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Perceived Organizational Support and Pedagogical Content Knowledge of TLE Teachers; the Mediating Role of Program Resources

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

This study determined the mediating effect of program resources on perceived organizational support and pedagogical content knowledge of TLE teachers. Quantitative descriptive correlational design was employed. The study was conducted through online survey in a public school of Division of Davao del Sur during the school year 2021-2022. The TLE public junior high school teachers who are the respondents were chosen using purposive sampling. Data utilized in this study were gathered through adopted questionnaires. Mean, Pearson product-moment correlation and path analysis were among the statistical tools used. Results revealed that TLE teachers had a very high level of perceived organizational support, a very high level of pedagogical content knowledge, and a high level of program resources. Moreover, there is a significant relationship among perceived organization support of TLE teachers and their pedagogical content knowledge, perceived organization support and program resources, and program resources and pedagogical content knowledge. It was also revealed that the program resources partially mediated the

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relationship between perceived organizational support and pedagogical content knowledge. With considerations on the findings of the study, the perceived organization support of TLE teachers was evident at all times. Second, the pedagogical content knowledge as perceived by TLE teachers was important all the time. Lastly, the program resources were evident most of the time. It was recommended that the school administrators should support the improvement of program resources in schools.

Keywords: Perceived organizational support; pedagogical content knowledge; program resources; TLE teachers; mediating effect.

1. INTRODUCTION

In the past decades, there has been a notable focus among education researchers, educators, and educational policy-makers on the topic of teachers' knowledge and its application in achieving high-quality teaching outcomes [1]. The proficiency of teachers is fundamentally significant in ascertaining the degree of success attained by learners in their academic pursuits. The factors that influence the effectiveness of teachers encompass a range of variables, including but not limited to the size of enrollment, certification status, type of credential, academic degrees obtained, and duration of service [2-11]. The pedagogical content knowledge of teachers is a measure of teacher excellence that has received relatively less research attention in comparison to other measures (Guerriero, 2017).

Several studies have looked into the status of the pedagogical content knowledge of teachers. Khan and Gul (2022) presented the disagreement of teachers' responses with respect to technological pedagogical content knowledge. Likely, in the survey conducted by Kavanoz et al. (2015), it was revealed that teachers have lower scores in Web Pedagogical Content Knowledge. Further, Technology and Livelihood Education (TLE) teachers are said to have limited opportunities to undergo skills trainings in teaching TLE in the Philippines. If there is limited opportunities for trainings, teachers might not have a continuous development of their PCK (Elli & Ricafort, 2020). This idea was supported by Salvador et al. (2022) revealing that teachers don't have adequate knowledge on the content as well as the strategies to be used in teaching the subject. Moreover, it has been asserted that educators continue to encounter challenges in adhering to the principles and standards of the K to 12 educational program. One of the primary challenges encountered was the provision of assistance to educators in acquiring proficiency in the new curriculum and implementing a student-centered, all-encompassing pedagogical approach (Carreon, 2020). In Davao, the study of Somosot (2018) presented that there is the widespread of dissatisfaction among students to the teachers who do not maximize learning environment and who ineffectively teach the content. With this, there is an urgent need to conduct a study that can provide information on what are the things that can develop or influence the PCK of teachers specifically in TLE subject.

Educators bear the responsibility of redefining pedagogical approaches to enhance the quality of education [12-17]. To achieve this quality of education, pedagogical content knowledge (PCK) and perceived organizational support (POS) should go hand in hand [18]. Furthermore, there exists a significant correlation between perceived organizational support and pedagogical content knowledge, which serves as a driving force for teachers to engage in teaching activities [19]. Biswas and Bhatnagar [20] also posited that teachers' intrinsic motivation and work effort are positively influenced by organizational partnership.

Organizational is support is said to be crucial in any education institution (Naylor & Nyanjom, 2020). Numerous studies have demonstrated that the integration of technology in education is linked to technical and pedagogical support, the school vision on educational technology, and effective leadership (Bao, 2020; Rapanta et al., 2020). As per Tondeur et al. (2019), the integration of technologies in educational processes can serve as a shared vision that motivates teachers to bring about a change. Conversely, a lack of commitment to change at the organizational level can lead to demotivation among teachers. According to Bao (2020), educational institutions often faced significant time constraints when it came to delivering educational resources, technical infrastructure, and pedagogical support. This means that teachers can perceive organizational support if

they are provided with different educational resources [21-25].

In today's teaching and learning process, teachers should know on how to use the different program resources. According to Bušljeta (2013), without the various modern teaching and learning resources, it is difficult to perceive the teaching process. Their use enhances the learning process and makes it more engaging, modern, and attractive. Moreover, Adeniran (2020) emphasized that inadequate skills and knowledge of utilizing teaching- learning materials results to ineffective utilization of the educational resource which were found to be inadequate as well. It was also highlighted in the same study that all institutions are made up of human resources and other non-human resources, like facilities, infrastructures, and other teaching- learning materials, which help the teachers to perform and actualize their pedagogical content knowledge [26-33].

This study is anchored on the theories Social Exchange Theory of Blau [34]; Cognitive Learning Theory of Jean Piaget (1980); and Humanism Learning Theory by Combs (1981). Social Exchange Theory emphasizes that people tend to have positive responses towards others that will offer benefits in certain conditions. Likewise, the relationship between teachers and the organization is similar to a relationship of exchange and trade [35-39]. Hence, in return to perceived organizational support, teachers will develop and apply pedagogical content knowledge (PCK). Meanwhile, Cognitive Learning Theory of Jean Piaget posited that learning depends jointly on what information is given and how the information of an individual was processed. It explains how the internal and external factors like program resources influence an individual's mental processes to supplement learning. In relation to the Pedagogical Content Knowledge of teachers, every teacher needs to master the content of their lessons to teach the learners effectively. Lastly, Humanism Learning Theory by Combs focuses on the freedom, value, dignity and potential of persons. Affective and cognitive needs are considered key aspects of learning, and the goal is to develop self-actualized individuals in a cooperative, supportive environment (Kolb, 1984). Also, lots of people are striving for this to achieve a conducive learning environment equipped with plenty of educational materials to meet the needs of each student. Generally, it aims to fulfill the teacher's and students' emotional and physical needs, giving them a safe and comfortable place to learn and to work with varied teaching learning resources. Thus, the theory pointed out that program resources necessitates organizational support.

The conceptual framework of this study includes three variables. The independent variable is the teachers' perceived organizational support by Eisenberger et al. (1997). The dependent variable is the pedagogical content knowledge of TLE teachers with the indicators knowledge of TLE teachers, knowledge of students and knowledge of concept representation as presented by Halim et al. (2012). Lastly, the mediating variable in the program resources with the indicators personnel resources, facilities, laboratory sources and academic support resources as presented by Commission on Accreditation for Respiratory Care (2015).

With the mentioned studies, the researcher is interested in finding the mediating role of program resources on the relationship between perceived organizational support and pedagogical content knowledge among TLE teachers. Also, the limited studies about the relationship between perceived organizational support and pedagogical content knowledge as a mediating role of program resources is what prompted the researcher to conduct this study. Thus, the researcher conducted this study to explore perceived organizational support and pedagogical content knowledge which help teachers and school administrators define measures and strategies on how to further improve the teaching quality.

The study sought to determine the mediating role of program resources on the relationship between perceived organizational support and pedagogical content knowledge among TLE teachers. Specifically, this study sought to: (1) determine the level of perceived organizational support among TLE teachers; (2) determine the extent of program resources as perceived by TLE teachers in terms of personnel resources, facilities, laboratory resources, and academic support resources; (3) determine the level of pedagogical content knowledge of TLE teachers in terms of knowledge of TLE pedagogy, knowledge of students and knowledge of concept representation; (4) establish the significance of the relationship between perceived organizational support and program resources, program resources and pedagogical content knowledge, and perceived organizational support and pedagogical content knowledge.

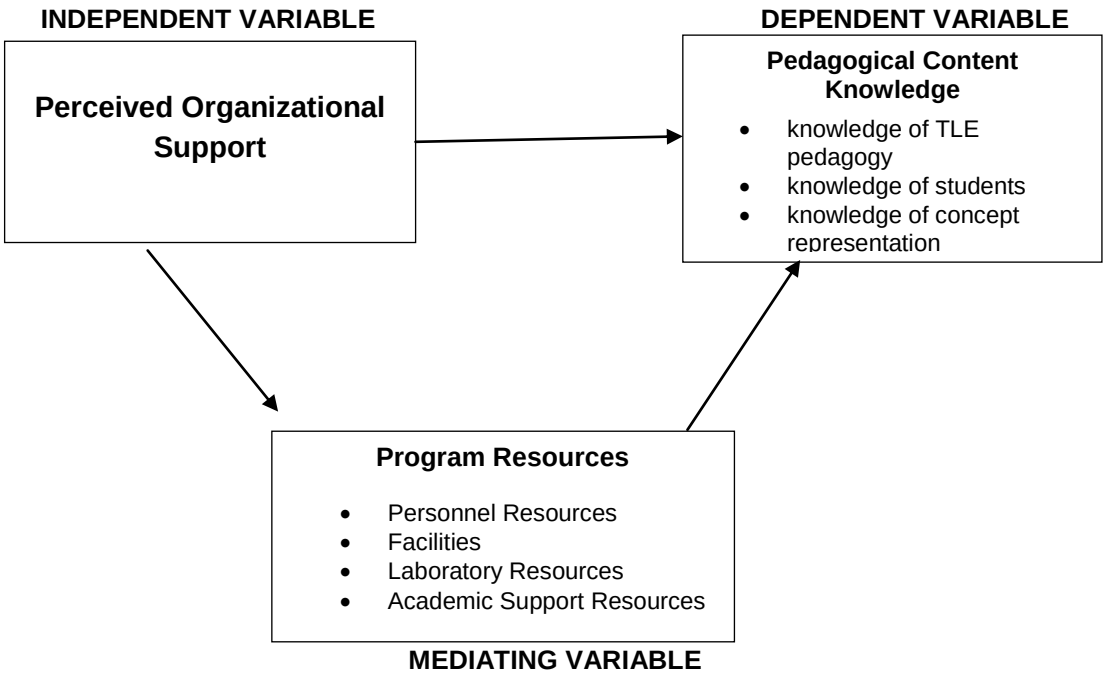

Fig. 1. Conceptual framework

The findings of the study were significant to: (1) administrators which would provide them with new ideas to revise the curriculum; (2) TLE teachers which would encourage them to provide high quality teaching and can motivate more students; and (3) future researchers which would encourage them to conduct research studies in pedagogical concept that are more comprehensive in the future.

2. MATERIALS AND METHODS

2.1 Respondents

The respondents of the study were the T.L.E public secondary school teachers in the Schools Division of Davao del Sur. In totality, 275 T.L.E teachers from the Schools Division of Davao del Sur participated in the survey. This supports Green's (1991) assertion that a sample size of at least 100 respondents is sufficient for quantitative research.

A simple random sampling was employed in determining the participants of the study. In this technique, each member of the population had an equal chance of being selected as subject. The entire process of sampling was done in a single step with each subject selected independently of the other members of the population (Elfil & Negida, 2017). With the rule of thumb, a larger sample increases the statistical power of the evaluation.

For the inclusion criteria, all secondary T.L.E teachers from the Schools Division of Davao del Sur with more than two in the field were included in the study. Furthermore, college instructors, elementary and secondary T.L.E teachers from Schools Division of Davao del Sur with less than two years teaching experience were excluded in the study.

The research was conducted in secondary schools in the region of Davao del Sur. The locale is located in the southwestern portion of Mindanao's Davao Region and has a total area of 2,163.98 square kilometers (835.52 sq mi). The province shares borders with Davao del Norte to the north, Davao Occidental to the south, the Davao Gulf to the east, North Cotabato and Sultan Kudarat to the west, South Cotabato and Sarangani to the south, and North Cotabato and Sultan Kudarat to the east. The province consists of sandy beaches and distant islands, agricultural plains and valleys, marshes, rainforests, undulating hills, and mountains, including the highest peak in the Philippines, Mount Apo, which rises 2,954 meters (9,692 feet) above sea level.

Davao del Sur is an ideal location for conducting this study because it is where the researcher has connections and can easily collect the necessary quantitative data. Moreover, the research deficit is evident at this point. Therefore, it is necessary to conduct this investigation in this area.

2.2 Research Instrument

In gathering the data, there were three parts of survey questionnaire employed in this study. The first part of the survey questionnaire focused on the Perceived Organizational Support which was adapted from the study of Eisenberger et al. (1997). Second part is about the Pedagogical Content Knowledge which was adapted from the study of Halim et al. (2012). This questionnaire includes knowledge of TLE pedagogy; knowledge of students; and knowledge of concept representation. The third questionnaire dealt on the program resource which includes personal resources, facilities, laboratories resources and academic support resources. This questionnaire was adapted, modified, and taken from the Commission on Accreditation for respiratory Care (2015).

In order to establish the content validity of the instruments, expert validators consisting of three T.L.E master teachers were tapped. Letters with attached instruments were given to the experts. Notes and comments made by the test evaluators were used as bases for judging which items were retained, improved, or removed. The average score is 4.57, which is considered to be excellent. This result indicates that the survey's content passed tests for clarity of language, presentation or organization of topics, appropriateness of items, adequacy of purpose, achievement of purpose, and objectivity.

In addition, the results of the statistical test for reliability indicate that Cronbach's Alpha's of each part of questionnaires are 0.93, 0.87 and 0.83. These figures were rated satisfactory for the reliability for the research [40]. Consequently, the survey questionnaires' reliabilities were sufficient for use in this investigation.

A five-point Likert Scale was adopted in the questionnaire for the research variables. To interpret the results, the researcher used the range of means, description and interpretation presented below.

In evaluating the perceived organizational support, the following scales were utilized:

Range of Means	Description	Interpretation
4.20 – 5.00	Very high	The perceived organization support of TLE teachers is evident all the time
3.40 – 4.19	High	The perceived organization support of TLE teachers is evident most of the time
2.60- 3.39	Moderate	The perceived organization support of TLE teachers is sometimes evident.
1.80 – 2.59	Low	The perceived organization support of TLE teachers is seldom evident.
1.00 – 1.79	Very Low	The perceived organization support of TLE teachers is never evident.

In evaluating the pedagogical content knowledge, the following scales were utilized:

Range of Means	Description	Interpretation
4.20 – 5.00	Very high	The Pedagogical Content Knowledge is evident all the time.
3.40 – 4.19	High	The Pedagogical Content Knowledge is evident most of the time.
2.60- 3.39	Moderate	The Pedagogical Content Knowledge is sometimes evident.
1.80 – 2.59	Low	The Pedagogical Content Knowledge is seldom evident.
1.00 – 1.79	Very Low	The Pedagogical Content Knowledge is never evident.

In evaluating the program resources, the following scales were used:

Range of Means	Description	Interpretation
4.20 – 5.00	Very high	The items under the program resources is evident at all times.
3.40 – 4.19	High	The items under the program resources is evident most of the time.
2.60- 3.39	Moderate	The items under the program resources is evident occasionally.
1.80 – 2.59	Low	The items under the program resources is evident in few instances.
1.00 – 1.79	Very Low	The Pedagogical Content Knowledge is not evident at all.

2.3 Research Design and Methodology

This study employed descriptive correlational quantitative research design. Quantitative research employed objective measurement to collect numerical data that was used to answer questions (Creswell, 2014). It is a deductive study in which the researcher infers the characteristics of the investigated population from the tests and surveys conducted [41]. Hence, the purpose of this design is to collect information about the study without manipulating an independent variable or using random assignment to control unrelated variables.

A descriptive correlational design also refers to a study in which the researcher attempted to describe, evaluate, and discover the relationships between the variables, for instance, how the dependent and independent variables were related, linked, or correlated with one another, without establishing a causal relationship [42]. The descriptive statistics will provide a summary of the acquired data, including averages and variability variables such as motivation level, computer self-efficacy, and teacher engagement (Creswell, 2014).

This examines the relationship or association between the three factors under consideration, namely perceived organizational support as independent variables, pedagogical content knowledge as dependent variables, and program resources as the mediating variable. The descriptive statistics will provide a summary of the collected data, including averages and variability variables such as the perceived level of organizational support, pedagogical content knowledge, and program resources. The statistical tools that were used to analyze the data are mean, Pearson-r correlation and regression. Mean were utilized to describe the characteristics of variables used for this study. Furthermore, the Pearson moment correlation coefficient (r) was employed to assess the strength of the relationship between the variables in this study [43]. Specifically, this statistical method was used to determine whether there is a correlation between variables in a sample of Davao del Sur division secondary TLE teachers. All interpretations will be based at 0.05 level of significance.

Also, Sobel's test was used to determine whether the relationship between the independent variable and dependent variable has been significantly affected by the addition of the mediator variable. In other words, this test determines if a mediation effect is statistically significant [44]. This was used to test the mediating effect program resources in the relationship of perceived organizational support and pedagogical content knowledge of secondary TLE teachers of Schools Division of Davao del Sur.

In order to complete research using appropriate study techniques, ethical consideration is required. Using correct protocol, the researcher seeks permission from the UMERC and accomplished the certificate of approval with UMERC Protocol number UMERC-2022-222 prior to data gathering. Furthermore, the researcher adheres to the following ethical guidelines: voluntary participation, privacy and confidentiality, recruitment, risks benefits, plagiarism, fabrication and falsification, conflict of interest (COI), deceit, permission from organization, technology issues, and authorship.

3. RESULTS AND DISCUSSION

The first part of the results describes the levels of perceived organizational support of TLE teachers, program resources in schools and extent of pedagogical content knowledge as perceive by TLE teachers. Table 1 presents the perceived organizational support of TLE teachers. It shows that the overall mean of school management system is 4.43 which is described as very high. In addition, the overall standard deviation is 0.30 which is less than one denoting that the respondents have ratings that are practically nearly identical.

3.1 Perceived Organizational Support of TLE Teachers

Specifically, the table further reveals that the mean rating of the items ranges from 4.47 to 4.87. It is notable that item, *I use realia in presenting the concepts in my lesson* has a mean rating of 4.47, describe*d as very* high while item, *I allow the students to have hands-on activities for them to deeply understand the lesson and develop their skills* and *I present contextualized examples so that the students can easily relate to the lessons* both have mean rating of 4.87, described as very high.

3.2 Perceived Level of Program Resources in Schools

Table 2 shows the perceived level program resources in schools. It shows that the overall

mean of program resources is 3.92 which is described as high. Also, the overall standard deviation of 0.904 (> 1) signifying that the respondents have ratings that are practically nearly equal. Specifically, examining indicators reveal that it ranges from 3.86 to 3.97. It is notable that the indicator, laboratory resources, has a mean rating of 3.86, described as high. Also, the academic support resources and personnel resources/facilities have category mean of 3.92 and 3.97, respectively.

Table 1. Perceived organizational support of TLE teachers (Eisenberger et al., 1997)

		Mean	SD	Description
1.	My test questionnaire in my subject evaluates the understanding of the students on the given topic.	4.73	0.52	Very High
2.	Every question included in the questionnaire allows the students to check their understanding of concepts.	4.73	0.45	Very High
3.	I assure that my students clearly understand the objectives of my topic.	4.70	0.47	Very High
4.	I teach my students actively where they are always involved in varied activities.	4.73	0.45	Very High
5.	I use demonstrations which are engaging to explain the main concepts to my students.	4.70	0.47	Very High
6.	I consider my students' abilities and skills in learning different concepts.	4.80	0.41	Very High
7.	I use varied teaching approaches to teach different topics.	4.70	0.47	Very High
8.	I use familiar terminologies to explain the concepts of the subject matter.	4.70	0.53	Very High
9.	I consider the prior knowledge of my students in implementing a lesson.	4.77	0.43	Very High
10.	I use realia in presenting the concepts in my lesson.	4.47	0.63	Very High
11.	I allow the students to have hands-on activities for them to deeply understand the lesson and develop their skills.	4.87	0.35	Very High
12.	I always prepare additional teaching materials so I can effectively present the lesson.	4.77	0.43	Very High
13.	I present contextualized examples so that the students can easily relate to the lessons.	4.87	0.35	Very High
14.	I allow my students to ask related questions on the topic I presented and give them answers satisfying answers.	4.83	0.38	Very High
15.	I extend help to my students in doing hands-on activities for them to be guided and learn the concepts.	4.67	0.71	Very High
OVERALL MEAN		**4.74**	**0.30**	**Very High**

Table 2. Perceived level of program resources in schools (CARC, 2015)

Indicator	Mean	SD	Descriptive Level
personnel resources/facilities	3.97	.713	high
laboratory resources	3.86	1.074	high
academic support resources	3.92	1.006	High
Overall	3.92	.904	High

3.3 Extent of Pedagogical Content Knowledge as Perceived by TLE Teachers

Table 3 illustrates the extent of pedagogical content knowledge as perceived by TLE teachers. It shows that the overall mean of extent of pedagogical knowledge as perceived by TLE teacher is 4.76 which is described as very high. Also, the overall standard deviation of 0.276 (>1) demonstrating that the respondents have ratings that are practically nearly equal. Specifically, examining the indicators *knowledge of TLE pedagogy*, *knowledge of students*, and *knowledge of concept representation* it is notable that their means are 4.72, 4.73 and 4.78, respectively.

3.4 Correlation Matrix of the Variables

The second part of the results shows the significance of the relationships among the variables. Table 4 present the correlation matrix of perceived organizational support (independent variable), pedagogical content knowledge (dependent variable) and program resources (mediating variable). Results revealed that the independent variable and dependent variable have p-value of 0.000 (< 0.05 level of significance) and r-value of 0.234.

Furthermore, results revealed that the perceived organizational support and program resources have p-value of 0.000 (< 0.05 level of significance) and r-value of 0.525. Additionally, results revealed that the the program resources and pedagogical content knowledge have p-value of 0.000 (< 0.05 level of significance) and r-value of 0.234.

3.5 Regression Results of the Variables in the Four Criteria of the Presence of Mediating Effect

Lastly, the mediating effect of program resources on the relation of perceived organizational support and extent of pedagogical content knowledge as perceive by TLE teachers. Revealed in Table 5 is the mediating effect of program resources on the relationship between perceived organizational support and pedagogical content knowledge. As shown, the mediation is an assumed causative series wherein one variable affects a second variable which, in turn, affects a third variable. The intervening variable, program resources, is the mediator. It mediates the relationship between independent variable (perceived organizational support) and dependent variable (pedagogical content knowledge). Paths c, a and b are called direct effects. The mediational effect, in which independent variable leads to dependent variable through mediating variable, is called the indirect effect (c'). The indirect effect represents the portion of the relationship between independent variable and independent variable that is mediated by program resources. The regression coefficient for the indirect effect represents the change in pedagogical content knowledge for every unit change in perceived organizational support that is mediated by program resources. Thus, perceived organizational support leads to pedagogical content knowledge through program resources. Moreover, when perceived organizational support is tested if it affects program resources (mediator variable); result shows unstandardized value of 1.299 and standardized value of 0.527 with standard error value is 0.127. Also concluded that there is a significant relationship between perceived organizational support and program.

Moreover, when perceived organizational support is tested if it affects program resources (mediator variable); result shows unstandardized value of 1.299 and standardized value of 0.527 with standard error value is 0.127. Also concluded that there is a significant relationship between perceived organizational support and program. Further, when program resources is tested if it affects pedagogical content knowledge (independent variable); result shows unstandardized value of 0.058 and standardized value of 0.187 with standard error value is 0.021. Then, there is a significant correlation between program resources and pedagogical content knowledge.

Since significant relationships are shown in Steps 1 through 3, Step 4 follows. In Step 4, the mediation is supported if the effect of mediating variable (path b) remains significant after controlling for independent variable. Both independent variable and mediating variable significantly predict dependent variable, therefore, the result supports partial mediation. This means that the results are consistent with the hypothesis showing that program resources mediates the relationship between perceived organizational support and pedagogical content knowledge which supports partial mediation. This is illustrated in detail in the Fig. 1.

Table 3. Extent of pedagogical content knowledge as perceived by TLE teachers (Halim et al., 2012)

Indicator	Mean	SD	Descriptive Level
knowledge of TLE pedagogy	4.72	.613	very high
knowledge of students	4.73	.380	very high
knowledge of concept representation	4.78	.302	very high
Overall	4.76	.276	very high

Table 4. Correlation matrix of the variables

Pair	Variables	r_{xy}	*p*-value	Decision on Ho
IV and DV	perceived organizational support and pedagogical content knowledge	0.234	<0.000	Rejected
IV and MV	perceived organizational support and program resources	0.525	<0.000	Rejected
MV and DV	program resources and pedagogical content knowledge	0.259	<0.000	Rejected

Table 5. Regression results of the variables in the four criteria of the presence of mediating effect

Step	Path	Beta (Unstandardized)	Standard Error	Beta (Standardized)
Step 1	c	0.178**	0.045	0.235**
Step 2	a	1.299**	0.127	0.527**
Step 3	b	0.058**	0.021	0.187**
Step 4	c’	0.103*	0.052	0.136*

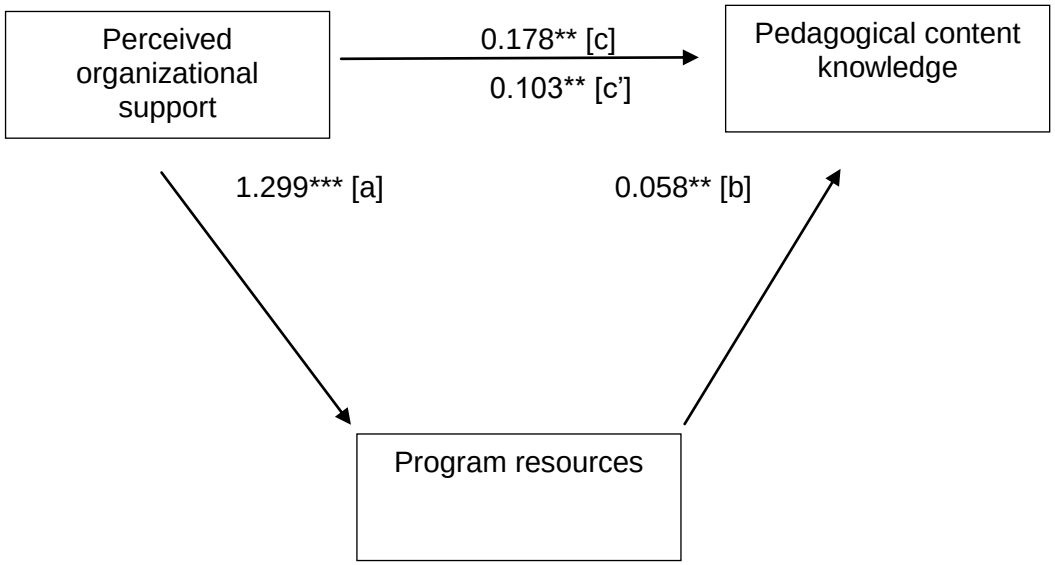

Fig. 2. Medgraph showing the variables of the study

3.5.1 Mediation analysis

Sobel z-value 2.642676, *p*<0.01

Percentage of the total effect that is mediated 41.939066%

As revealed, the Sobel z-value 2.642676, p< and total effect of perceived organizational support on pedagogical content knowledge controlling program resources is 41.939066%.

3.5.2 Perceived program resources in schools

The result of the level of perceived level program resources in schools is high. It means that the items under program resources is evident most of the time. Moreover, it was revealed that *laboratory resources* described as high which means that in in this aspect the program resources is evident most of the time. Also, the *academic support resources* and *personnel resources/facilities* were described as high which implies that in these aspects also the program resources are evident most of the time. These support the notion of Albarico et al. [45] which claims that excellent educational materials should be sufficient to cater the students because these are necessary for a successful teaching-learning process.

3.5.3 Extent of pedagogical content knowledge

The result of the level of pedagogical content knowledge as perceived by TLE teachers was high. It implies that the pedagogical content knowledge as perceived by TLE teachers is important all the time. Further, the indicators *knowledge of TLE pedagogy*, *knowledge of students*, and *knowledge of concept representation* were described as very high. This implies that the pedagogical content knowledge as perceived by TLE teachers is important all the time in these aspects.

This was supported by the study of Puteh (2014) which revealed that the knowledge of the teacher in the subject matter influences the learning of the children. This simply means that the pedagogical content knowledge (PCK) of the teachers should be efficient enough to allow the learners learn and transfer what they have learned. It was further discussed in his study that if teachers have enough PCK, then students who are learning are confident enough to share and express what they have learned.

3.5.4 Significant relationship among the variables

The results revealed that there is a significant relationship between perceived organizational support and pedagogical content knowledge, perceived organizational support and program resources, and program resources and pedagogical content knowledge. Hence, the hypotheses were rejected.

Specifically, the relationship between perceived organizational support and pedagogical content knowledge specified low degree of positive correlation. Meanwhile, the perceived organizational support and program resources specified a moderate positive correlation between the variables [46-48]. Lastly, the program resources and pedagogical content knowledge specified low positive correlation between the indicated variables. Despite, null is rejected.

This supports the study of Farooqi et al. [49] which revealed that employees who are valued and are appreciated with the efforts they have are more likely to perform their tasks. This suggests that teachers will become more interesting to master they content knowledge and at the same time will become more creative in delivering the lesson. This is so, because teachers have the feeling of job satisfaction out from the support given by the employers. Furthermore, this result was supported by Mohamed et al. (2022) which claims that perceived organizational support (POS) and program resources are related to one another which means that if the organization values the employees, they would also consider the program resources that can help them to achieve the POS. Thus, in considering the POS, program resources should also be put into consideration.

3.5.5 Mediating effect of program resources on the relationship between perceived organizational support and pedagogical content knowledge

As revealed in the results, the mediating effect of program resources on the relationship between perceived organizational support and pedagogical content knowledge. In fact, the total effect of perceived organizational support on pedagogical content knowledge controlling program resources indicates that program resources moderately mediates the relationship between perceives organizational support and pedagogical content knowledge. Therefore, variable program resources mediate the relationship between perceived organizational support and pedagogical content knowledge.

4. CONCLUSION AND RECOMMENDA-TION

With considerations on the findings of the study, conclusion is drawn in this section. First, the perceived organization support of TLE teachers is evident at all times. Second, the program

resources are evident most of the time. Lastly, the pedagogical content knowledge as perceived by TLE teachers is important all the time.

Furthermore, there is a significant relationship among perceived organization support of TLE teachers and their pedagogical content knowledge, perceived organization support of TLE teachers and program resources, and program resources and pedagogical content knowledge of the TLE teachers. (1) Perceived organizational support of TLE teachers and pedagogical content knowledge of the TLE teachers has low positive correlation, (2) Perceived organizational support of TLE teachers and program resources has moderate positive correlation, and (3) program resources and pedagogical content knowledge of the TLE teachers has low positive correlation.

Lastly, there is the program resources mediates the relationship between perceived organizational support and pedagogical content knowledge which supports partial mediation. Furthermore, the total effect of perceived organizational support of TLE teachers on pedagogical content knowledge of the TLE teachers mediated by program resources is 41.939066%.

This supports to the social exchange theory of Blau [34] which emphasizes that people tend to have positive or good responses towards other people that will offer benefits to them in certain conditions. This notion is evident in the result of this study as explained in the conclusions above.

In response to the result of very high perceived organizational support of TLE teachers, the school administrators may use the result to continue the programs they have like supporting the teachers in developing their skills through seminars and other opportunities. This result can also be shared with the other school administrators in the division, which may serve as evidence that their programs and support given to the teachers are effective to maintain the high level of perceived organizational support. Though the program resources in school is high, it can still be improved to very high. The school administrations should ensure effective program resources in schools for TLE teachers. Attending seminars and workshops may sustain the improvement. Developing financial management also may help to improve the school facilities and resources in teaching TLE.

In response to the result of very high pedagogical content knowledge of the TLE teachers, the teachers should create a list of different teaching strategies to effectively deliver the lessons in TLE. This list of teaching strategies can be shared with other teachers in the division so they can also utilize those strategies. Also, school administrators should revise or improve the curriculum based on the results of the study.

Since perceived organization support of TLE teachers and their pedagogical content knowledge, perceived organization support of TLE teachers and program resources, and program supports and pedagogical content knowledge of the TLE teachers is low, it is suggested that development of the organizational support and program resources should be implemented among TLE teachers.

Because the results revealed program resources mediates the relationship between perceived organizational support and pedagogical content knowledge, it is the school administrators should support the improvement of program resources in schools.

The future researchers may consider other variables or may conduct a wider scope that may improve the pedagogical content knowledge of the TLE teachers. Future researcher may use other mediating variables. Future researchers may also contemplate conducting the study in private schools or regard administering it to elementary TLE teachers.

ETHICAL APPROVAL AND CONSENT

In order to complete research using appropriate study techniques, ethical consideration is required. Using correct protocol, the researcher seeks permission from the UMERC and accomplished the certificate of approval with UMERC Protocol number UMERC-2022-222 prior to data gathering. Furthermore, the researcher adheres to the following ethical guidelines: voluntary participation, privacy and confidentiality, recruitment, risks benefits, plagiarism, fabrication and falsification, conflict of interest (COI), deceit, permission from organization, technology issues, and authorship.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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