in the per-subject GCs, then the adviser will endorse the Subject GCs to its assigned subject teachers and designate them as the Administrator of this GC. As a subject teacher, we hold classes synchronously in different platforms and ask the students to submit activities, worksheets, formative assessments, summative and performance tasks using Google Classroom, emails, FB messenger, and other forms of application just to see the students' output/s. Conducting online classes was new to Philippine Education history.

### *Using Facebook Messenger for Distance Learning*

A study conducted by Insorio and Olivarez (2021) aimed to assess the utilization of Facebook and Messenger groups as platforms for delivering video lessons and activities, learning materials, administering test, and answering queries of the students in grade 9 Mathematics following the modified PDSA model. The study employed a practical action research design utilizing surveys, interviews, and test materials as data collection methods validated by master teachers and a head teacher. Based on the results, the pretest scores are statistically different from the posttest scores. It means the interventions via Facebook and Messenger groups help students cope with modular distance learning challenges. The interventions done by the teacher were effective based on the computed effect size so that the students able to learn mathematics competencies despite being in the comfort of their houses. As a result, students better understand the mathematics lessons and enjoy learning at their own pace.

Avila (2020) conducted a similar study to better understand the effectiveness of using the Facebook Group feature of Facebook in Distance Learning as an alternative to various learning management systems, especially during the time of the COVID-19 pandemic.

Pre-test post-test control group design utilizing a quasi-experimental research design was used on the 96 Business administration students studying in a polytechnic university branch in the First District of Camarines Sur, the Philippines. A researcher-made test was used to test the academic performance of students. The results revealed that the use of Facebook Group in virtual classrooms highly improved the academic performance of students compared to those that were taught using a modular approach. Also, the students perceived that the use of Facebook can be used as supportive tools in learning during the new normal teaching even though they faced challenges in using the said platform in learning.

## Methodology

This action research aims to determine the effects of TRIO GC in feedback on the performance of selected Grade 8 students in Mathematics for the Academic Year 2020-2021.

## Participants

The respondents of this study were the 120 students of Grade 8 in Mathematics class who encountered difficulty in this new norm. The data came from both parents and students who assessed the TRIO GC in terms of its accessibility, feedbacking, monitoring, immediacy, and permanency in getting the learners' performance in class.

## Instruments

Survey questions were answerable in four indicators in ubiquitous learning namely: accessibility, monitoring, feedbacking, immediacy, and permanency. The level of assessment was answered "strongly agree", "agree", "disagree", and "strongly disagree". For parent survey questions, there were 20 questions, while 15 questions for students.

## Procedure

The researchers used the mixed method research design. A letter of request to the Research School Committee to conduct the study was secured, and noted by the principal. The questionnaires were validated by the panel of experts and tested on other respondents who were not part of the study for validation. The study was conducted after class hours, with permission granted by our principal, head teacher, and most especially parents, and were assured by the researcher that they would observe the data privacy law. The final grades of the students during the first and second quarters (First Semester) were the basis for the mathematical performance without the TRIO GC and the last two quarters (Second Semester) were the basis for the interpretation of the application of the innovation strategy.

The survey questionnaire was checked by the panel of experts and underwent validity in the form of a Likert scale for both parents and students. For the data analysis, the study obtained the computed mean of the first and second semesters of the students as their Mathematical performance in class. Finally, the study used the correlated t-test to answer if there is significant difference before and after the treatment.

## Ethical Considerations

The researchers asked permission from the parents to conduct the said research via Google Forms because their children are minors. To answer survey questionnaires, the Privacy Act Law was mandated.

## Results

This section presents the findings according to the study's research questions. To compare the mean and find out the significance between variables, multiple linear regression was computed using IBM SPSS 26.0.

### Respondents' profile in terms of Self-Concept, Self-Esteem, and Self-Efficacy

The parents rated the level of assessment in the Utilization Of Trio Group Chat (GC) For Tracking The Performance Of Selected Grade 8 Students In Mathematics Amidst the Pandemic, via Google Form with 20 questions using the Likert scale according to indicators. The research question #1 was answered using the table in the next page:

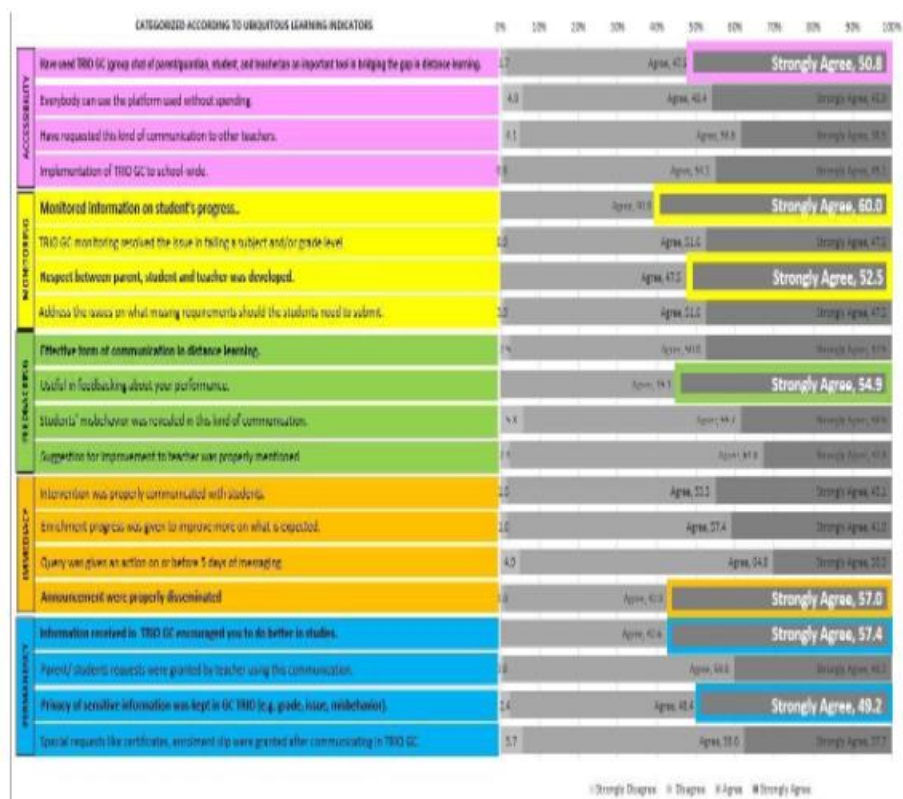
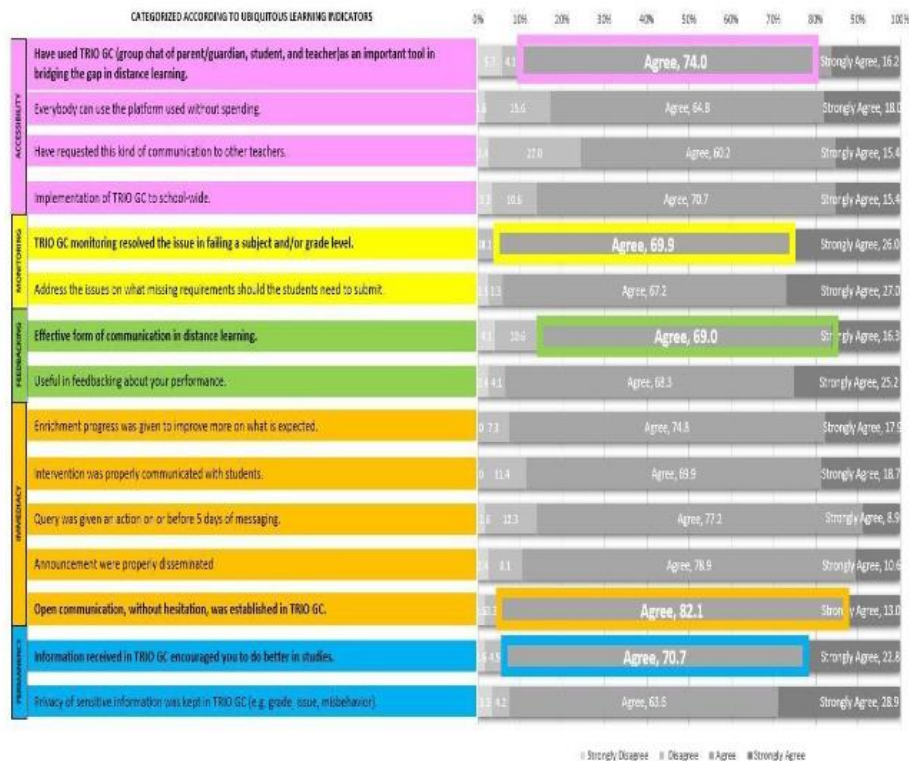
Table 1. *Parents' Assessment on the Level of Utilization of TRIO GC for Mathematics 8*Table 2. *Students' Assessment on the Level of Utilization of TRIO GC for Mathematics 8*

Table 3. *Difference in the Mathematical Performance of the Students in Two Semesters*

| <i>Tests</i>    | <i>Mean</i> | <i>Mean Difference</i> | <i>T test Score</i> | <i>T tabular value</i> | <i>Decision</i> | <i>Remarks</i> |
|-----------------|-------------|------------------------|---------------------|------------------------|-----------------|----------------|
| First Semester  | 80.692      | 4.62                   | 10.244              | 1.98                   | Reject Ho       | Significant    |
| Second Semester | 85.308      |                        |                     |                        |                 |                |

## Discussion

Table 1 revealed the parents' responses to the conducted survey using a bar graph with 5 indicators of Ubiquitous Learning on its right. For Indicator #1 accessibility, most of the parents strongly agreed to an item Have used TRIO GC (group chat of parents/guardian, teacher, student) as an important tool in bridging the gap in distance learning (50.8%); while agreed for the following items: Everybody can use the platform used without spending (48.4%); Have requested this kind of communication to other teachers (56.6%); and, Implemented of trio to school-wide (54.1%). Indicator #2 monitoring, parents strongly agreed into items: Monitored information on student's progress (60%) and Respect between parent, students and teacher was developed (50%), while agreed to items: Trio GC monitoring resolved the issue in failing a subject and/or grade level (51.6%) and Address the issue on what missing requirements should the students need to submit (50%). For Indicator #3 feedbacking, parents strongly agreed to: Useful in feedbacking about your performance (54.9%); while Effective form of communication in distance learning (50%); Students' misbehavior was revealed in this kind of communication (55.7%); and, Suggestion for improvement to teacher was properly mentioned (64.8%) were agreed as well. Indicator # 4 immediacy, parents' level of assessment to Announcement were properly disseminated (57%) indicated strongly agree, while the items: Intervention was properly communicated will students (53.3%); Enrichment progress was given to improve more on what is expected (57.4%); and, Query was given an action on or before 5 days on messaging (64.8%) rated agree. For the last Indicator # 5 permanency, the parents rated the 2 items strongly agree that were Information received in TRIO GC encouraged you to do better in studies (57%) and Privacy of sensitive information was kept in TRIO GC (e.g. Grade, issue, misbehavior) (49.2%), while the other two statements: Parents/students requests were granted by teachers using this communication (59%) and Special requests like certificates, enrollment slips were granted after communication in TRIO GC (56.6%) were agreed upon.

In Table 2, students' responses in the survey questions were shown using a bar graph with the same 5 indicators for Ubiquitous Learning on its right side. For Indicator #1 accessibility, students agreed to all items TRIO GC (group chat of parents/guardian, teacher, student) as an important tool in bridging the gap in distance learning (74.0%); Everybody can use the platform used without spending (64.8%); Have requested this kind of communication to other teachers (60.2%); and, Implemented of the trio to school-wide (70.7%).

For Indicator #2 monitoring, students agreed to two items: Trio GC monitoring resolved the issue of failing a subject and/or grade level (69.9%) and Addressed the issue on what missing requirements the students need to submit (67.2%). The Indicator #3 feedbacking, students agreed to Useful in feedbacking about your performance (64%) and Effective form of communication in distance learning (54.9%). And for Indicator # 4 immediacy, students also agreed that Enrichment progress was given to improve more on what is expected (78.9%); Intervention was properly communicated will students (69.9%); Query was given an action on or before 5 days on messaging (77.2%), Announcement were properly disseminated" (78.9%), and Open communication without hesitation, was established in TRIO GC (82.1%). And for the last Indicator # 5 permanency, the students rated the 2 items agree: Information received in TRIO GC encouraged you to do better in studies (70.7%) and Privacy of sensitive information was kept in TRIO GC (e.g. Grade, issue, misbehavior) (64.6%).

The students' responses on the survey needed verification since all items or statements in it were rated "agree". So, the researchers conducted a short interview in paragraph form via google form and FB video conference to further check the how's and what's of their experiences in the usage of TRIO GC. The process was recorded with parent's consent and it was copied verbatim. This short interview was written in Filipino so they can further understand the given questions. This will minimize the language barrier factor. The following statement were shown below:

1. Nakagamit o gumagamit ka na ba ng GC TRIO sa online distance learning? Kung oo, nakatulong ba ito sa iyong pag aaral ngayong panahon ng pandemya? Sa paanong paraan?;
2. Ano ang hindi mo nagustuhan sa paggamit ng TRIO GC?;
3. Sa iyong palagay, nararapat bang gamitin ang GC TRIO sa lahat ng asignatura sa paaralan? Bakit opo o bakit hindi po?;
4. Nanaisin mo kayang gumamit pa rin ng GC TRIO kapag nag face-to-face classes na? Ano ang dahilan kung bakit opo o bakit hindi na po?; and
5. Lumawak ba ang iyong kaalaman sa pagkatuto ng aralin sa asignaturang Matematika sa pamamagitan ng TRIO GC? Pakikuwento

ang pagyayaring ito.

The answers to this short survey showed how students' experiences led to recommending the TRIO GC to others. Indeed, it was remarkable to them that this intervention helped them improve their performance in Mathematics 8 because of the accessibility, monitoring of parents, relevant feedback, and immediacy was properly addressed while the permanency of the data was private and secure. Thus, this implies that TRIO GC is an educational technology for ubiquitous learning.

For research question #3, the researchers were able to get a mean of 80.692 for the 1st and 2<sup>nd</sup> quarters (First Semester) Mathematics grades of the 120 students who responded to this study. A mean of 85.308 for the 3rd and 4th quarters (Second Semester) Mathematics grades of the students (see appendix H). This data clearly showed that there was an increase or improvement in the grades of the students who responded in the survey after the utilization of TRIO GC.

After getting the mean scores of the first and second semesters, the researchers found out that there was a mean increase of 4% indicating that there was a difference before and after the treatment (utilization of TRIO GC).

Table 3 answered research question #4, using t-test to examine if the difference between the two means was significant, the computed t-value was 10.244 which is greater than the tabular value of 1.98 at 0.05 level of significance. The computed value is outside the acceptance area so the null hypothesis is rejected, which means that there is a significant difference in the two semesters.

The above data revealed that the utilization of TRIO GC was able to prove that this treatment was a success for the Academic Year 2020 - 2021. Moreover, TRIO GC greatly helped both parents and students to communicate well in this new norm of learning. Furthermore, there are concerns that teachers should use a uniform platform for communicating with parents which is more economical and user-friendly. In line with this, the researchers highly recommended the use of this TRIO GC in all subject areas for the next school year for fruitful, timely, and relevant feedbacking and monitoring with the parents.

## Conclusion

In conclusion, this research has demonstrated the significant positive impact of utilizing Trio Group Chat (GC) as a tool for tracking the performance of selected Grade 8 students in mathematics amidst the challenges posed by the pandemic. The observed increase in grades among the students who participated in the survey after the implementation of Trio GC is a testament to its effectiveness as an educational support mechanism.

The utilization of Trio GC provided a platform for real-time communication and collaboration between students, teachers, and parents. This facilitated a more immediate and personalized approach to addressing academic concerns and providing timely feedback. The platform proved to be instrumental in mitigating the potential learning gaps that may have emerged during the pandemic, ensuring that students received the necessary support to excel in their mathematical studies.

Moreover, Trio GC not only served as a means of tracking performance but also fostered a sense of community and shared responsibility among the participants. It encouraged active engagement, discussion, and peer-to-peer learning, creating an environment conducive to academic growth. This collaborative aspect of Trio GC proved particularly valuable at a time when physical distancing measures necessitated alternative methods of interaction.

The Trio GC shall be utilized to help teachers, parents, and students to have easy access in tracking the performance of the learner. The result of this study might answer the problems of how to communicate with the parents for relevant, dynamic, and fruitful feedback with the students in this new norm of learning.

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