

Competencies and Delivery of Instruction of Technology and Livelihood Teachers in the Utilization of Virtual Classroom

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Abstract

This research was entitled “Competencies and Delivery of Instruction of Technology and Livelihood Education Teachers in Utilization of Virtual Classroom”. The study aimed to determine to competencies of TLE teachers in delivery of instruction in virtual classroom. Specifically, the researcher attempted to attain the following objectives (1.) identify level of competencies of Technology and Livelihood Education teachers in terms of mastery of lesson, classroom management, interpersonal relationship; (2.) determine the level of delivery of instruction of Technology and Livelihood Teachers in terms of teaching strategies, pacing of lessons, clear directions, and assessment for reflection and evaluation; (3.) identify the extent of utilization of virtual classroom among TLE teachers in terms of access, interaction, responses and results; (4.) to find out the significant differences of teacher’s competencies and utilization of virtual classroom; (5.) and establish significant relationship between the delivery of instruction and utilization of virtual classroom.

Descriptive quantitative research design was employed by the researcher to obtain the necessary data. The research respondents are composed of twenty-five (25) junior high school TLE teachers from two school. They purposing sampling was utilized in selecting the respondents. The researcher instrument of this study is through the development of a series of questionnaires suited for the problems in this study.

Salient findings revealed that Technology and Livelihood Education teachers’ level of competence was very high as evidenced by the grand mean of 3.38. In terms of classroom management, Technology and Livelihood Education teachers’ level of competence was very high as evidenced by the grand mean of 3.62. In terms of interpersonal relationship, Technology and Livelihood Education teachers’ level of competence was very high as evidenced by the grand mean of 3.61. 4. It was found out that teachers’ competencies in terms of mastery of the lesson only showed significant effect on virtual classroom utilization in terms of access alone, as evidenced by the obtained p-value (0.020) which was lower than (0.05) level of significance.

Keywords: Online teaching; Virtual Classroom; Technology and Livelihood Education

1. Main text

Different applications emerged to promote an avenue in collaboration of teachers and learners at the educational level. The technology needed among TLE teachers is integrated with skills that can be easily achieved. These tools are very much needed in the effective delivery in a virtual classroom. According to Barron (2020) virtual classroom is an environment using online platform where both teachers and students are actively participating in online learning courses. Moreover, members are harmoniously engaging and interacting with the use of online tools. As part of the online distance learning, many applications have been made and updated to. The likes of Google Classroom and Zoom make for students to easily cope with the challenged imposed by online learning. To utilize these kinds of online applications, teachers must have more profound knowledge and equipped with various competencies.

It is necessary for teachers to effectively delivery the instruction in every subjects. Expectations among them become high as implementation of distance learning was happened. Abraham (2020) said that the technical competencies brought by this new learning modal have required both participants different skills needed to master. These are like the willingness to learn, level of knowledge in utilization, design of online materials, practice of content purposes, and lastly evaluating the targeted outcome. The application of these skills in the online environment can greatly influence how students will learn.

In response, the researcher attempts to study the competencies needed by TLE teachers in virtual classroom. Primarily, this study seeks out the level of practices and expertise needed by every teacher. The researcher observed that there are limited information and research determining the competencies by TLE teachers in virtual classroom. It is often overlooked in establishing academic discussion for the improvement of key teaching competencies. That is why, this study is deeply motivated to assess and explained the benefits it will added to the educational pedagogies.

1.1 Structure

The first theory that the researcher used is the Unified Theory of Acceptance and Use of Technology. Venkatesh and Diaz (2013) developed to explain the use of information technology toward a unified view. This theory aims to explain the user intention to use an information system and subsequent usage behavior. It is essential to understand the premise of this study. It emphasizes how the users, in this case, the teachers, control technology in their delivery of instruction. It is evident how the teachers will be perceived by their target audience.

The effectiveness of their grasp on the information technology skill will have a profound effect on their learning outcome. Now, the question that arose is the reason for the preparation time. Another theory was Substitution, Augmentation, Modification, and Redefinition or SAMR Model that was developed to share common educational strategies across disciplines as teachers strive to personalize learning and help students visualize complex concepts.

Conceptual Framework

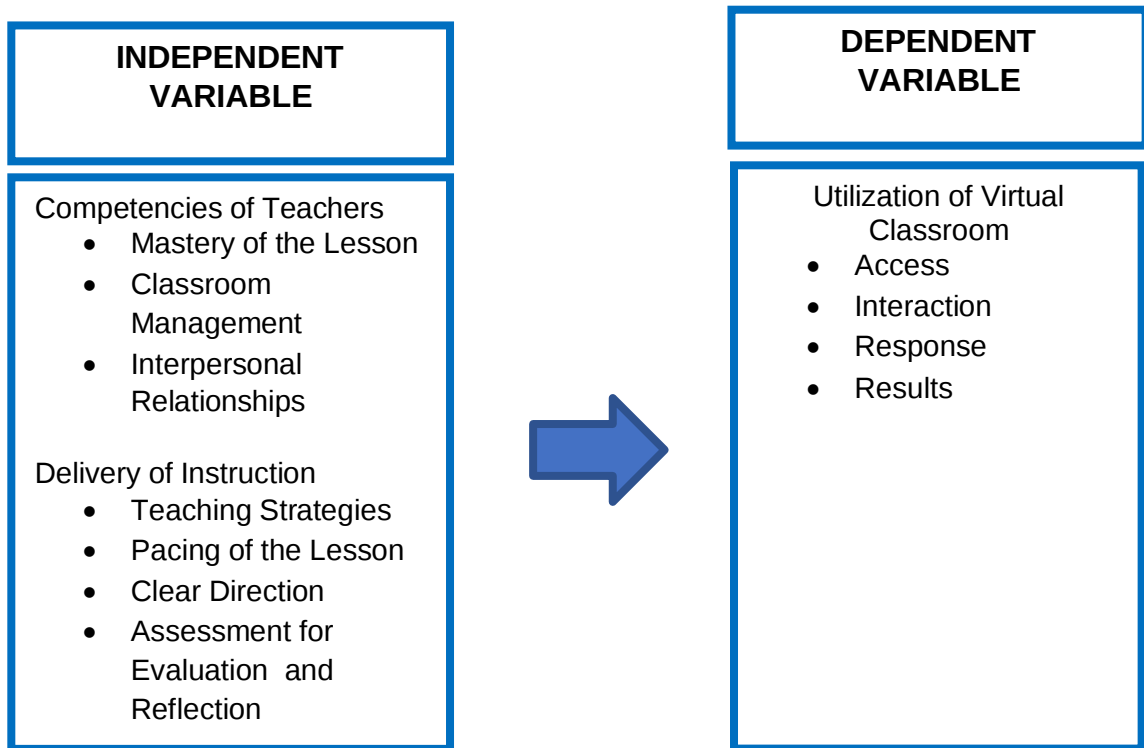


Figure 1. Research Paradigm of the Study

1.2 Tables

Results and Discussions

Level of Competencies of Technology and Livelihood Education Teachers

In the teaching and learning process, teachers must possess competencies that will lead to learners' acquisition of learning. In our present time, these competencies especially of the like Technology and Livelihood Education teachers had been greatly challenged by a new learning environment, the virtual classroom.

Table 1. Level of competencies of Technology and Livelihood Education teachers in terms of Mastery of the Lesson

STATEMENT	Intermediate		
	Mean	SD	Remarks
1. Teacher should have a wide knowledge in utilizing technology in lesson	3.64	0.49	Strongly Agree
2. Teacher should apply technological concepts in presenting a lesson	3.40	0.50	Strongly Agree
3. Teacher must have course design skills in teaching lesson	3.44	0.51	Strongly Agree
4. Teacher should utilize novel and various strategies of lesson planning	3.24	0.52	Agree
5. Teacher must integrate pedagogical skills in different performance-based lessons	3.16	0.47	Agree
Grand Mean	3.38		Strongly Agree
Interpretation	Very High		

The above table reveals that in terms of mastery of the lesson, Technology and Livelihood Education teachers' level of competence was very high as evidenced by the grand (M=3.38). This means that the respondents viewed that TLE teachers possess mastery of their subject matter that may lead to quality of learning.

Table 2. Level of competencies of Technology and Livelihood Education teachers in terms of Classroom Management

STATEMENT	Intermediate		
	Mean	SD	Remarks
1. Teacher should organize conducive learning environment	3.88	0.33	Strongly Agree
2. Teacher must impose effective classroom routines and rules	3.60	0.50	Strongly Agree
3. Teacher should let students communicate their thoughts and opinions	3.56	0.51	Strongly Agree
4. Teacher must manage disruptive behavior of students in virtual classroom	3.44	0.51	Strongly Agree
Grand Mean	3.62		Strongly Agree
Interpretation	Very High		

The above table reveals that in terms of classroom management, Technology and Livelihood Education teachers' level of competence was very high as evidenced by the grand mean of 3.62. This means that the respondents viewed that TLE teachers should have competencies related to classroom management. It indicates the role of manager in classroom facilitation and execution.

Table 3. Level of competencies of Technology and Livelihood Education teachers in terms of Interpersonal Relationship

STATEMENT	Intermediate		
	Mean	SD	Remarks
1. Teacher should have systematic plan addressing the needs of students	3.80	0.41	Strongly Agree
2. Teacher must be a communicative tool in voicing out the concerns of students	3.60	0.50	Strongly Agree
3. Teacher must facilitate the demonstration of students' performances	3.72	0.46	Strongly Agree
4. Teacher should be able to hold praises in student's work and progress	3.60	0.50	Strongly Agree
5. Teacher should encourage initiative and motivation among students	3.52	0.51	Strongly Agree
6. Teacher must have friendly approach in appropriate conduct of students during discussion	3.40	0.50	Strongly Agree
Grand Mean	3.61		Strongly Agree
Interpretation	Very High		

Table 3 above reveals that in terms of interpersonal relationship, Technology and Livelihood Education teachers' level of competence was very high as evidenced by the grand (M=3.61). This means that the respondents viewed that TLE teachers exhibited good and positive interpersonal relationship towards the students which can improve to their academic performance.

Level of Delivery of Instruction of Technology and Livelihood

Table 4. Level of Delivery of Instruction of Technology and Livelihood in terms of Teaching Strategies

STATEMENT	Intermediate		
	Mean	SD	Remarks
1. I can utilize many teaching strategies (cooperative, constructive approach)	3.76	0.44	Strongly Agree
2. I can utilize multimedia technology in delivery of instruction	3.36	0.49	Strongly Agree
3. I can effectively use the differentiated background of students	3.04	0.61	Agree
4. I can update and upgrade my learning materials	3.08	0.49	Agree
5. I can be able to mix classroom teaching with outbound approach	2.96	0.61	Agree
Grand Mean	3.24		Agree
Interpretation		High	

The above table reveals that in terms of teaching strategies, Technology and Livelihood Education teachers' level of delivery of instruction was high as evidenced by the grand ($M=3.24$). This means that the respondents viewed that TLE teachers utilized and effectively explored the teaching strategies in their delivery of instruction.

Table 5. Level of Delivery of Instruction of Technology and Livelihood in terms of Pacing of the Lesson

STATEMENT	Intermediate		
	Mean	SD	Remarks
1. I always indicate the learning goals clear and attainable	3.60	0.50	Strongly Agree
2. I provide feedback on the students' level of understanding	3.48	0.51	Strongly Agree
3. I always use smooth transitions of lesson-to-lesson basis	3.28	0.46	Strongly Agree
4. I able to show the vital information visually	3.24	0.44	Agree

5. I check the progress of the students and their capacity to demonstrate	3.32	0.48	Strongly Agree
Grand Mean	3.38		Strongly Agree
Interpretation		Very High	

The above table reveals that in terms of pacing of lesson, Technology and Livelihood Education teachers' level of delivery of instruction was very high as evidenced by the grand (M=3.38). This means that the respondents viewed that TLE teachers have systematic use of pacing of lessons which can contribute to the increased academic achievements.

Table 6. Level of Delivery of Instruction of Technology and Livelihood in terms of Clear Direction

STATEMENT	Intermediate		
	Mean	SD	Remarks
1. I show the objectives of the lesson before the presentation	3.52	0.51	Strongly Agree
2. I clearly explain the purposes of every assigned activity	3.44	0.51	Strongly Agree
3. I provide the activities with ample time to finish	3.52	0.51	Strongly Agree
4. I give multiple examples for students to towards effective learning	3.40	0.50	Strongly Agree
5. I use clear, precise, and easy to understand language in giving directions	3.44	0.51	Strongly Agree
Grand Mean	3.46		Strongly Agree
Interpretation		Very High	

The above table reveals that in terms of clear direction, Technology and Livelihood Education teachers' level of delivery of instruction was very high as evidenced by the grand (M=3.46). This means that the respondents viewed that TLE teachers valued the purpose of establishing clear directions to the level of instruction.

Table 7. Level of Delivery of Instruction of Technology and Livelihood in terms of Assessment for Evaluation and Reflection

STATEMENT	Intermediate		
	Mean	SD	Remarks
1. I give students opportunities to demonstrate what they have learned	3.72	0.46	Strongly Agree
2. I explain the use of rubrics in evaluating the student's performance	3.60	0.50	Strongly Agree
3. I make time for question and answer to diagnose the student's learning	3.36	0.49	Strongly Agree
4. I upload the weekly lesson for students to review harder	3.48	0.51	Strongly Agree
5. I do reflection activities as part of assessment tool	3.52	0.51	Strongly Agree
Grand Mean	3.54		Strongly Agree
Interpretation	Very High		

The above table reveals that in terms of assessment for reflection and evaluation, Technology and Livelihood Education teachers' level of delivery of instruction was very high as evidenced by the grand (M=3.54). This means that the respondents viewed that TLE teachers utilized the importance of assessment process in ensuring effective instruction.

Extent of Utilization of Virtual Classroom among TLE Teachers

Table 8. Extent of Utilization of Virtual Classroom among TLE Teachers relative to Access

STATEMENT	Intermediate		
	Mean	SD	Remarks
1. I can easily present my lesson in utilizing virtual classroom	3.00	0.00	Agree
2. I can easily collect the raw data from the students' activities	2.92	0.27	Agree
3. I can organize my weekly lesson planning	2.96	0.20	Agree
4. I had pleasant experience in checking assignments and activities	2.88	0.33	Agree
5. It is easier to setup classroom through virtual than face-to-face	2.42	0.58	Disagree

Grand Mean	2.84	Agree
Interpretation	High	

Table 8 above reveals that in terms of relative to access, the extent of utilization of virtual classroom among TLE teachers was high as evidenced by the grand ($M=2.84$). This means that the respondents treated access in utilization of virtual classroom as improvement in presentation of lesson through online.

Table 9. Extent of Utilization of Virtual Classroom among TLE Teachers relative to Interaction

STATEMENT	Intermediate		
	Mean	SD	Remarks
1. Interaction between teacher and students is harmonious in virtual classroom	2.15	0.37	Disagree
2. There is collaboration and sharing of information	2.96	0.20	Agree
3. Students are participating actively in synchronous discussion	2.23	0.43	Disagree
4. Students are getting better attention using virtual classroom	2.12	0.33	Disagree
5. Students can express more in virtual classroom compared to classroom setup	2.00	0.00	Disagree
Grand Mean	2.29		Disagree
Interpretation	Low		

The above table reveals that in terms of relative to interaction, the extent of utilization of virtual classroom among TLE teachers was low as evidenced by the grand ($M=2.29$). This means that the respondents encountered inefficient interaction in a virtual classroom.

Table 10. Extent of Utilization of Virtual Classroom among TLE Teachers relative to Responses

STATEMENT	Intermediate		
	Mean	SD	Remarks
1. Students are participating actively using virtual applications	2.23	0.43	Disagree
2. Responses to questions are provided quickly in virtual form	2.92	0.27	Agree
3. Students are faster in answering activities and tasks	2.15	0.37	Disagree

4. Teachers can get easier and faster responses	2.12	0.33	Disagree
5. Posting of announcements and immediate concerns are accessible	2.73	0.45	Agree
Grand Mean	2.43		Disagree
Interpretation		Low	

Table 10 above reveals that in terms of relative to responses, the extent of utilization of virtual classroom among TLE teachers was low as evidenced by the grand (M=2.43). This means that the respondents posited that responses of students in virtual classroom can be further improve and develop.

Table 11. Extent of Utilization of Virtual Classroom among TLE Teachers relative to Result

STATEMENT	Intermediate		
	Mean	SD	Remarks
1. Learning through virtual classroom becomes enjoyable activity than face to face	2.65	0.49	Agree
2. Online resources provided through virtual online apps are of good quality and related to my curriculum	2.27	0.45	Disagree
3. Using virtual classroom can enhance the academic achievement of students.	2.96	0.20	Agree
4. Learning activities are presented in organized manner	2.88	0.33	Agree
5. Learning content becomes focused in multimedia and other resources	2.85	0.37	Agree
Grand Mean	2.72		Agree
Interpretation		High	

The above table reveals that in terms of relative to results, the extent of utilization of virtual classroom among TLE teachers was high as evidenced by the grand (M=2.72). This means that the respondents viewed that virtual classroom is effective in getting the desired results from the students.

Findings and Conclusions

The level of competencies of Technology and Livelihood Education teachers was described in terms of mastery of the lesson, classroom management and interpersonal relationship. In terms of mastery of the lesson, Technology and Livelihood Education teachers' level of competence was very high. In terms of classroom management, Technology and Livelihood Education teachers' level of competence was very high. In terms of interpersonal relationship, Technology and Livelihood Education teachers' level of competence was very high. It was found out that teachers' competencies in terms of mastery of the lesson only showed significant effect on virtual classroom utilization in terms of access alone. Contrastingly, teachers' competencies in terms of classroom management and interpersonal relationships are not significant effect on virtual classroom utilization in terms of access, interaction, responses, and result. It was found out that there is no significant relationship between the teachers' delivery of instruction in terms of teaching strategies, pacing of the lesson, clear direction and assessment for evaluation and reflection to the utilization of virtual classroom.

It was concluded that the teacher's competencies only showed significant effect on virtual classroom utilization in terms of access alone. mastery of lesson established the expectation given under the virtual learning. It is important that TLE teachers have wide practical and theoretical knowledge in preparing lesson virtually. Respondents viewed that access influenced the increased achievement of students. Therefore, the hypothesis was accepted.

Recommendations

In light of the findings and conclusions, the following recommendations are offered:

1. It is recommended to explore teachers in mastery of lesson in all aspects of learning. Trainings and seminars can be applied to the mastery of teachers.
2. It is recommended to utilize various, unique, and differentiated online tools that will highlight the delivery of instruction.
3. Schools can adopt strategic intervention plan which focused on the improvement of teachers' knowledge, skills, and behaviors.
4. Future researchers can explore other learning concepts in relation to the utilization of online platforms. They can utilize the impacts of virtual classroom towards the part of students and curriculum.
5. It is further recommended to develop online materials and resources which helps teachers integrate skills in instruction.

References:

- Basher, S. A. O. (2017). The impact of Google classroom application on the teaching efficiency of preteachers. Retrieved march 4, 2018 from <http://ijsse.com/sites/default/files/issues/2017/v7i2/Paper-4.Pdf>
- Barron Rodriguez, Maria; Cobo, Cristobal; Munoz-Najar, Alberto; Sanchez Ciarrusta, Inaki. 2021. Remote Learning During the Global School Lockdown: Multi-Country Lessons. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/36141>
- Beaumont, K. (2018). Google Classroom: An online learning environment to support blended learning. *Compass: Journal of Learning and Teaching*, 11(2), 118-1
- Chandra, V., Fisher, D., & Chang, V. (2012). Investigating higher education and secondary school web-based learning environments using the WEBLEI.

