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Development and Utilization of Online Teacher Professional Development Program to Improve Private e-Tutors' TPACK Skills

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Abstract: Development and Utilization of Online Teacher Professional Development Program to Improve Private e-Tutors' TPACK Skills. Objective: The study aimed to design, implement, and evaluate an online teacher professional development (oTPD) training program and develop the TPACK skills of private e-tutors as evidenced by their lesson design and teaching demonstration performance. **Methods:** A mixed method in data gathering such as TPACK survey, pre-post-performance, and feedbacking was utilized. The input-process-output method with the PRIME framework in the process stage was used. The training program design was evaluated by experts anchored with the frameworks and theories with the synchronous form of learning for 20 contact hours. **Findings:** Findings revealed a significant mean gain between the pre-post-performance of the teachers' lesson design and teaching demonstration. **Conclusion:** The online teacher professional development training program developed and enhanced the teachers' TPACK skills. The study proposed guidelines for conducting oTPD training programs and compilation of lesson designs based on the TPACK framework.

Keywords: e-tutors, online teaching, teacher professional development, TPACK.

Abstrak: Pengembangan dan Pemanfaatan Program Pengembangan Profesi Guru Online untuk Meningkatkan Keterampilan TPACK e-Tutor Privat. ***Tujuan:*** *Studi ini bertujuan untuk merancang, mengimplementasikan, dan mengevaluasi program pelatihan pengembangan profesional guru online (oTPD) dan mengembangkan keterampilan TPACK dari e-tutor privat yang dibuktikan dengan desain pembelajaran dan kinerja demonstrasi pengajaran mereka.* ***Metode:*** *Metode campuran dalam pemerolehan data seperti survei TPACK, pra-pasca-kinerja, dan umpan balik diterapkan. Metode input-proses-output dengan kerangka kerja PRIME pada tahap proses digunakan. Rancangan program pelatihan dievaluasi oleh para ahli yang tertaut pada kerangka dan teori dengan bentuk pembelajaran sinkron selama 20 jam.* ***Temuan:*** *Temuan mengungkapkan gain rata-rata yang signifikan antara kinerja sebelum dan sesudah implementasi desain pembelajaran dan demonstrasi mengajar guru.* ***Kesimpulan:*** *Program pelatihan pengembangan profesi guru online berhasil mengembangkan dan meningkatkan keterampilan TPACK guru. Penelitian ini menghasilkan pedoman pelaksanaan program pelatihan oTPD dan penyusunan desain pembelajaran berdasarkan kerangka kerja TPACK.*

Kata kunci: *e-tutor, pengajaran online, pengembangan profesi guru, TPACK.*

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INTRODUCTION

Technological innovations and the growing search for supplementary educational support services have created a new paradigm of private tutoring, which has led to the rise of e-tutoring (Barefah & McKay, 2016; Keebler, 2009; Tagiltseva et al., 2018). E-tutoring offers private and personal teaching to learners that use the internet and technological tools in the teaching-learning process. E-tutors play significant roles in the success of e-tutoring and they must be experts in the subject matter, technical skills, and pedagogical, information, and communication skills (Doukakis et al., 2013; McPherson & Nunes, 2004). Along with e-tutoring in an educational institution's existing structure is the need for e-tutors' training to strengthen their teaching role as facilitators, technologists, administrators, advisers, and assessors (Goodyear et al., 2001). Furthermore, e-tutors must acquire Technological, Pedagogical, and Content Knowledge-Web (TPACK-W) to comply with the demands of online teaching (Lee& Tsai, 2010).

The TPACK framework, as Koehler and Mishra (2006) proposed, provides teacher competencies across different levels relevant to the online setting. TPACK stresses the interconnections and relations between the teachers' technological knowledge, pedagogical knowledge, and E-tutors need a thorough understanding of the relationship between technology, content, and pedagogy significant to the teaching-learning process. E- tutors must participate in an online Teacher Professional Development (TPD)training program based on the TPACK framework. Thus, bridging the gap between traditional and online teaching methods is relevant for teacher professional development programs (Stewart, 2011).

Doukakis et al. (2013) conducted a blended training program based on the TPACK framework for four teachers as preparation for their new role as e-tutors. The study revealed that the participants deemed the training program very helpful and supported their needs. The student's knowledge of computer use, learners' needs, subject area content, and technical problems that may arise were some of the identified factors in the planning, implementation, and tools used in the E-tutoring that are connected to the TPACK. The study also suggested that e-tutors training in e-tutoring environments must emphasize the TPACK framework's components, including technology. Alsofyani et al. (2012) found that the online training mode for TPACK development is effective and highly accepted by the participants. Lowder (2013) developed a teacher education course for building TPACK skills for nine pre-service teachers with the integration of scientific methods. Lesson plans based on the TPACK framework were the output of the respondents. The study found that TPACK knowledge has increased, especially in the technological integration. The lesson plan TPACK format and peer collaboration significantly contributed to the success of TPACK development. It was suggested that professional development for teaching in creating and implementing TPACK lesson plans is relevant to transforming the standard of technological integration of schools.

Lehiste (2015), in his longitudinal action research study, conducted a two-year in-service training program of Educational Technology based on the TPACK framework with twenty (20) primary school teachers as respondents. The findings revealed a strong growth of teachers' knowledge in all the domains of TPACK, specifically in their TK, TPK, and TPACK, but

they have the lowest level of confidence with their Technological Content Knowledge (TCK). In addition, it was found that there are significant correlations with the seven knowledge domains of TPACK, with the highest between TPACK and TPK, and TPACK and TCK. The study suggested not relying only on self-report assessments to measure TPACK.

Archaumbalt and Crippen (2009) examined the TPACK among K-12 online teachers in the United States in their study. A tailored design survey method is used by 596 respondents who examine and measure their perception and knowledge of key domains of TPACK. Findings revealed that teachers have high knowledge among the domains of pedagogy, content, and pedagogical content but have low knowledge within the domains of TPK and Technological Content Knowledge (TCK). Furthermore, it suggests that teacher preparation programs will emphasize the integration and usage of technology in the content courses.

E-tutors must also have skills in technology, pedagogy, and online teaching evaluation according to the Technological Pedagogical Content Knowledge (TPACK) framework (Spyros et al., 2013). Acquiring new competencies, changing perceptions of instructional time and space, virtual management techniques, technological demands, and ways of engaging students are some challenges they need to cope with (Doukakis et al., 2013). Online Teacher Professional Development (oTPD) is any teacher learning experience that is delivered partially or completely on the Internet" (Fishman et al., 2013; Nuland, 2019). These include online courses, interactive workshops/webinars, learning modules, or online professional development networks (Macia & Garcia, 2016; Nuland, 2019).

Teacher Professional Development catalyzes teachers to progress professionally and personally by improving or discovering their knowledge, skills, and abilities (Loughran, 2014). It is also a nurtured systematic collaboration of educators, both individual and team, through adult learner-centered processes that aim to attain essential teaching skills and abilities (Al-Behaisi, 2011). Professional development has been changing over time, and the contextualized, curriculum-and pedagogically focused, reflective/ reflexive, collaborative, and pragmatic approaches for teachers. Consequently, it links to developing TPACK and any professional development for technology integration. Furthermore, teachers' evolving needs created three professional development formats: face-to-face, blended and online (Harris et al., 2012; McCusker, 2017).

Online professional development sessions provide personalization, focus on practice, and the creation of professional learning communities (Brooks & Gibson, 2012). It is relevant for learning content and integrating video demonstrations for effective teaching. Online training sessions offer collaborative, real-time discussion among participants and an expert (McCusker, 2017). Teacher Professional Development must be of excellent priority for both teachers and administrators. It is a continuing education that goes beyond a teacher's professional career and involves enhancing skills and designing new methods for becoming effective educators (Al-Behaisi, 2011). Besides, professional development programs directly impact teachers' knowledge, practices, and efficacy, upgrade their skills and understanding, and uplift school teaching status (Al-Behaisi, 2011; Darling-Hammond et al., 2005).

Designing a training program must consider the teachers' varied experiences for active participation and purposeful learning (Lawler et al., 2000; McGee-Swope, 2010). It comes in different types: courses or workshops, conferences or seminars, qualification programs, individual or collaborative research, mentoring, peer observation, and coaching. Furthermore, training programs can be Formal and Informal Training. Formal training programs comprise presentations, seminars, class sessions, workshops, and lectures using audio and video media with structured materials. Informal training is usually unstructured, for it is unplanned, like support by colleagues in relaxed and casual settings (Mc-Gee-Swope, 2010). TPACK framework is useful for creating a professional development program focusing on cost-saving and training efficacies. Recent research has utilized qualitative methods such as questionnaires, self-reporting, interviews, and observations that further assess TPACK as a program development model (Loughran, 2014).

Considering all the literature and studies cited, it is clear that the majority involved TPACK skills and teacher professional development. These reviews further give awareness that teacher professional development training programs for teachers through online context are subject to future research. It aims to address educators' challenges in the paradigm shift of technological innovation in teaching-learning by helping them become effective and efficient e-tutors through their TPACK skills. This study aims to help the e-tutors enhance and develop their TPACK skills through the oTPD program, which would be evident in their lesson designs and teaching demonstration performance. It also determines the respondents' understanding of the TPACK Framework, pre and post-performance of the respondents in their lesson design; teaching demonstration; and evaluation of the program designed in terms of content, activities, and assessment by the experts.

Theoretical-Conceptual Framework of the Study

Figure 2 shows the Input-Process-Output method with the IPARD Framework in the process phase that went through the Investigation, Planning, Action, Reflection, and Demonstration. In the Input phase, the E-tutors' needs as participants were identified through an interview that focused on the challenges they have encountered in E-tutoring and the topics of training or seminars they were interested in. In the Process phase, the IPARD framework was utilized by the study. The investigation comprised the e-tutors' needs assessment, their performance evaluation of designing a lesson plan, and teaching demonstration. Before the oTPD, three experts created and evaluated an oTPD training program design in the planning stage. The three experts were Master's Degree holders in Education with relevant academic experience.

In the action stage was implementing the oTPD training program using the Zoom telecollaborative platform for twenty (20) contact hours. It was divided into ten sessions with 2 hours per session. In the reflection stage, the participants gave their feedback on the impact of the oTPD training program on their TPACK skills. Participants designed a lesson plan based on TPACK Framework in the demonstration stage and had their teaching demonstration. Their performance was evaluated using a rubric. The study's output phase presented guidelines for the online Teacher Professional Development Training program based on the TPACK Framework for E-tutors and a compilation of lesson plans based on the TPACK Framework.

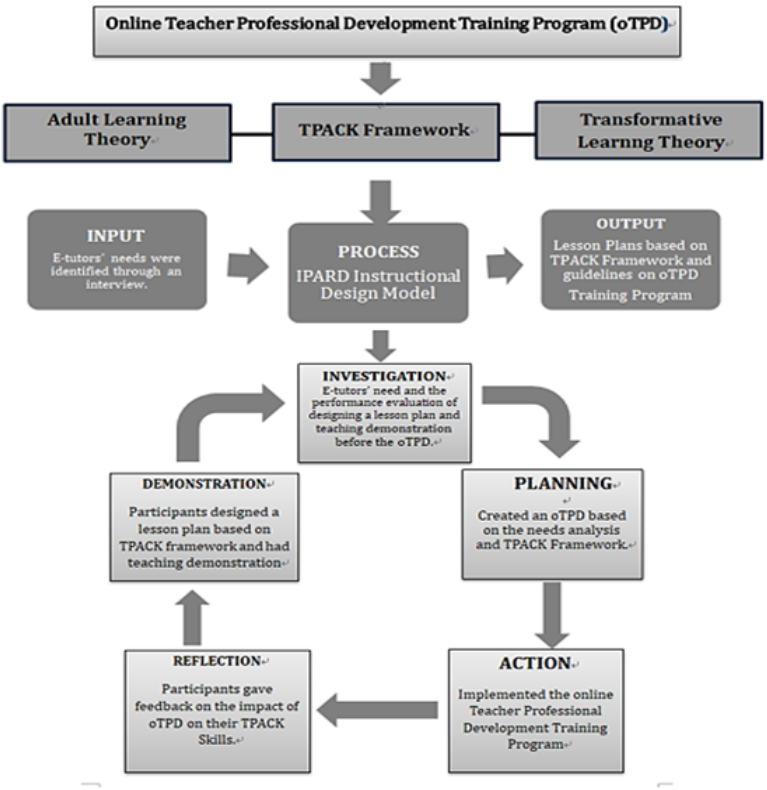

Figure 2. Theoretical - conceptual framework of the study

METHODS

Participants

The respondents of this study were eight e-tutors across grade levels handling English subjects who passed the criteria using purposive sampling technique. They are licensed professional teachers with varied teaching experiences in the offline setup. The research respondents approved joining the online TPD training program of TPACK invitation that the researcher sent through Google Forms. Purposive sampling occurs when elements selected for the sample are chosen by the researcher's judgment (Black, 2010). The study was conducted through the school's official platform for the e-learning setup, Zoom. The eight e-tutors work at a private tutoring school. This school offers e-tutoring to Kindergarten, Elementary, and High school learners across all subjects. The majority of the students are homeschoolers who are based abroad. The school was established in August 2020.

Research Design and Procedures

This study utilized a descriptive research design. It used qualitative and quantitative methods to describe the impact of online teacher professional development on private e-tutors' TPACK skills and the performance level of their lesson design and teaching demonstration. Quantitative data was collected first followed by a collection and analysis of qualitative data. The use of qualitative results assisted the study in explaining and interpreting the findings of the quantitative data (Creswell et al., 2003).

The researcher asked for consent from the school's administration to conduct the research and for the research participants to be part of the study. The participants answered an adapted TPACK survey questionnaire to determine their understanding of the TPACK framework in the input stage. Before starting the online TPD training program sessions, the school's administration announced their directive to their e-tutors to participate. The study's process phase followed

the PIME structure in planning, implementing, monitoring, and evaluating the lesson designs and teaching demonstration. The research output phase presented the guidelines for the online teacher professional development training program (oTPD) of TPACK to E-tutors and a compilation of lesson designs. The output is based on the nine respondents' experiences and a compilation of the respondents' revised lesson plans.

The PIME Structure

In the planning stage, the researcher analyzed the respondents' needs for their e-tutoring, which was also based on the challenges they encountered and the TPACK survey result. Then, the training program syllabus was developed, which the three experts evaluated, and the pre-performance evaluation of the lesson design and teaching demonstration.

The training program was implemented using a Zoom telecollaborative platform for twenty (20) contact hours. The training program was divided into ten (10) sessions with two (2) hours per session with specific content objectives and activities. As part of the training, the e-tutors revised their lesson design with their knowledge and understanding of the TPACK Framework.

In the monitoring stage, the participants created their lesson design based on TPACK, and their teaching demonstration was evaluated using the TPACK assessment rubric as the post-test performance. Afterward, the respondents gave feedback on the training program's content, activities, assessment, and monitoring.

Research Instrument

An instrument adopted from Shmidt et al. (2009) TPACK Survey Questionnaire was used to determine the participants' current understanding of the TPACK framework. The survey instrument has been proven valid and reliable and emphasizes the self-evaluation of teachers' development of TPACK to their technology integration with a total of fifty-seven questions. The participants were evaluated based on Technology Knowledge (TK), Content Knowledge (CK) in Mathematics, Social Studies, Science, Literacy, Pedagogical Knowledge (PK), Pedagogical Content Knowledge (PCK), Technological Content Knowledge (TCK), Technological Pedagogical Knowledge (TPK), Technology Pedagogy and Content Knowledge (TPACK), Models of TPACK (Faculty, PreK-6 Teachers), and Models of TPCK. The TPACK assessment rubric was adopted from Harris et al. (2012), and TPACK progressive levels rubric was adopted from Lyublinskaya and Tournaki (2012). The instrument assessed both the lesson design and teaching demonstration.

Data Analysis

This study used nonparametric tests to treat the data because of the limited number of samples. A sign Test was used to determine the respondents' pre-post-performance. A Wilcoxon Signed-Rank Test was used to determine if there was a significant difference between the respondents' pre-post performance. However, the following assumptions for the Wilcoxon Signed-Ranked Test must be met before it can be used: the paired data have been obtained from a random sample, and the population of differences has an approximately symmetric distribution.

■ RESULTS AND DISCUSSION

Performance of Participants in Designing a Lesson Plan before the oTPD Training Program

Table 1 shows the participants' performance in designing a lesson before the oTPD Training Program. All respondents had a

mean under the interval score of 2.51-3.50. The mean of the participants in each criterion can be analyzed based on the description assigned for each score. Criteria 1 had a mean of 2.96 which presented that the technologies selected for use in the lesson design are aligned with one or more curriculum goals. In criteria 2 the mean was 2.67, which means that the technology used supports instructional strategies. Criteria 3 had a mean of 2.92 which presented that the technology selection(s) are appropriate but not exemplary by the curriculum goals and instructional strategies.Criteria 4 had a mean of 2.96, which means that the content, instructional strategies, and technology fit together within the lesson design.

Table 1. Performance of designing a lesson plan before the otpd

Participants	Criteria 1 Curriculum Goals and Technologies	Criteria 2 Instructional Strategies and Technology	Criteria 3 Technology Selection	Criteria 4 Fit
1	2.67	2.33	3.00	3.33
2	3.33	3.00	3.33	3.33
3	3.00	2.67	3.00	2.67
4	3.00	2.67	2.67	3.00
5	3.00	2.67	3.00	2.67
6	3.00	3.00	2.67	2.67
7	3.00	2.67	3.00	3.33
8	2.67	2.33	2.67	2.67
Mean	**2.96**	**2.67**	**2.92**	**2.96**

The three evaluators have evaluated the lesson design pre-performance of the participants using the Technology Integration Assessment Rubric. Table 1 shows the participants' performance in designing a lesson before the oTPD Training Program. All respondents had a mean under the interval score of 2.51-3.50 in the following criteria in Table 2.

Table 2. Criteria on the performance of designing a lesson plan

LEGEND	Criteria			
Likert-Scale Interval	**Curriculum Goals and Technologies**	**Instructional Strategies and Technologies**	**Technology Selection(s)**	**Fit (Content, Pedagogy and Technology together)**
3.51-4.00	Strongly aligned	Optimally supports	Exemplary	Fit together strongly
2.51-3.50	Aligned	Supports	Appropriate but not Exemplary	Fit together
1.51-2.50	Partially aligned	Minimally supports	Marginally appropriate	Fit together somewhat
1.00-1.50	Not aligned	Does not support	Inappropriate	Do not fit together

Performance Level of Participants' Teaching Demonstration before the oTPD Training Program

The three evaluators evaluated the teaching demonstration performance level of the respondents using the TPACK levels rubric. Table 2 shows the mean scores and level of the teaching demonstration performance of the participants. Participants 1, 3, 5, and 8 had a mean score of 2 in the Accepting level, while respondents 2, 4, 6, and 7 had a mean score of 3 in Adapting level. The participants had a mean score of 3 in Adapting Level of Performance.

The participants in the accepting level showed in the teaching demonstration that instructional technology was used as motivation rather than the actual subject matter. The more significant part of the technology used was for demonstrations which included presenting new knowledge, while the technology-based activities did not include inquiry tasks. Therefore, technology procedures concentrated on teacher demonstration and practice. The participants in the Adapting level showed in the teaching demonstration that they used instructional technology in a way that is new and different from teaching used for learning new knowledge by students. Technology-based activities include inquiry tasks. Therefore, technology procedures concentrated on language concepts, communication skills with connections, and inquiry activities that used or developed connections.

The overall mean level of the participants' teaching demonstration is Adapting level, which revealed that it still needs to be improved to the next level. The data collection for the teaching demonstration's performance level has a significant relationship with the role of the respondents as E-tutors in the teaching-learning process. According to Spyros et al. (2013), the E-tutors must also have the technology, pedagogy, and online teaching evaluation skills according to the Technological Pedagogical Content Knowledge (TPACK) framework. Thus, the E-tutors' roles are divided into four domains: Pedagogical, Managerial, Social, and Technical. The Pedagogical part is to provide instruction and effective strategies for the learning process. The managerial role is administering introductory courses and tracking student progress and data. The social function is to establish a warm and conducive environment. The technical part guides students with Information and Communication Technology (ICT) and gives technical support (Keebler, 2009; Mcphearson & Nunes, 2004).

Table 3. Performance level of teaching demonstration before the otpd training program

Participants	Evaluator 1	Evaluator 2	Evaluator 3	MeanSD	Level
P1	2	2	3	2.33±0.58	Accepting
P2	3	3	4	3.33±0.58	Adapting
P3	2	2	3	2.33±0.58	Accepting
P4	3	2	3	2.67±0.58	Adapting
P5	3	2	2	2.33±0.58	Accepting
P6	3	2	3	2.67±0.58	Adapting
P7	4	2	3	3.00±1.00	Adapting
P8	2	2	3	2.33±0.58	Accepting
MeanSD	**2.75±0.71**	**2.13±0.35**	**3.00±0.53**	**2.63±0.38**	**Adapting**

Legend: *1.00-1.80 (Recognizing); 1.81-2.60 (Accepting); 2.61-3.40 (Adapting); 3.41-4.20 (Exploring); 4.21-5.00 (Advancing)*

Participants' Performance of Designing a Lesson Plan and Teaching Demonstration after the oTPD Training Program

Table 3 presents the participants' performance in designing a lesson plan and teaching demonstration after the oTPD training program. All the participants had a mean score interval of 3.51-4.00 in all the criteria and can be analyzed based on the rubric's description assigned for each score. Criteria 1 presents that the technologies selected for the lesson design are strongly aligned with one or more curriculum goals. In Criteria 2, the technology used optimally supports instructional strategies. Criteria 3's technology selection(s) were exemplary, following the curriculum goals and instructional strategies. In Criteria 4, the content, instructional strategies, and technology fit strongly within the lesson design. The respondents' performance in designing a lesson plan had improved, for they got the highest mean score based on the rubric. This finding also validates the study of Lowder (2013) that respondents' TPACK knowledge has increased significantly in technological integration, as seen through their pre- and post-lesson plans.

The table also shows the respondents' mean scores and level of teaching demonstration performance. Participants 1, 3, 5, and 8 had mean scores that ranged from 3.00 to 3.67, while respondents 2, 4, 6, and 7 had mean scores that ranged from 3.42 to 4.00. The highest mean score is 4.00, and the lowest mean score is 3.00. The respondents had an overall mean score of 3.42. Participants 1, 3, 5, and 8 in the Adapting level showed in their teaching demonstration that they used instructional technology that was new and different from teaching without technology used for learning new knowledge by students. The technology-based activities included inquiry tasks. Thus, technology procedures concentrate on language concepts or communication skills with connections and inquiry activities that use or develop relationships. Respondents 2, 4, 6, and 7 in the Exploring level showed in the teaching demonstration that the more significant part of the instructional technology was used by a student who explored and experimented with it for new knowledge and practice. The technology-based activities included inquiry tasks. Thus, the technology procedures concentrated on language concepts and communication skills with connections and inquiry activities that use or develop connections.

The result of the post-test of the teaching demonstration of the respondents revealed an improvement in the mean scores that further establishes the process of E-tutoring and the roles of E-tutors in the teaching-learning process. E-tutoring is a form of e-learning taught online by an e-tutor that offers personal guidance and facilitates the learning process (Doukakis et al., 2013). The E-tutors' roles are divided into four domains: Pedagogical, Managerial, Social, and Technical. The Pedagogical part is to provide instruction and effective strategies for the learning process. The managerial role administers introductory courses and tracks student progress and data. The social function is to establish a warm and conducive environment. The technical part guides students with Information and Communication Technology(ICT) and gives technical support (Keebler, 2009; Mcphearson & Nunes, 2004).

Significant Mean Improvement in Designing a Lesson Plan and Teaching Demonstration before and after the oTPD Training Program

Table 4 shows the significant mean improvement in the performance of the participants in designing a lesson plan and teaching demonstration before and after the oTPD training program. Using the Wilcoxon Signed Rank Test, the *p-value* of the Lesson design is

Table 4. Performance of designing a lesson plan and teaching demonstration after the otpd training program

Participants	Designing a Lesson Plan (Mean)				Teaching Demonstration (Mean)	
	Criteria 1 Curriculum Goals and Technology	**Criteria 2** Instructional Strategies and Technology	**Criteria 3** Technology	**Criteria 4** Fit	Mean	Level
Participant 1	3.67	4.00	3.67	3.67	3.00	Adapting
Participant 2	4.00	4.00	3.33	3.67	4.00	Exploring
Participant 3	3.67	3.67	3.33	3.67	3.33	Adapting
Participant 4	4.00	3.67	3.67	3.67	3.67	Exploring
Participant 5	4.00	4.00	3.00	3.00	3.00	Adapting
Participant 6	3.67	3.67	4.00	3.33	3.67	Exploring
Participant 7	4.00	3.33	3.00	4.00	3.67	Exploring
Participant 8	3.67	3.33	3.00	4.00	3.00	Adapting

*0.014 while the teaching demonstration performance *p*-value is *0.014. The *p*-value of lesson design (*0.014) is less than the alpha (*0.05), and then rejects the null hypothesis. Thus, there is a significant mean improvement in the participants' performance in designing a lesson plan and teaching demonstration before and after the oTPD training program.

Based on the data presented above, it is concluded that the Online Training Professional Development Training Program (oTPD) improved the performance level of the respondents in their lesson design and teaching performance. The findings also supported the study of Lowder (2013) and Lehiste (2015). The action research study of Lowder (2013) revealed that respondents' TPACK knowledge had increased, especially in the technological integration, and there is a difference as seen through their pre and post-lesson plans. The lesson plan TPACK format and peer collaboration significantly contributed to the success of TPACK development. Lehiste's (2015) longitudinal action research study results revealed strong growth in teachers' knowledge in all the domains of TPACK, specifically in their TK, TPK, and TPACK. In addition, it was found that there are significant correlations among the seven knowledge domains of TPACK, with the highest between TPACK & TPK & TPACK and TCK.

Table 5. Significant mean improvement in designing a lesson plan and teaching demonstration before and after the otpd training program

Performance of Respondents	n	Pre-test Median	Posttest Median	Wilcoxon *p*-value
Designing a Lesson Plan	8	3.00	4.00	*0.014*
Teaching Demonstration	8	2.50	3.50	*0.014*

**significant at 0.05*

Narratives from the Participants

The oTPD training program had a significant impact not only on the TPACK skills but also on the professional and personal development of the participants, as revealed in their feedback on the training program through the focused group discussion with the question. Their feedback on the contents and activities of the training program was positive. Overall, they found that the content and activities are relevant and helpful to their work as E-tutors, aiming to develop their TPACK skills. Participant said,

"Yes, the content and activities of the program are beneficial and helpful for my professional development as an educator." (Participant A)

It validates the Adult Learning Theory, which states that one of the four simple principles to best train adults is to consider that they are most engaged in learning courses essential to their work and personal life (McGee-Swope, 2010). They also agreed that the activities were engaging and challenging, allowing them to apply their knowledge and skills. Participants shared that,

"I like the part when I was introduced to the TPACK framework and was given a chance to make a lesson design based on it." (Participant H).

"All the activities of the program were exciting. Yes, it stimulated my learning, especially that it trains us about integrating technology as part of the modern way of teaching." (Participant A)

Some considered the training sessions fun and productive as they were given a chance to listen and learn from the speakers' and co-teachers' experiences in teaching. It supports that Online Teacher Professional Development (oTPD) is "any teacher learning experience that is delivered partially or completely on the Internet" (Fishman et al., 2013; Nuland, 2019). These include online courses, interactive online workshops/webinars, learning modules, or online professional development networks (Macia & Garcia, 2016; Nuland, 2019).

The respondents also expressed that the training program has contributed to their personal and professional growth by developing their TPACK skills. Participants mentioned that,

"Yes, the training program helped me develop my TPACK skills, and I gained more information and knowledge that is very useful and relevant to my work as an E-tutor." (Participant F)"I believe the training program helped me hone my TPACK skills because I learned how to manipulate and integrate more technology, thus catering to the needs of my learners." (Participant A)

"The program was beneficial; especially that it helped us deliver our lessons better. I also learned a lot of things from the training." (Participant B)

Their positive feedback shows that the oTPD was effective and served its purpose. Teacher Professional Development catalyzes teachers to progress professionally and personally by improving or discovering their knowledge, skills, and abilities (Loughran, 2014). It is also a nurtured systematic collaboration of educators, both individual and team, through adult learner-centered processes that aim to attain essential teaching skills and abilities (Al-Behaisi, 2011).

The E-tutors also agreed that there is proper monitoring and feedback, especially on designing their lesson plan based on the TPACK framework. Furthermore, they have expressed their recommendations and challenges met throughout the training program. Most suggested having more speakers and webinars about Online Teaching, Classroom Management, and related topics. Two respondents have shared the time constraint because some sessions conflict with their class schedule. In connection with this, they recommended having some sessions on weekends even though most respondents have no classes on Fridays.

The Design of the oTPD Training Program

The study used the Input-Process-Output Method with the IPARD Framework that aimed to design an online Teachers Professional Development training program to enhance the TPACK skills of the E-tutors. The findings of the investigation stage about the E-tutor needs based on the challenges they have encountered in the E-tutoring and the topics of the training program that they considered helpful in them were relevant in creating the content, activities, and assessment of the training program.

The oTPD training program design is anchored on the Adult Learning Theory, Transformative Learning Theory, and TPACK Framework. The training program was implemented using the Zoom telecollaborative platform for twenty(20) contact hours. The training program was divided into ten sessions with two(2) hours per session with specific content, objectives, activity, and assessment. The content of the program was created based on the TPACK Framework. TPACK framework helps create a professional development program focusing on cost-saving and training efficacies. Recent research has utilized qualitative methods such as questionnaires, self-reporting, interviews, and observations that further assess TPACK as a program development model (Loughran, 2014).

TPACK can be used as a design to conduct professional development programs for teaching and learning. The program's content also considered the TPACK survey findings of the low mean scores in the TPACK domains of Technological Knowledge, Content Knowledge, Pedagogical Content Knowledge, and Technological Pedagogical Content Knowledge. The activities are designed to achieve the objectives of the topic in each session. Adult earning theory supports making adult learners active participants in their learning experiences; therefore, creating a training program must consider the teachers' varied experiences for active participation and purposeful learning (Fidishun, 2005; McGee-Swope, 2010). The assessment of the training program was to write a lesson design based on the TPACK framework. The TPACK gives guidelines that help develop lesson plans that utilize content, pedagogy, and technology. It uses surveys, learning activities, rubrics, and other significant tools to evaluate and develop TPACK-related competencies with pre-service and in-service teachers (Lowder, 2013).

Table 6. Experts' evaluation of the training program

Criteria	E1 (Q)	E2 (C)	E3 (A)	Mean	QI
Communicates the Teaching Philosophy of the Instructor	4	4	3	3.67	Highly Developed
Uses language of incusivity/ Evokes affective domain	3	3	4	3.33	Highly Developed
Communicates learning outcomes	4	4	4	4.00	Highly Developed
Communicates Course content & co nnection to curriculum	4	4	4	4.00	Highly Developed
Communicates how students will de velop learning and understanding	3	3	3	3.00	Developed
Communicates how students will be evaluated	4	3	4	3.67	Highly Developed
Mean	**3.67**	**3.50**	**3.67**	**3.61**	**Highly Developed**

Legend: *1.00-1.74 (Undeveloped); 1.75-2.49 (Evolving); 2.50-3.24 (Developed); 3.25 - 4.00 (Highly Developed)*

CONCLUSIONS

The technological demands faced by E-tutors in the E-tutoring industry served as one of the significant challenges they need to cope with developing their Technological Pedagogical and Content Knowledge (TPACK) skills. Hence, the implemented online Teacher Professional Development Training Program based on TPACK Framework became a catalyst in developing the TPACK skills of E-tutors. It also assessed the impact of the oTPD in developing the skills of the E-tutors as part of their continuous professional development. The lesson designs based on the TPACK framework are the output of the training program conducted. The TPACK framework, the synchronous form of learning, telecollaborative platforms, practical activities, and assessments can promote interactive and productive discussion when conducting the oTPD. It is further revealed that the Online Teacher Professional Development Training Program positively impacts the development of the TPACK skills of the private E-tutors, as evidenced in the significant mean gain of their lesson design and teaching demonstration performance.

In light of the findings of this study, it is recommended that online teachers or E-tutors should be provided with an online Teacher Professional Training Program that helps them with their personal and professional growth; thus, it should be a priority for any school administration or institution. Online Teachers Professional Development training program based on TPACK and PIME conceptual framework anchored with Adult Learning Theory provides development of TPACK skills. The content, activities, and assessment of the oTPD should be relevant to the needs of the participants. It must also offer collaborative, real-time interaction and discussion among participants and experts. Integrating more practical activities that require targeted outputs promotes high participation hence achieving the objectives of the training program. The time and schedule of oTPD sessions should be accessible to all the participants. Further studies of oTPD based on TPACK with more than 20 contact training hours should be considered.

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