PEER-OBSERVATION OF TEACHING(POT): TOOL DEVELOPMENT AND COLLABORATIVE MENTORING PROGRAM FOR SENIOR HIGH SCHOOL TEACHERS

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Peer Observation of Teaching (POT): Tool Development and Collaborative Mentoring Program for Senior High School Teachers

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ABSTRACT

Peer Observation of Teaching (POT): Tool Development and Collaborative Mentoring Program for Senior High School Teachers

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This study focused on the innovative way in which classroom observation will become transformative and collaborative among teachers within a specific subject group across strands in the senior high school. The proponents implemented a qualitative and participatory action research design in an attempt to improve and enhance the way class observations are conducted. Similarly, it aimed to develop a well-designed Peer-Observation Tool and Mentoring Program for teachers using the Peer-Observation of Teaching (POT) as a model. The proponents employed the constant comparison method, a classic grounded theory coding scheme to be reinforced by the triangulation method within several types of data sets, for the data analysis. There were three teacher-participants and three sections of students who granted their consent to be part of this study, confined to the synchronous sessions of the respective online classes of the participants. The data revealed that the best online practices in mathematics class of the teacher-participants are the following: lesson motivation, sufficiency of provided illustrative examples, opportunities for students to ask questions, simplifying abstract mathematical concepts, and good

instructional aids. The data also revealed that certain key areas must be improved, like the graphical presentation and the teachers' rapport. Data further revealed that teachers' confidence and skills in teaching mathematics were effectively enhanced by Peer-observation which facilitated collaborative mentoring. A simplified set of procedures for implementing Peer- Observation Strategy had been proposed based on existing data sets. Moreover, a better version of the observation tool had been formulated for future use by other subject groups.

Keywords: *POT, PAR,Grounded Theory, Constant Comparison Method, and Methods Triangulation, Caloocan City Business High School*

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(**mvbv/sla/hep**)

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I. Context and Rationale

No one has a monopoly on knowledge. At some point, it grows in an incremental fashion, thus emphasizing that nobody knows everything and nobody knows nothing.

Parallel with this aphorism is the Department of Education's spearheading of several programs to ensure that teachers have continuous learning opportunities, whether this learning is done through formal or informal platforms. In order to advance their learning in their chosen profession, teachers enroll in postgraduate studies at different universities. DepEd, on its part, provides varied programs such as the Learning Action Cell (LAC) and Teachers Quality Circle on top of many seminars and workshops offered to teachers during in-service training or other types of seminars.

To check and balance the teacher's performance, classroom observation has become part and parcel of public-school teachers' performance of duty. This classroom observation, anchored on DO 42 s. 2017, also known as the National Adoption and Implementation of the Philippine Professional Standards for Teachers, stipulates the legal basis for establishing a standardized tool for evaluating teachers' performance. One of the major objectives of the said order is to utilize an established tool to "assess teacher performance, identify needs, and provide support for professional development".

Stipulated in DepEd Order No. 2, s. 2015, also known as Guidelines on the Establishment and Implementation of RPMS in DepEd, RPMS is a systemic mechanism

to manage, monitor, and measure performance and identify human resource and organizational development needs to enable continuous work improvement and individual growth. Evaluation of teacher's performance is partially taken from the ratings in the class observation made by the Master teacher, where the teacher observed is rated based on the criteria stipulated by DepEd in relation to the RPMS. However, in the different public schools where only one Master Teacher per subject area is allotted, evaluation seems to be unilateral. The purpose of such observation is primarily evaluative and secondarily mentoring.

Classroom observation is one of the most commonly used tools to improve teaching and affect change inside the classroom (Gitomer, 2014). In the Philippine setting, observation is done with a top-down approach, such that classroom teachers are observed by the principal, department head, and/ master teacher. In this vein, it is seen that classroom observations are construed for appraisal purposes and less likely for staff development. Gotimer (2014) adds that classroom observation should be pivotal in a way that, aside from its appraisal context, it can also be a venue for peer observation and coaching. However, classroom observation can be a source of anxiety among teachers (Leary, 2020), but a well-developed peer observation program can help teachers develop their teaching strategies. A well-placed program can be potentially interesting in generating interest and excitement among teachers, for it can help teachers deliver their best practices (Dos Santos, 2017). In the same study, the researcher points out that peer observers can help contribute better guidelines based on each other's sensibilities, which sometimes top-down observation lacks.

When incorporated into the teaching practice and culture, and conducted in a mutually respectful and supportive manner, peer observation of teaching (POT) has the potential to facilitate change and growth for teachers (Siddiqui, 2007); thus, a good POT program can help teachers improve their teaching practice, transform their educational perspective, and develop collegially (Bell, 2005, as quoted by Bell, 2008).

This POT can be formative in the sense that it can be a venue for providing feedback to individual teachers, disseminating good practice habits, and fostering an evaluative enhancement culture. However, one of the questions that arise with this practice is the capacity of the peer to evaluate and provide critical feedback that can inform a reflective approach to practice. This gap can be addressed when personalized observation criteria are provided for peer observers. In this context, the teacher-peer observer is accompanied by the master teacher in the observation of the evaluative tool prescribed in the RPMS, where the master teacher serves as a pedagogic expert in facilitating the development of the peer observer's capacity to evaluate colleague's teaching through the modeling of critical feedback and behaviors (Yiend et al., 2014).

Recent literature has focused on different mechanisms for implementing POT and its links to enhanced professional practice (Hammersley & Fletcher, 2004). This

shows that, given opportunities for its proper implementation, POT is an effective means of improving the overall quality of the teaching process.

Gosling (2014), as quoted by Hammersley- Fletcher (2017) in a separate study, mentions that POT can be 'evaluative''developmental',l' or 'collaborative'. When framed as a developmental process, benefits have been noted in the integration of theory and practice and as an outlet for teachers to discuss their teaching (Donnelly, 2007). Developmental POT can enhance teaching practice by encouraging critical self-reflection (Carroll and O'Loughlin 2014; Chester, 2012; Hammersley-Fletcher and Orsmond 2004; Peel, 2005), creating opportunities for teachers to become more aware of varied experiences, and allowing each other to identify and disseminate good practice (Gosling, 2002). When framed as a mechanism for quality measurement, POT can be viewed, experienced and resisted by educators who perceive such a process as a means of ensuring compliance with a purely managerial agenda (Peel, 2005)

Data shown by Trends in International Mathematics and Science Study (TIMSS) 2019 by International Association for the Evaluation of Education Achievement (IEA) indicated that Filipinos ranked last among 58 countries assessed in Mathematics and Science. With a score of 297 in Math and 249 in Science, both scores showed that the country fared lower than in 2003, with a score of 358 in Math and 332 in Science. This decline in the Filipino students' performance in Math and Science is quite alarming. DepEd, on its part, sees the urgency in addressing these gaps basically through its Sulong Edukalidad by "implementing aggressive reforms", and two of these reforms

are focused on "teachers and school heads' upskilling and reskilling through a transformed professional development program and engagement of all stakeholders for support and collaboration". Anchored on these premises, the proponents decide that it is more beneficial at the micro and macro level that the study be focused on the teaching of Mathematics subjects.

II. Innovation, Intervention, and Strategy

The proponents adopted the conduct of the Participatory Action Research (PAR) in this study. PAR provides the opportunity to investigate issues through the collaboration and cooperation among academics and non-academic community members (Johnson M.T. et al, 2019), in this context, the school community. Moreover, as stated from the article entitled: Participatory Action Research and Evaluation, "Participatory approaches to research and evaluation intentionally include people and groups who are most affected by an inquiry in the design and execution process". Hence, the proponents themselves conducted the study in their own practice as Subject Group Heads whose mandates are to observe classes among other duties stipulated in DepEd Order no. 19, s. 2016. However, the scope of the intervention only covered the mathematics subject group as the research timeline was relatively short.

The proponents and implementers were the two Master Teachers and another Teacher III functioning as Subject Group Head. Since classroom observation is one of the duties and responsibilities of a Master Teacher, they conceptualized an innovative way of doing the classroom observation in a more inclusive and collaborative

manner. In most school settings, only one Master Teacher is allotted per subject area and classroom observation is done in a unilateral pattern following the top-down process. In this study, this practice was modified to be horizontal and a co-equal practice between and among teachers.

The modification implemented in this practice was focused on the classroom observation of the Mathematics Teachers. The Master Teacher in-charge of the STEM Strand used the COT-RPMS tool mandated by DepEd and the two Mathematics Teacher-Peer observers used the tool created by the proponents. The Master Teacher provided the numerical rating to the teacher- observed parallel with the criteria set in the COT- RPMS; the peer-observers on the other hand made use of the tool created by the proponents where there was no numerical rating, but instead made use of guide questions focusing on the flow of teaching-learning processes.

As customarily done, after the class observation, the post-conference assessment of the observation was also conducted. In this proposed context, the post-conference involving the teacher observed and the Master Teacher was done after the conduct of the Focus Group Discussion (FGD). All FGDs were conducted right after the class observation where each FGD was composed of the Master Teacher and the two Mathematics Teacher-Peer observers. The FGD served as the avenue where the peer observers shared their respective observations and justifications to what they have witnessed during the class observation. The Master teacher and the peer observers discussed and focused their attention on how the teaching could be improved and similarly provided commendations on best teaching practices

observed. The Master Teacher as well as the peer observers gave their feedback and point of reflection in relation to the presentation of the teacher observed. Here, the Master Teacher focused on the evaluative side of the observation; whereas, the peer-observers focused on the developmental and collaborative side particularly on the best practices in relation to the Mathematics content area. Subsequently, the peer observers and Master Teacher arrived with a proposition and recommendation which were relayed by the master teacher to the observed teacher during the conduct of the post-conference- the Master TEacher being the official class observer of teachers. All post-conferences were held customarily as a one-on-one session between the master teacher and the teacher concerned for this was the avenue for the master teacher to mentor the teacher concerned.

Consent letters were secured by the proponents before the entire intervention program was implemented. The concerned observed-teachers and one of the Mathematics Teacher-Peer Observers were among the significant key persons involved in the intervention program; thus, they needed to give their respective consent on the conduct of the plan.

III. Action Research Questions

This study sought to explore the effectiveness of Peer-Observation as a professional collaboration in teachers' mentoring. It further aimed to develop Peer-Observation tools and formulated an alternative procedure on how typical classroom observation could be transformed into a collaborative and empowering endeavour.

Particularly, this study sought to answer the following research questions:

1. What are the teachers' best classroom practices in Mathematics?

2. What are the teaching strategies and methodologies that the teachers need to improve through mentoring?

3. Is Peer-Observation an effective strategy to enhance teachers' confidence and skills in teaching Mathematics through mentoring?

4. What simplified set of procedures for the Peer-Observation strategy can be formulated for the enhancement of Mathematics teachers' mentoring? and

5. What refined version of the Peer-Observation tool can be adapted for future class observation use?

IV. Action Research Methods

Research Design

The researchers utilized the Participatory Action Research (PAR) along with qualitative research design as proposed by John W. Creswell in 2014. PAR as a form of action research espouses that researchers collaborate with the members of the organization in studying and transforming that organization. In addition, the researchers used Constant Comparative Method of Analysis (Glaser & Strauss, 1967 and Holton, 2010). Methods Triangulation (Denzin, 1978 and Patton,1999) and Document Analysis (Bowen. 2009) to analyse the collected qualitative data.

A. Participants and/or other Sources of Data and Information

There were a total of seven (7) participants of the study. These were composed of one (1) Master Teacher (STEM in-charge and proponent), Peer-Observer 1 (Officer-In-Charge, Subject Group Head for Mathematics and proponent), Peer-Observer 2 (Volunteer Senior High School Mathematics Teacher), and the four (3) SHS Mathematics Teacher volunteers. The lead proponent served as the process observer during the class observation.

B. Data Gathering Methods

The main data collection strategies were the FGDs, Teachers' In-Depth Interviews, Students' Reflection, and the Observation Tool. The conduct of the FGDs and Teachers' In-Depth Interviews were audio and video recorded. Subsequently, the recordings were transcribed and processed for qualitative data analysis. All the audio and video recordings will then be deleted from storage after all the necessary transcriptions have been performed and relative audit trail from the respective research committees have been satisfied.

Focus Group Discussion (FGD)

Data gathered from the observations made by the peer-observers using the proposed tool and the COT prescribed by DepEd were shared and evaluated using FGD. The FGD was carried out immediately after each class observation using the Google Meet platform. The conduct of each FGD session was audio and video recorded.

Teachers' In-Depth Interviews

Every after each class observation and post-conference, the in-depth interview with the observed-teacher was conducted by the lead-proponent. The interviewer used a semi- structured interview protocol, where mostly open-ended questions were used. In addition, the interviewer asked some probing questions whenever the interviewer deemed it necessary. The sessions lasted between twenty (20) to forty (40) minutes limiting the set of questions to at most 12 per interview. The conduct of the interview was done via the Google Meet platform and subsequently audio and video recordings were transcribed. There were three sessions in total.

Students' Reflection

Every after each class observation, the students were requested to write their respective reflection regarding their experiences during the conducted class observation. In writing the reflection, students were provided with the Google Form link where guide questions were integrated to generate students' reflections. Volunteer - students needed not to identify themselves in the provided Google Form. Only three (3) purposively chosen unnamed reflections were processed for qualitative data analysis per observation session; thus, there were a total of nine student's reflections in the entire duration of this study.

Observation Tool

Every after each class observation, the actual observation tools used by the assigned observers were collected and archived for documentary analysis. The main

goal was to determine appropriateness and ease of use by the observers and guarantee that all observations were efficiently recorded in the said tool.

C. Data Analysis

All the transcribed data from the FGDs and the students' reflections underwent data analysis through the Comparison Method. It followed the steps of coding based on classic grounded theory methodology: substantive coding and theoretical coding (Holton 2010). To establish the consistency and validity of the results from the Constant Comparison Method, the data were analyzed using Methods Triangulation. In addition, the teachers' in-depth interviews were transcribed and subsequently analyzed the constant comparative method. Lastly all the filled observation tools underwent rigorous data analysis. All the data coding and recoding processes were conducted using a Qualitative Data Analysis Software. The latest version of MAXQDA 2020 was used as the document and coding management system to provide efficiency and organization in the coding and analytical processes of the study. The software was purchased by the proponents as a cost- sharing initiative for this research endeavour.

VI. Discussion of Results and Reflection

A. Research Results/Findings

All the transcribed data sets were analyzed using the constant comparison method and subsequently underwent the method's triangulation for the data sets from FGD sessions and students' reflections, respectively. The data set for the

teacher's in-depth interview underwent a constant comparative method of analysis, and the proposed observation tool underwent document analysis. After all the qualitative data analysis has been rigorously and iteratively performed, the following categories have been reached as a result:

The Teachers' Best On-line Class Practices in Mathematics

Based on the collected, organized, and analyzed qualitative data, the following are considered the teachers' best practices in Mathematics during the online classes of the teacher-participants: lesson motivation, sufficiency of provided illustrative examples, opportunities for students to ask questions, simplifying abstract Mathematical concepts, and instructional aids.

Lesson Motivation

These are excerpts from the FGD sessions that show that the springboard of the lesson or the motivational aspect of the lesson created a very good learning atmosphere.

> "First*, highly lively class experience for the students considering yung kanina connection issues, delayed for 30 minutes, nawala yung momentum kung pinaghandaan ni maam diba nakakadisappointing yun so ginawan natin ng paraan yung technical aspect, and yet andun parin yung bungad palang energy hanggang matapos hindi ako inantok talaga so I wish sya teacher ko sa math dun sa napakalively kahit afternoon ang hirap gawin nun kailangan mo ng matinding motivation para mamaintain yun consistency*".

Another cited in particular the same valuing for the motivation during the online class.

"*Ganun din po mam kasi ang hirap talaga mag execute ng lesson lalo na sa Math kapag 1 o'clock, after lunch nakakaantok yun. Napaka lively yung pambungad ni Mam mataas yung kanyang energy tapos ang mga studyante rin ay nakikita ko sa cam na tumatango-tango rin yung ulo, may pumapalakpak so nakuha nya yung interest ng student at the same time*"

Likewise, it was mentioned in the student's reflection in several instances the motivational activity of the teacher which the student called icebreaker or energizer.

"and even prepared an energizer before starting the class." and "I enjoyed the lesson for the day! Not only because there is an icebreaker before the class starts."

Sufficiency of Provided Illustrative Examples

Both the FGD and the students' reflections cited the importance of providing sufficient examples and similarly explaining them systematically to the students.

"The whole lesson helped me understand the concept presented, including the introduction, the title and descriptions, a ton of examples, and a slight activity."

Another student expressed his/her reflections, particularly in his/her personal context.

> "*The part of the lesson that helped me understand the presented concept better is that she explained the given examples first for two to three times, then she let us answer the next examples on our own to test if we really did understand the concept.*"

Based on the FGDs, these were excerpts furnished by the observers on providing students with sufficient illustrative examples:

> "*And lastly, the illustrative examples are quite sufficient, I think yung quite is another statement it's really sufficient ang dami, bawat ano may examples yun lang medyo however relatively challenging examples could have also been included pero sa earlier part lang ito pero sa dulo nakita ko naging challenging, complex na rin yung mga problem na binigay ni Teacher C so nasa bandang dulo lang pala I meant yung mga earlier examples ni Teacher C dito sa notes ko po.* "

> "*Kahit po yung kung ano yung objective dun sa WHLP dun sa working home learning plan. Lahat ay nahit ni mam and okay yung transition kanyang yung flow ng pag deliver, pag execute ng lesson at pinpresent yung mga lows yung mga definition prior to illustrative examples at maraming examples po yun nga sufficient examples are provided para sa akin.*"

Opportunities for Students to Ask Questions

Students and teachers have the same consensus that students must have opportunities to ask questions during the online class. These are some of the excerpts from the FGDs and Student's reflection.

> *"The thing that my teacher did that caught my attention or interest is when she gives us corrections for our mistakes or appreciates our effort to participate at the best that we can. She also brings positivity to us."*
> *With the help of my classmates, asking questions about the things they don't understand makes me understand a lot of things too.*

> *"So, like Teacher C said earlier, so, right here it went well because there are plenty of opportunities. Although the platform reduces the opportunity, it's still worth noting as it went very well."*

> *"Then another is the part of the next topics wherein the students is ahm..give the answer about the question or given how to find the horizontal and vertical asymptote, about the domain and range, and 'yun lang, Ma'am, about 'dun sa delivery went well."*

Simplifying Abstract Mathematical Concepts

These were excerpts from the peer - observers of the participants noting in particular that abstract Mathematical concepts must be simplified in order for students to better grasp the lesson. Further, students may be able to visualise abstract concepts at some degree so learning may take place efficiently.

"*The part of Exponential Expression example mas maintindihan at na visualize lahat ng problem*."

Similarly noted was one of the more abstract concepts in General Mathematics: The asymptotes.

"*The Horizontal Asymptote dahil para sakin ito ang pinaka madali at mabilis masagutan*"

Also, it is very worth noting that the teacher-participants exerted effort in simplifying abstract concepts for students to better understand the lesson.

"*And then lastly, the teacher's effort in making abstract concepts understandable by students is very much evident, so, 'pagka walang response 'yung students, so, ginagawa ni-re-re-phrase ni Sir na 'yung especially concepts on asymptotes*".

"The effort is there so that students would be able to understand the abstract concept. That's it for my first observation, Ma'am."

Instructional Aids

There were a variety of online and offline instructional aids that were used by the teacher-participants which were noted in the FGD and student's reflections.

One student in particular showed appreciation that the teacher used the spin-a-wheel application to choose students who will present their respective outputs in the online class.

"I think the thing that caught my attention the most is the spinning wheel, because it can make others with no participation gain some points which is very good. "

The peer observers similarly confirmed the effective use of instructional aids in the online class of the participants.

"The teacher presented all the equipment and made it easy for the students to learn."

Also worth noting that there was still an opportunity to optimize the use of PowerPoint presentation to present the lesson.

"*So, then next learning material, the PowerPoint presentation is prepared by the teacher, 'no? So, it was well-prepared. It was well thought-of.*"

One of the highlights of using PowerPoint presentations in the online class was during the review of the lesson and unlocking of difficulties.

"*An example of review and ah..part of the new lesson well-explained by the teacher and presented by the PowerPoint Presentation.*"

Teaching Strategies and Methodologies that the Teachers Need to Improve through Mentoring

Based on the acquired, organized, and analysed qualitative data, the following aspects of the teaching strategies and methodologies that needed some improvement through mentoring were graphical presentation and teaching rapport.

Graphical Presentation

The following were excerpts from the students' reflection noting in particular their difficulties in the graphing part of the lesson.

"*The graphings base sa sarili kong kakayahan sa graphing po talaga ako naguguluhan at mabilis makalimutan Ang lahat ng parts of graphings.*"

One of the students suggested how to make graphing more interactive and interesting for students.

"*Present a white board and the teacher will do a graph on how things work, so that the students will understand more clearly*."

Likewise, the visual quality of the graphical presentation was also significant to one of the students.

"*I think my teacher was teaching fine as it is, except for the blurry presentation of course*."

One of the peer observers noted that illustrations were also important while presenting the graph of the function.

"*Dun sa ano mam isa rin yang sa graph kasi part ng objective dun. Acually hindi ko nga naabutan yung graph kasi curious ako kung katulad din sa akin na hindi rin makita sa screen yung graph ni mam katulad din ng comment sakin na paano kaya ito, mas maganda ba kayang gamitin yung sinabing app na isa kanina kasi yung ginamit ko GeoGebra so hindi ko na ano yun plus yung illustration sana kung dun diniscuss yung properties ng ano to graph of function merong illustration na katabi dun na ito yung domain yun nga sinabi ni mam, sir na kung makita dun na may graph na katabi dun s property tapos makikita*

dun na positive infinity, negative infinity, so makikita dun na ang domain ay kanan kaliwa set of real numbers so yun yung isa yung X-axis ay yun yung naging asymptote naging ano so yun yung isa kong nakita kasi dapat visual kasi graph na ano dun na ano. Then improvement ba to mam tama ba ako sa improvement ng ano?"

The Teaching Rapport

One student in particular noted in the reflection that teachers should be enthusiastic in teaching the lesson.

"*Not really, i would've wished that the teacher was a bit livelier*."

Likewise, it was noted in the FGD session that teacher-student interaction is paramount to make the lesson more engaging.

"*And another po na dapat mai-develop, Ma'am and Sir, is the ano, the teacher and student interaction. Kailangan po laging may student and teacher interaction po talaga. Hindi lang po talaga dapat tayo 'yung nagsasalita especially for this time--1 to 3 PM, sobrang nakakaantok po talaga and sobrang ah..huwag po masyadong ano, 'no? 'Yung nakita ko po, nakita ko po 'dun sa wala na pong interaction at the same time si Teacher B sobrang serious niya when it comes 'dun sa ano, kasi 'yung mga student po when it*

comes sa subject natin, Sir Henry (Proponent), hindi po tayo puwedeng mag-seryoso. Kasi po talagang aantukin sila. Opo. Kaya po ako minsan, before ako magklase ng one o'clock, 'pag nag-send po ako sa kanila twenty minutes before the time, nagpapatugtog po ako ng mga Tiktok Tiktok para magising sila kasi alam ko po medyo nakakaantok talaga 'tong oras na 'to. So, 'yun po 'yung mga needs to improve sa part po ni Teacher B."

Similarly noted during the FGD was when participation was maximized resulting in students' motivation which made themselves more engaged in the lesson.

"*Kung meron pang iba na mamaximize yung participation, engagement nung bata kasi kahit wala syang motivation yun pwede na yung motivation since engaging na para maset yung tone kasi dito hindi talaga na set yun tone na kahit ako inantok talaga ako kahit interested ako makinig kasi may hinahanap ako how much more yung bata.*"

The Peer-Observation as an Effective Strategy to Enhance Teachers' Confidence and Skills in Teaching Mathematics through Mentoring

Based on the In-depth interview of the teacher participants regarding their level of confidence and skills in teaching Mathematics by means of mentoring, the following are emphasized:

Teacher A, noted that mentoring helped improve him professionally. That peer mentors were able to provide him with suggestions and inputs regarding the content of the lesson.

"*uhummmm okey, Para po saken ay makaka ay malaking tulong po ito ah malaking tulong po para sa professional growth ko bilang isang Math teacher ahm meron din content na peer un nga merong sa content, ah meron ng content talagang ah observer kesa sa don lang ah don lang ah sa teaching strategies ahm tinitiningnan*"

Also, Teacher A appreciated that peer mentoring really provided a lot of help.

"*kasi kumpleto eh kumplteo rekado po Mam eh combination*"

Na ano. Pero ano pa rin po ako Mam, na ganon pa rin sa physical ano rin, ganon ah malaking tulong din itong peer ah tutoring , mas ano nga eh, peer ano to observation"

Teacher C noted the willingness to adopt the peer observation and mentoring on a regular basis as it was claimed that it could result in more benefits in the teaching performance.

"*ah kung pupwede nga lang po talagang i-observe ako ng i-observe kaso hindi po pupwede ung ganon kasi mapapagod nman po ung mag oobservers kasi gustong gusto ko po talaga na natutututo ako because of the ano ung*

mga naiimpart saken na knowledge especially Sir Henry Peralta sobrang dami ko pong natututunan sa kanya and (unintelligible words and sound)"

Teacher C also noted the importance of the Subject Group Head who led the peer observation and how the endeavour had beneficially impacted her way of teaching.

"*Ung ngaun po ung content standard na po tayo because nanjan na si Sir Henry na naggaguide nag-aadvice ano po ung dapat hindi dapat gawin. Mas much better po talaga ung ah with the content standard kasi po nga Mam Sonia ay not Mathematics major so kapag ini-observe nya po ako medyo may mga part na hindi nya alam or hindi nya po ah ma-catch ung topic kasi di nman po nya major. Mas much better po talaga ung with the content standard with the ahhh may subject group head*."

Likewise, suggestions from the peer-observer as mentor made effective transition to better teaching the subject.

"*Mam gawin mo eto gawin mo kaya sobrang effective po talaga si Sir Henry as a subject group head effective po talga ung peer observation ngaun with the content standard*".

Simplified Set of Procedures for the Peer-Observation Strategy for the Enhancement of Mathematics Teachers' Mentoring

After the constant comparative method analysis of the data set, the following results are arrived. Firstly, the Focus Group Discussion should be audio and video recorded as it provided the observers reliable data which can be communicated to the teacher - observed during the post-conference phase of the Peer-Observation strategy.

> "*So here, we are going to discuss this morning, ah by the way, this is recorded, ha? This is recorded. You agree, Teacher C and Sir Henry, that we will be recording the entire process of this focus-group discussion and then I will incorporate also my observation under the required COT for Teacher I, II, and III, Teachers I, II, and III.*"

Secondly, that the entire online class observation be limited to the synchronous part of the lesson and the asynchronous part should not be included in the observation.

> *"Ah, as earlier Sir, 'yung nagtanong po ako about the ah..time. The ah..synchronous time. So, tinanong ko po kanina kay Sir kung ilang oras po ba dapat tayo mag-synchronous time kasi nga kanina medyo nagulat din ako kanina kay Ma'am Sonia, Sir Henry, kasi nag-cut po s'ya 'dun sa lesson ni Teacher A"*

Similarly noted that peer observation only focused on the synchronous part of the lesson of the teacher-participants.

> **"***So, about the synchronous, Ma'am, ah ito po yung napag-usapan naming researchers kahapon. Na sa asynchronous, ako yung mag-go-go signal kung*

ah okay na po sa akin. Mag-li-leave na lang po ako 'dun ng message. Kasi ayokong ma-distract 'yung klase. Wala siyang oras, kung ilan, ito ba ay isa't kalahati, isang oras, basta makita lang po natin 'yung entire rubrics doon sa COT. Kapag tapos na po, no problem. Magpapaalam na po ako. Tapos Sir Henry will be the one to create a link para makapag ano tayo ngayon, focus-group discussion.

The Refined Version of the Peer-Observation Tool

After the documentary analysis of the filled observation tool utilized in this study, the following results have been arrived with: Firstly, Question Number 1 and 2 will be combined as the responses provided by the observer for both of these questions were interchangeable which implied that the questions were relatively the same to the lens of the observers, Hence the question will rewritten as follow: " What aspect of the lesson delivery either or both participated by the teacher and students are worth commending?". Secondly, Question number 3 will be added with appended brief description as the true intention of the proponent was to focus on the development of the content part of the lesson. Hence, the question will be restated as "What aspect of the lesson needs to be developed? (Content)", Lastly, question number 4 will also be restated since the true intention of the proponents was to focus on the pedagogical aspect of the lesson. Therefore, it will be restated as "What clarification, thought, or observation needs sharing? (Pedagogy)" All other parts of the observation will remain the same including its format and tabular design form among other properties.

B. Reflection

Working on this action research has tested my mettle as an individual, as a teacher, and as a teacher-researcher. It has been my personal observation that several teachers consider research writing (and research teaching for that matter) such a herculean task, and to some degree, I am on the affirmative side.

In spite of the extent to which energy, talent and knowledge were poured into the cup of this research work, there were wisdoms gained from this endeavor such as building rapport with colleagues, understanding the rigors of research writing, honing skills needed in research work, contributing to the field of research, and gaining personal self-development.

No man really is an island, and this research work has solidified the truism attached to this. During the conduct of this research, I was given the chance to talk with my co-teachers in a much deeper level of personal and professional exchange of ideas. Symbiotic existence has become a significant part of our dealings with each other which is centered on the study being conducted, and on some personal level along the side-lines.

Research writing entails much and demands more from the researchers. The rigors of research writing were compensated by the level of satisfaction gained once the concerns related to the content of the paper were resolved.

The use of a new software, MAXQDA, purchased by the researchers as a cost-sharing initiative was not put to waste, for it helped open my eyes to the wonders of

qualitative data analysis. I can say that through the use of this software, I now see research writing from a new perspective – tiring but fulfilling, cumbersome yet educative, excruciating but nonetheless gratifying.

I also recognize the value of Interpersonal skills in research and have come to realize that these skills should not only be confined to public speaking purposes but should also be maximized in the field of research. These skills played an important role most especially during the in-depth interview with the teacher-participants for I was able to communicate with and extract valuable information which are pivotal in the completion of this paper.

Success in all its forms cannot be credited to only one thing but it is an amalgamation of numerous elements. The overall goal of developing a tool for peer-observation teaching has been one of the major driving forces that propel us forward. This professional (and personal) commitment to research endeavours and the longing for a positive outcome to contribute for the betterment of our profession has really fueled us to persevere though sometimes the battle seems all uphill. We cannot deny the fact that the positive organizational climate also serves as a ground breaker for mental stimulation. Really, research work will never be possible if we do not focus on success factors that will help us develop a stronger research culture in our learning community.

Given the chance to further refine this study, it would be much better if bigger research participants can be utilized to have a wide range of information that can be manipulated as reference. On top of this, a face to face venue can also be much

advantageous for visual communication demonstrated by both the teachers and the students can come into play.

But generally, looking at the outcome of our research work, I am in awe of the anticipation on how it can improve the teaching-learning process in every school. Openness among teachers in sharing best practices and accepting criticisms and suggestions can surely pave the way for effective learning experiences, and this will surely reverberate to our students in particular and to our educational system in general.

I admit that this research work has made me a better individual - not only as a teacher but more so as a researcher for the values and skills it inculcated in me. With all of these, how I wish that many teachers also get involved with research writing for knowledge really grows when it is shared. Through the engagement of every individual involved in this study, we seem to be beaten on the onset of this undertaking, but like the proverbial bird in Greek mythology – that of the phoenix - , we can usher new beginnings by inspiring our colleagues to get involved in research work.

VI. Action Plan

This action research focusing on Peer-Observation as an avenue in collecting data for Tool Development and Collaborative Mentoring Program for Senior High School Teachers will be employed for its full utilization in a bigger spectrum of the academe.

Improvements on the procedure for the implementation of the study and the utilization of the improved tool will be instituted in various levels of academic settings.

LAC sessions will be utilized for the dissemination of the research results among STEM Teachers, the Mathematics teachers being the participants of the study. The application of the tool across learning areas is the long-term target of the study; therefore, Mid-Year In-Service Training of Senior High School teachers will be utilized for the dissemination of the research findings among the SHS teachers for them to be acquainted with the dynamics of the research study.

Permission from the school head will be secured for the localized STEM implementation of the study during the second semester of SY 2022-2023. Findings from the said localized implementation within the STEM Strand will be presented to all the SHS teachers during the school-based in-service training for SY 2022-2023 as a venue for the total implementation of the study across subject groups.

The researchers also planned to maximize every opportunity to have the study presented in various SDO sanctioned research forums, and if possible national and internationally, for the comprehensive utilization of the study among diverse educational settings.

PLANS FOR DISSEMINATION AND UTILIZATION

DISSEMINATION/ ACTIVITIES	Jan. 2023	Feb. 2023	March 2023	August 2023	Remainder of School Year 2023-2024
1. Dissemination of research results LAC					

Session for STEM Teachers					
2. Dissemination of research results Mid-Year In-Service Training (SHS)					
3. Localized STEM Proposed Implementation during the Second Semester of SY 2022-2023.					
4. Dissemination S.Y. 2022-2023 In-Service Training (School Based)					
5. SHS All Subject Groups across all strands as Proposed Implementation in the succeeding School Year 2023-2024					

6. Dissemination in SDO sanctioned Research Forum					

VII. References

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VIII. Financial Report

EXPENSES	COST ESTIMATE	ACTUAL COST	MEANS OF VERIFICATION
1. MOA Notarial Fee	Php 300.00	Php 300.00	Final Output
2. School Supplies for the submission of notarized MOA to the D.O.	Php39.00	Php39.00	Final Output
3. Transportation fee for the submission of notarized MOA to D.O. (Grab Driver)	Php3500.00	Php 350.00	Final Output
4. Internet load of the researchers and research-participants	Php 550.00 _ Mrs. Viloria Php 500.00 – Mrs. Annang Php500.00 – Mr. Peralta Php250.00 – Teacher A Php200.00 – Teacher B Php150.00 – Teacher C Php100.00 – Teacher X Php100.00- Sir Dela Cruz	Php 2,850.00	Final Output
5. Food allowance for the researchers and research-participants	Php 1200.00- Mrs. Viloria Php1000.00 – Mrs. Annang Php1000.00 – Mr. Peralta	Php5,800.00	Final Output

	Php500.00 – Teacher A Php400.00 - Teacher B Php300.00 – Teacher C Php200.00 – Teacher X Php200.00- Mr. Dela Cruz		
6. Printer ink (1 bottle/black)	Php300.00	Php300.00	Final Output
7. Transportation Allowance (Observation, Consolidation of Materials, Data gathering, Peer-observations, writing of research report))	Php50.00/per researcher x 9 times	Php 1,350.00	
		Total – Php10,989.00	

PREPARED BY:

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CHECKED BY:

RODOLFO GREFIEL REYES

(Division Research Coordinator)

X. Annexes

TEACHER I - III

RATING SHEET

OBSERVER: _____ DATE: _____

TEACHER OBSERVED: _____ QUARTER: _____

SUBJECT & GRADE LEVEL TAUGHT: _____

OBSERVATION 1 ☐ 2 ☐

DIRECTIONS FOR OBSERVERS:

1. Rate each item on the checklist according to how well the teacher performed during the classroom observation. Mark the appropriate column with a (/) symbol.
2. Each indicator is assessed on an individual basis, regardless of its relationship to other indicators.
3. For schools with only one observer, this form will serve as the final rating sheet.

INDICATORS	3	4	5	6	7	NO*
1. Apply knowledge of content within and across curriculum teaching areas.						
2. Plan and deliver teaching strategies that are responsive to the special educational needs of learners in difficult circumstances, including: geographic isolation, chronic illness; displacement due to armed conflict, urban resettlement or disasters; child abuse and child labor practices						
3. Select, develop, organize and use appropriate teaching and learning resources, including ICT, to address learning goals.						
OTHER COMMENTS:						

_____ _____

Signature over Printed Name of the Observer Signature over Printed name of the Teacher

*NO stands for **Not Observed** which automatically gets a rating of 3.

S.Y. 2020-2021 | **Proficient Teachers**

This tool was developed through the Philippine National Research Center for Teacher Quality (NCTQ) with support from the Australian Government.

Semi-structured interview questions
(In-depth Interview Questions)

1. How did you find this class observation?
2. Is there a noteworthy difference between your feeling during the usual classroom observation done and this one? Can you elaborate on this?
3. Were the preparations you made during this classroom observation the same or different during the usual classroom observations we had before?
4. Which do you think will help you improve your teaching more – this peer observation method or the traditional way we had before?
5. How will this experience with peer observation affect your teaching?

Questions for Student's Reflection (Students' Observation)

1. Are you satisfied with how the lesson went? Why?
2. What particular thing did the teacher do that caught your attention/interest?
3. What part of the lesson helped you understand the concept presented?
4. What part of the discussion needed to be strengthened?
5. Was there anything that the teacher could have done better to increase the student's learning? Kindly name those things.