We Need Your Help: An Evaluation of Students’ Tutorial Experiences in Mathematics and Science
Ariel E. San Jose
Southern Philippines Agri-business and Marine and Aquamarine School of Technology, Digos City, Davao del Sur, Philippines

Abstract
No one can claim success of any project unless a systematic and well-thought evaluation is conducted. No one either can suggest improvements unless the downside of the project is determined. The main purpose of the qualitative-evaluative study is to determine the successes and failures of the tutorial project of the SPAMAST-Digos Education Department, learn the experiences of the participants, and obtain their suggestions. Using the focus group discussions and in-depth interviews, the research found that students typically found the conduct of the tutorials to be pleasant; most of the tutors used visual-aids; tutors used games; tutors were accommodating and approachable; and generally, the participants believed the tutorials were beneficial for them and that it should be continued. However, the participants suggested that tutors may avoid favoritism, develop more patience, avoid long lectures, write the lecture on the visuals, and give them time to study. Discussions and conclusions were provided.

INTRODUCTION
No one can claim success of any project unless a systematic and well-though evaluation is conducted. No one either can suggest improvements unless the downside of the project is determined. Various literatures have presented different factors of a project’s success. Dvir, Lipovetsky, Shenhar, and Tishler (1998) mentioned that one of the common barriers of project success is the lack of specificity of constructs applied; Chan, Ho, and Tam (2001) found that commitment, client’s and service providers’ competencies were essential for project success; Alias, Zawawi, Yusof, and Aris (2014); Belout and Gauvreau (2004); Mir and Pinnington (2014) also found that it was management support and trouble-shooting variables directly linked with success; likewise Takim and Akintoye (2002), likewise showed that it was the performances of the respondents involved in the project concretely determined success; Ogunlana (2010) argued that the measure of project success can no longer be restricted to the traditional indicators which include time, cost, and quality rather on efficient use of resources and on the effectiveness and satisfaction of the respondents.

On the other hand, class tutorials have been the subjects of significant number of researchers. Positively, most of the findings obtained positive remarks. Jheng (2015) said that tutoring students were able to use the “time-stealing” strategy to steal time from an ongoing class and create a “double-context learning situation” to optimize the efficiency of the use of their in-class time. Zerin and Zafar (2017) mentioned that students attending regular tutorial classes developed their confidence level in order to keep pace with the classroom activities with the other good students. Yung (2015) found tutorials reinforce what students learned while Zapata-Rivera, Zwick, and Vezzu (2016) discovered that tutorials significantly improve students’ comprehension; tutorials substantially increased weak students’ knowledge of the topic and contributed to their academic success (Binani, and Chowdary, 2018; Kritzinger, Lemmens, and Potgieter, 2018; Patil and Karadesai, 2016). Lastly, Kong, Hua and Luo (2018) mentioned that tutorials improved not only the learning environment of students but also the teaching effectiveness of the providers.

The Southern Philippines Agribusiness and Marine and Aquatic School of Technology (SPAMAST) Education Department has provided a tutorial programs in Mathematics and Science at Digos City National High School-Matti High School Annex. The tutorials were conducted from 2015 to 2018 by the BSEd Biological Science pre-service teachers. The main purpose of the tutorials was to improve the academic performance of students especially in Science.

This research was conducted to find out not only the impact of the tutorials to the participants but also their experiences in the conduct of the program. Moreover, this evaluative study would determine whether to continue similar community extension activity. This view was in line with University of Arizona (2009) which contended that knowing the program’s outcomes and impacts is important for institutional success, promotion and future funding.

Research Questions
The main purpose of the qualitative-evaluative study is to determine the successes and failures of the tutorial project of the SPAMAST-Digos Education Department, learn the experiences of the participants, and obtain their suggestions. Specifically, it sought answer to the following questions:
1. How the Science tutorials were conducted to the student-participants?
2. How the Science tutorials help improve the academic performance of the student-participants?
3. What were the experiences of the student-participants in the conduct of Science tutorials?

4. What significant experience(s) do the student-participants can share to other students?

5. What suggestions the student-participants can offer to improve the conduct of the Science tutorials?

**METHOD**

**Research Design**

This study used the qualitative method particularly the evaluative-phenomenological approach. Jackson, Drummond and Camara (2007); San Jose, Bahket and Ali Alsalhi (2017) pointed out that qualitative method’s main focus is to recognize the essence of human experiences; it obtains personal and significant experiences of the participants (San Jose and Mortos, 2017); it describes personal confessions, opinions, narratives, and reflections (Brinkman, 2014); it deals with the processes and not on statistical requirement (Mays and Pope, 1995); and it requires another study to confirm whether the participants suggestions were viable or not (San Jose and Mortos, 2017). On the other hand, evaluation research is used to determine the impact of an intervention such as a particular program (Vedung, 2017); to highlight feedbacks into the processes which happened during the conduct of the intervention (Caraher and Cowburn, 2015).

Likewise, general phenomenology is commonly used when investigators wanted to find out participants’ individual encounters and insights (Patton, 1990); to listen to personal anecdotes (Clandinin, and Connelly, 1994); to determine the important meaning of the experience (Creswell, 1998; Rossman and Rallis, 2011), to explore the individuals’ view of the environment (Eisner, 2017); and investigate the worth of the experiences of individuals (San Jose, Bahket, and Ali Alsalhi, 2017).

The Focus Group Discussion (FGD) was used to gather the pertinent information from study-participants. The tutees were divided into three focus groups. Each group was composed of 7 or 8 members. Moreover, it was made sure that only those who participated in the tutorials were included in the focus group. Gibbs (1997) said that an FGD needs to have a manageable number of participants; Derksen, Hartman, van Dijk, Plouvier, Bensing, and Lagro-Janssen (2017); Powell, Single and Lloyd (1996) averred that an FGD should only compose of chosen individuals who can provide comments, opinions and views, from their personal experiences, about the topic under investigation; Morgan (1997)26 pointed out that FGD is a place of inter-actions between the investigators and the participants on a certain topic; and Wong (2008) maintained that FGD includes communicating with each other, exchanging ideas and giving comments on each other’s experiences. Certainly, all these were observed in this study. All study participants were given enough chance to time speak and enter-act with the other focus group members and with the investigators. Moreover, the study-participants’ obtained personal experiences were transcribed, examined, analyzed, evaluated, and thematized.

**Research Instrument**

The main instrument used to obtain the essential information was the researcher-made interview guide questions based on the research questions. DBM and San Jose (2015) mentioned that interview guide questions are usually utilized in a focus group to ‘cull information’ pertinent to the study. In this study, the guide questions were composed of five main questions and probe questions which generally sought to determine the participants’ experiences in the tutorials; specifically, their views on the how the tutorials were conducted, their significant experiences from the tutorials, their opinions on the benefits they obtain, and their suggestions which could improve the future conduct of the tutorials.

**RESULTS AND DISCUSSION**

This section present the findings of the study based on the gathered information from the Focus Group Discussions (FGD). The frequency of responses of the participants was considered as General if it obtained 50% and above; Typical if it garnered 21% and above but not more than 49%; while Variant if it obtained less than 20% and below. Moreover, to further elaborate the results, the verbatim answers of the study-participants were culled from the transcribed information. These information were given proper tagging for easy audit trail.

**Explanations are Thoroughly Conducted**

The student-participants typically found the conduct of the tutorials to be pleasant. They highlighted that the tutors elaborately and thoroughly discussed the lessons to make sure that tutees were able to grasp the lesson. As a matter of fact, sometimes tutors would repeat the explanations and would ask the tutees whether they could proceed to the next topic. The tutees observed that their tutors became focused and committed to the task of tutoring them.
...the way I see it, they were creative in discussing the topic. If someone cannot grasp the lesson, they will explain it thoroughly. They will not settle until someone understands. They show concern to the students (FGD/Pg1L).

...that teacher who taught us the lesson, he makes sure that the lesson is understood by us. He repeats his explanation until all of us understand (FGD/Pg1L).

Additionally, tutors entertained tutees’ questions. Thus, the classroom became a venue for friendly and welcoming interactions between the tutees and tutors. More than that, students felt that they were valued.

They properly taught us. If we have questions, they let us understand it (FGD/Pg1L).

They are not satisfied if they don’t deliver the lesson properly. They show their concern to the students (FGD/Pg1L).

It was experienced by the tutees that their tutors explicitly explain and discuss the lessons through lectures, which they found to be beneficial. Tutors reasons for using this lecture approach are implicit; however, it is obvious that the tutors apply the lecture-discussion approach similar to that of the cognitive approach, to organize the concept of understanding of the learners (Bartunek and Moch, 1987) and self-knowledge (Peterson, Sampson and Reardon (1991). Tsvetkov (2014) believes that courses with symbols and terminologies such as in Science and Mathematics, cognitive approach is essential.

On the other hand, several authors are in unison in their findings that explaining through traditional lectures is significant (Palmer, Dixon, and Archer, 2015) in content-based courses like Science and Mathematics. Duschl and Osborne (2002); Kolodner (2002) mention that in Science, explaining means providing reasons why something happened; Rieber, Tzeng, and Tribble, (2004) aver that explaining allows explicit understanding of the principles of the subject matter. Yip, Coyle, and Tsang, (2007) point out that emphasis on explaining Science concepts to the learners establishes a good learning atmosphere in class. For Olney, Brawner, Pavlik, and Koedinger (2015) through explanation, learners able to comprehend the Science phenomenon presented; while Wallace and Prather (2018) reveal that lecture-tutorials help learners achieve learning gains beyond what is typically thought.

Utilization of Visual Aids and Pictures

Typically, the tutees observed that most of their tutors used visual aids during the conduct of their lessons. They found these visual materials beneficial in comprehending the lessons being discussed.

They use pictures so that we can see what they are teaching us (FGD/Pg1L).

In our class, they also use visual aids. We like it because we can see everything especially in the pictures. Isn’t it in Science we need to see things in pictures so that we can recognize the names of those things? (FGD/Pg1L).

Students prefer to have visual aids because they can understand better the lessons. According to Shabiralyani, Hasan, Hamad, and Iqbal (2015), visual aids provide the learners chance to learn the lessons effectively and easily. On the other hand, Morony, McCaffery, Kirkendall, Jansen, and Webster (2017) mention that use of photographs, illustrations, and graphs in presenting the lessons provide a more complete overview of the topics under discussion. In the same vein, Renkl and Scheiter (2017) point out those students who are expose to visual aids showed stronger gains in comprehension.

Application of Games and Jokes

Aside from visual aids, the tutors also used games in the conduct of their lessons. Through the games, students’ were able to cooperate, active, and participative which the tutees found to be fun and enjoyable. Moreover, the tutors also inserted jokes in the conduct of their classes. Jokes may be in a form of analogy or comparison which led to understand better.

They let us play games. By that, we enjoyed the way they taught (FGD/Pg1L).

We liked him. Sometimes we didn’t like some teachers. With him, we could easily understand the lesson especially when he associated it with jokes (FGD/Pg1L).

Tutors incorporate games and inject jokes to their lessons for the students to actively participate, make the class alive, and understand the gist of the topic. Darfial (2015); Salehi (2017) describe games as ‘big describer’ for teaching and learning because games engage learning among students. Bose and Seeto (2016) also mention that games in classroom are innovative strategy that can make teaching and learning meaningful because

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<th>Theme</th>
<th>Frequency of response</th>
<th>Core ideas</th>
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<td>Explanations are thoroughly conducted</td>
<td>Typical</td>
<td>Discussing the lessons thoroughly and clearly</td>
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<tr>
<td>Utilization of visual aids and pictures</td>
<td>Typical</td>
<td>Asking the tutees to proceed to the next lessons or not</td>
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<tr>
<td>Application of games and jokes</td>
<td>Variant</td>
<td>Focusing on the lesson</td>
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<td>Additional knowledge gained</td>
<td>General</td>
<td>Posting pictures and visual materials</td>
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<td>Consideration with tutees</td>
<td>Typical</td>
<td>Encouraging student to participate</td>
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<td></td>
<td>Variant</td>
<td>Making the class alive</td>
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<td>Suggestions and recommendations</td>
<td>Typical</td>
<td>Deepening of understanding</td>
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<td>Giving tutees time to study for the quiz</td>
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Table 1: Themes and core ideas on the evaluation of tutorials
games empower skills. Further, Popil and Dillard-Thompson (2015) games in the classroom are student-centered because they create excitement, enjoyment, and satisfaction; thus, the level of involvement and satisfaction is high. Moreover, the use of jokes retrieve mind frame from long-term memory to interpret information in working memory (Coulson and Kutus, 2001). Thus, jokes resurface the unconscious events of learners. Further, Resnick, Davatzes, Newcombe, and Shipley (2017) averred that the use of analogy is the most efficient and effective technique in teaching scale information. Vethamani and Nair (2016) said it use of analogy and facilitates understanding of a certain concept. This result is affirmed by Houle (2018) who claimed benefits on the use of analogy as a teaching strategy.

Additional Knowledge Gained

Overwhelmingly, all student-participants found the tutorials beneficial for them. They mentioned that the lessons given to them in the tutorials deepened their understanding and improved their learning.

The tutorials deepened my knowledge and understanding in Science and Math (FGD/Pg4 L).

It was a big help because it allowed me to know more about Science (FGD/Pg4 L).

The tutorial really improved us a lot unlike before when the tutorials were not yet conducted, we were confused and we didn’t understand (FGD/Pg4 L).

Undeniably, tutorials classes when done properly significantly help any learners especially when the learners’ need are addressed—that is gaining relevant information which they could use in their studies. Susilo and Suhardi (2018) agree with this finding. They mention that tutorials are successful if learners’ important dimension and satisfaction are met. Moreover, Magsino (2014) found that tutorials enhance higher order thinking skills if tutors use problem-based learning. Tutorials, according to Nikolic, Vial, Ros, Stirling and Ritz (2015), generally provide direct instruction to learners on how to deal with their difficulties and to make them independent and confident, Yung (2015) to reinforce what they have learned. However, Ritterbush (2015) mentions that to attain the goals of tutorial classes, planners need to consider the importance of class size and class time. These allow tutees and tutor to have meaningful interactions.

Therefore, to materialize the outcome of any tutorial classes, tutorial planners need to carefully outline their plans. A mapping may be conducted to determine and analyze the needs of the learners and to identify what could be the appropriate strategies may be applied during the conduct of the classes.

Consideration with Tutees

Moreover, the tutees experienced a welcoming and friendly atmosphere with their tutors because they could approach and ask them without hesitations apprehensions.

The tutors were friendly. They could be asked and approached of whatever we were confused of (FGD/Pg4 L).

We had a tutor who could be asked anytime about the lesson (FGD/Pg4 L).

Because of the benefits the tutees realized with the tutorials they experienced, few study-participants slowly developed their academic self-confidence.

It’s okay for me. The tutorial is very helpful. The tutorials open your mind and because of the way they teach, your mind will be opened in Science (FGD/Pg4 L).

The tutorial helps me a lot because I can sometimes answer my assignment. I don’t rely and copy from my classmate (FGD/Pg5 L).

It seems that it’s easy for us... hahaha.. but I like it (FGD/Pg5 L).

In any class, the learners are the most important individuals. The learners’ successes of learning the lessons taught and discussed do not depend solely on the materials used or on the strategies applied but also on the attitude of the teachers. In the study of Cohen, Kulik, and Kulik (1982), they found attitudes of tutors significantly linked with the learning outcomes of the tutees. Likewise, Wicklund (2016) said that positive attitudes of tutors improved the willingness of the tutees to perform tasks given to them. Also, Mack, Leavitt, and Peters (2015) over that these positive attitudes seen on the tutors strengthen team work, belongingness, warm among the tutees. Wang (2017) mentions that these pleasant behaviors of tutors build trust and confidence among the learners.

Therefore, tutors may not be only be trained and prepared with the contents of the subject but also capable of upholding positive attitudes like sympathy, empathy, caring, and openness.

Suggestions and Recommendations

Despite the favorable advantages of the tutorials claimed by the study-participants, they typical offered suggestions which could improve the conduct of upcoming tutorials. Typically, they believed that the tutorials may be continued so that others could also benefit from it.

For me, I hope that the tutorial program will continue. I fervently hope the tutors will continue to teach us especially in Science, which is a challenging subject (FGD/Pg4 L).

For me, if possible the tutorial needs to be continued because I learn a lot. The tutor gave us answers. If there is no tutorial we will always rely on our subject teachers.

They also mentioned that tutors need to avoid favoritism among their tutees. Tutors may also call those who were active and participative. Also, tutors need to discriminate tutees’ abilities.

I suggest that the tutor should be fair. In some instances, only those who could answer are regularly called (FGD/Pg5 L).

For me, tutors should not play favoritism. There are those students who are given much attention by the teacher (FGD/Pg5 L).

Tutor should fairly deal with his learners. There are those tutors who understatement the abilities of the learners (FGD/Pg5 L).

Also, tutors also needed to develop their patience to the tutees. It was observed typically that tutors easily angered which makes them unapproachable.

The types of interactions between teachers and students sometimes serve as an obstacle for a good dealing. For example, a teacher is unapproachable (FGD/Pg5 L).

Variantly, the study-participants proposed of avoiding long lectures because it makes them bored.

The tutor always discusses which sometimes lead the students to be bored and become uninterested (FGD/Pg5 L).

They also wanted the tutors to use visual aids; however, few prefer that what the tutor says should be found in the visuals.
They believed that they learn more if they can see everything on the visuals, drawings and pictures.

The tutor needs to write everything on a manila paper or else where for us to see. Tutor should not always lecture in front, while we just nod even though we don’t understand (FGD/Pg1).

Lastly, few tutees clamored that tutors may also give them some time study before any assessment is conducted. Moreover, they are frustrated when an announced assessment is postponed because they already exerted effort in reviewing their notes.

I suggest that we should be given time to study because there are some tutors who directly gives us a quiz, then we don’t comprehend. It’s difficult (FGD/Pg1).

We study hard for the quiz, then, the teacher did not come. We were so nervous (FGD/Pg1).

In every evaluation, suggestions and recommendations were offered not to discredit the good things brought by any program or activity, rather those suggestions and recommendations aimed at improving, enhancing and strengthening the program. To avoid favoritism in the classroom, several literatures mention that tutors need to develop love and respect for each student (Demirel, Özmat, and Elgün, 2016; Gidey, 2015; fairness (Forgas, 2016); consistency (Kapa, Luke, Moulthrop, and Gimbret, 2018); trust and loyalty (Osman, Omar, Mahphoth, Hashim, 2015); and equality and openness (Whitaker, 2016). It was observed that new teachers or tutors tend to be unaware of favoritism because they are unfamiliar with their students’ name or mesmerize by those students who are active and exuberant to recite and participate in classroom activities.

Likewise, patience need to be considered because it is one of the essential characteristics linked with a successful tutor (Casteck, Jacobs, Pendell, Pizzolato, Reder, and Withers (2015); it is also the most appreciated attitude of well-trained tutors by the tutees (Blohm, Krautter, Lauter, Huber, Weyrich, Herzog, and Nikendei, 2014). The lack of patience also contributes to poor completion of task and stretching skills (Krestina, 2015).

Lastly, time is an important element tutors need to observe in tutoring. Unlike fast learners, tutees need to think. Coe, Aloisi, Higgins, and Major (2014) mention that increasing the amount of time would allow learners to prepare and spend time to think hard about the lesson. Moreover, Nation (2017) says enough time is important in fluency activities while Bjork (2017) points out that appropriate time is necessary when teaching factual information.

These suggestions from the tutees serve as the baseline information to be considered if another tutorial class will be conducted; thus, improving the implementation of the program. Bauer and Dey (2016) say suggestions for improvement contextualizes the needs of the clients while Cooper (2017) mentions these suggestions make coherence to the curriculum design of the program.

**Implication for Practice**

With the results of this evaluation, the implementers of the tutorial classes may consider thorough preparations before the implementation of program. Preparation may include training of the tutors not only to be expert of the subject matter but also to be behaviorally pleasant. Moreover, mapping and needs analysis of tutees may be considered with utmost priority. Likewise, class size and class timetable may be determined to identify the appropriate learning strategies. Lastly, being unfamiliar with the learners is not a reason for any tutor to show favoritism. Tutors may find ways how to avoid favoritism by providing students with name tags; calling them with consistency; giving them fairness by roaming around to different groups and many other things. Also, patience can be observed by making adjustments on the part of the tutors. Tutors need to realize that these learners need pastoral support and should be leveled similar to other learners.

**REFERENCES**


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