

Cognitive Perspective of Teachers: It's Repercussion to Educators Instructional Competence



Dr. Ritzcen A. Durango

St. Michael's College, Quezon Ave., Iligan City

ABSTRACT: The COVID-19 pandemic has had a significant impact on people's life all across the world, changing a number of professions, including education. The Commission on Higher Education and the Department of Education in the Philippines have both suggested that professors use a variety of teaching strategies to guarantee that students continue to learn in the face of these difficulties. This study focuses on evaluating teachers' thinking processes throughout the epidemic and looking at how that affected their ability to teach. The study investigates the relationship between instructors' thinking styles and their effectiveness as teachers using Sternberg's Thinking Styles Inventory (1997). The computed findings show that responders have a variety of thought processes, and there is a strong correlation between different cognitive stances. Interestingly, the research shows a relationship between instructors' thought processes and their methods of instruction.

To sum up, these results provide a solid framework upon which to build a customized development program. With the help of this curriculum, educators will be able to develop their cognitive views and gain the tools they need to deal with the current pandemic in the field of education.

KEYWORDS: Thinking styles of teachers, teaching performance, Sustainable Development Program

1.0 INTRODUCTION

In 2020, an infection shocked the world, developing into a worldwide pandemic later named Coronavirus or Covid Sickness 2019. This ailment has wrought profound alterations in the lives of individuals globally, with a particularly pronounced impact on various sectors, most notably on the realm of education.

In the Philippines, to explore the movements prompted by this pandemic, both the Division of Training and the Commission on Advanced education has directed educators to utilize different showing strategies, guaranteeing the coherence of learning. This includes the reception of online stages, modules, and different other options, including the ongoing combination of crossover learning, alternative for conventional eye to eye classes.

Amidst the challenges posed by the Coronavirus pandemic, it is essential to ensure educators can effectively convey information in classroom setting. This involves addressing a crucial issue related to how educators engage in their cognitive processes, influenced by their distinctive styles of thinking. This is fundamental to ensure the conveyance of value instruction to students, even without conventional up close and personal classes.

Accordingly, the essential goal of this study is to assess thinking styles, perceiving their necessary job in showing execution and understudy picking up during this pandemic. Furthermore, the exploration digs into inspecting the effect of these styles on instructors' presentation, drawing bits of knowledge from their Singular Exhibition Responsibility and Audit Structure (IPCRF) for the School Year 2020-2021. Subsequently, the discoveries of this study will act as a central reason for the improvement of a far reaching instructor advancement program pointed toward further developing their reasoning styles in the midst of the difficulties presented by the pandemic.

2.0 METHOD

This research employed descriptive correlational research design to assess the relationship between the thinking styles of teachers amidst pandemic, and the overall teaching performance of the respondents. Accordingly, correlational research is a quantitative research design that involves two or more variables, and assesses their statistical relationship. The relationships of these variables are not entirely causative and thus, this type of research design aims to discover what relationship is inherent to these variables through the use of statistical tool. This particular research design is a perfect fit for the research considering that the aim of the research is to describe the dominant thinking among the respondents as well as assess whether there is an inherent interrelationship among these two variables.

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This study was conducted at Tubod Central Elementary School located at Poblacion, Tubod, Lanao Del Norte. Considering that the Municipality of Tubod is the center of Lanao del Norte province, this particular academic institution is the major elementary school in the district which serves as the melting pot of various ethnicities present within the municipality. Tubod Central Elementary School was established on November 13, 1933 and has a population of 1, 227 learners and 48 personnel as of the School Year 2021-2022.

This study focused on the K-12 teaching environment, specifically public elementary school teachers. The respondents of the study were the 40 teachers from Tubod Central Elementary School. Considering that the researcher's goal is to check the relationship of thinking and leadership skills of teachers and their teaching performance, it is imperative for the researcher to conduct the research in ones area of responsibility.

This study utilized a purposive sampling technique in choosing the respondents. This sampling technique is used in a research in order to recruit participants which could provide deep and detailed information with regards to the phenomenon in question. In this particular research, the sample that has been purposely chosen to participate in the study are teachers who are currently teaching in Tubod Central Elementary School. Due to the number of teachers in Tubod Central Elementary School, all 40 teachers are included in the study who served as respondents. The respondents were then given the questions to answer that are significant to this study and their teaching performance was assessed from their Individual Performance Commitment and Review Form (IPCRF) result in the School Year 2020-2021.

The researcher likewise adapted the Thinking Styles Inventory designed by Sternberg (1997). This is a self-reporting test consisting 48 statements. In this particular tool, each of the 13 thinking styles described in the Theory of Mental Self Government is assessed by these statements divided into 5 parts/dimensions. The researcher employed a quantitative method of treating the data for analyses suited according to the research problem. These are basic and inferential statistical tools appropriate to the nature of the data sets gathered. These are the following:

Table A. Test for Normality Distribution of the Factors of Motivation in Online Learning

Data Sets (<i>Variables</i>)	Shapiro-Wilk			
	<i>Statistic</i>	<i>df</i>	<i>p-value</i>	
Thinking Styles	Legislative	.881	40	.001
	Executive	.930	40	.016
	Judicial	.890	40	.001
	Hierarchic	.956	40	.127
	Monarchic	.934	40	.022
	Oligarchic	.864	40	.000
	Anarchic	.805	40	.000
	Global	.908	40	.003
	Local	.891	40	.001
	External	.907	40	.003
	Internal	.800	40	.000
	Conservative	.886	40	.001
	Liberal	.826	40	.000
Performance Rating	.625	40	.000	

Shapiro-Wilk test yielded highly significant results of the thinking styles data sets except on hierarchic data set which yielded a non-significant result. Performance rating also yielded significant results of testing the normality of the data set. This led the researcher to reject the null hypothesis stating that the data sets were not normally distributed. This means that the normality distribution was not met for most of the data sets of thinking. This result allowed the researcher to utilize the non-parametric statistical tool to test the relationship between the aforementioned variables.

3.0 RESULTS AND DISCUSSION

This chapter presents, analyses, and interprets the findings and results of the data gathered and treated statistically. This study aims to assess the cognitive perspective of teachers during pandemic and its repercussion to the Instructional competence of the respondents.

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Problem 1: What are the respondents' thinking styles in terms of functions, forms, level, scope, and leanings?

Table 1.1. Thinking Style of the Respondents' in Terms of Functions (n = 40)

Functions	Frequency	Percent	Mean	SD	Qualitative Interpretation
Legislative	12	30.0	56.7	14.97	Moderately High
Executive	18	45.0	54.4	11.49	Moderately High
Judicial	10	25.0	50.0	12.47	Moderately Low

Table 1.1 shows the thinking styles of the respondents in terms of functions. As shown, it can be seen that majority of the respondents, which consists of 18 (45%) of the respondents have executive thinking styles in terms of function. Next to this are those who are legislative in their thinking styles in terms of functions, which consists of 12 (30%) of the respondents. Coming in last is judicial, which consists 10 or 25% of the respondents.

Based on the data, it can be observed that 45% of the respondents had an executive thinking style. Not too far behind, thirty percent of the teachers have legislative thinking styles, which suggest a significant emphasis on planning and conceptualization. Just 25% of respondents had judicial thinking styles, which is a less common thinking style. This distribution highlights how most people think practically and strategically, which highlights how important it is to take these cognitive preferences into account when creating instructional strategies and professional development programs for teachers.

This implies that most of the respondents are more concerned with having a set of regular, guiding principles that are imposed to them. In other words, most of the respondents are followers of a specific instruction rather than initiating for themselves.

The results of the study are in line with that of Navan and Shariatmadari (2018) wherein the researcher also found out that most of the educators are showcasing executive thinking styles. Accordingly, those that are employing executive thinking styles have their lessons planned out targeted to enhance the creative aspect of their students as manifested in their activities.

Table 1.2. Thinking Style of the Respondents' in Terms of Forms (n = 40)

Forms	Frequency	Percent	Mean	SD	Qualitative Interpretation
Hierarchic	24	60.0	59.2	9.74	Moderately High
Monarchic	7	17.5	48.6	10.69	Moderately Low
Oligarchic	7	17.5	45.7	9.76	Moderately Low
Anarchic	2	5.0	40.0	0.00	Moderately Low

Table 1.2 depicts the thinking styles of the respondents in terms of forms. As shown in the table, most or 24 (60%) of the respondents are hierarchic. Both monarchic and oligarchic consisted 7 (17.%) of the total number of respondents while anarchic garnered the least number of respondents which only consists of 2 (5%).

The table shows that 60% of the respondents, or most of them, have a hierarchical thinking style. In contrast, 17% of all respondents each represent monarchic and oligarchic thought patterns. The least prevalent thinking style is anarchic, as only 5% of respondents expressed a preference for it. The distribution of responses reveals that educators are generally inclined toward hierarchical thinking. This emphasizes the necessity of recognizing and accommodating these cognitive inclinations in training programs and instructional practices.

Individuals who exhibit a hierarchical thinking style do the thinking by virtue of a priority sequence basis. This means that most of the respondents follow a specific pattern in thinking or in teaching. This is true, considering that teachers have lesson plan to follow before every learning session.

In the study of Apaydin and Selin (2018), they have discussed that most teachers who are hierarchic in their thinking style in terms of forms are individuals who are dealing with numerous tasks but works on a priority basis. This can be true in the current research, considering that on top of inculcating knowledge to learners, teachers are also expected to do paper works and other documentary requirements to retain their teaching position.

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Table 1.3. Thinking Style of the Respondents' in Terms of Level (n = 40)

Level	Frequency	Percent	Mean	SD	Qualitative Interpretation
Global	18	45.0	74.3	21.21	Moderately Low
Local	22	55.0	65.9	18.17	Moderately High

Table 1.3 shows the results on the conducted survey for the thinking style of respondents in terms of Level. It can be seen that most respondents are Local consisting 22 (55%) of the total number of the respondents which is closely followed thereafter by Global which consists 18 (45%) of the respondents.

The data indicates that a majority of participants, comprising 55% of the total, exhibit a preference for a local way of thinking. Not far behind, 45% of participants have a global thinking style. This distribution highlights how important it is for educators to acknowledge and comprehend how local and global perspectives interact. Education practices may be more effective overall if instructional strategies and professional development programs are adapted to meet the needs of both local and global learners.

This means most of the respondents are local thinkers. That is, they are better workers when they are instructed with intricate details rather than being provided with vague details.

These results are in line with the study of Emir (2018) in which majority of his respondents have local thinking styles in terms of level. Accordingly, those who have local thinking styles in terms of levels are dealing with their work by closely paying attention to detail. This could be attributed to the various activities that teachers prepare for learners and their attention to detail, considering that they could change how learners think of a concept and thus, they are careful and wary about these activities.

Table 1.4. Thinking Style of the Respondents' in Terms of Scope (n = 40)

Level	Frequency	Percent	Mean	SD	Qualitative Interpretation
External	24	60.0	74.2	17.67	Moderately High
Internal	16	40.0	79.4	16.92	High

Table 1.4 shows the thinking style of the respondents in terms of scope. As per the data obtained, it can be seen that most or 24 (60%) of the respondents have external thinking style in terms of scope followed by internal which consists of 16 or 40% of the respondents.

According to the data, a significant proportion of participants, precisely 60%, demonstrate an external way of thinking concerning scope. By contrast, internal thinking is exhibited by 40% of the respondents. This distribution highlights a common tendency among the surveyed educators to take into account outside influences or viewpoints. Comprehending these inclinations is essential to customizing teaching tactics and continuing education initiatives that suit the majority's cognitive inclinations, thus augmenting the efficacy of teaching methodologies.

People who employ internal thinking style are those who work without the help of others or without the prejudice of seeking for validation. This means that while a commendable teacher should be a team player, most of the respondents of this study are more comfortable working on their own.

According to Aljojo (2019), individuals who have external thinking style are those that provide work opportunities which could develop interpersonal relationship. This is true amongst the respondents, especially that apart from being independent; learning to become a team player is one of the necessary keys in pursuit of academic excellence.

Table 1.5. Thinking Style of the Respondents' in Terms of Leanings (n = 40)

Leanings	Frequency	Percent	Mean	SD	Qualitative Interpretation
Conservative	21	52.5	75.2	19.65	Moderately High
Liberal	19	47.5	81.1	18.53	High

Table 1.5 shows the thinking styles of the respondents in terms of leanings. According to the data obtained, most or 21 (52.5%) of the respondents have conservative thinking style which is closely followed by liberal thinking style which consists 19 or 47.5% of the respondents.

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According to the data, 52.5% of respondents have a conservative thinking style, which is closely followed by 47.5% of respondents who have a liberal thinking style. The survey's balanced distribution points to a range of ideological viewpoints held by the educators. It is imperative to recognize and honor these diverse ways of thinking in order to promote inclusive and productive communication in educational environments. A wide range of opinions within the teaching community can be accommodated by developing instructional approaches and initiatives that take into account the prevalence of both conservative and liberal viewpoints.

This means that most of the respondents have a liberal thinking style. This means that they are open for innovation, to new learnings, and that they are not afraid to try on a lot of other things in forwarding education for learners.

In the study of Ylmaz (2016), they have discussed that a person with conservative thinking styles work by following the rules. On the other hand, those with liberal thinking styles are up for innovations and not afraid of uncertainty. While it can be seen that most of the respondents are conservative, almost half of them are liberals. The researchers then implied that while there is a certain and concrete form which teachers follow in the manner of their teaching, liberal teachers still innovate in ways that they feel where knowledge could be effectively delivered (Ylmaz, 2016).

Problem 2: What is the level of the respondents' teaching performance?

Table 2. Level of the Respondents' Teaching Performance (n = 40)

Range	Frequency	Percent	Mean	SD	Qualitative Interpretation
4.50 - 5.00	14	35.0	4.71	0.378	Outstanding
3.50 - 4.49	26	65.0	4.04	0.196	Very Satisfactory
Total	40	100.0	4.28	0.423	Very Satisfactory

Table 2 showcases the level of Teaching Performance of the Respondents. It could be seen that most of the respondents are within the 4.50-5.00 with a qualitative interpretation of Outstanding, followed by those that are in the 3.50-4.49 range, which has a qualitative interpretation of Very Satisfactory.

According to the data, a considerable proportion of the respondents are in the outstanding range (4.50–5.00), which is indicated by the data, and the next significant group is in the very satisfactory range (3.50–4.49). This distribution highlights the excellent general performance of the teachers who were polled. Acknowledging these high levels of competency is essential to reaffirming the positive aspects of the teaching community and offers important perspectives for maintaining and improving instructional quality through focused professional development programs.

A high degree of instructional competence among the surveyed educators is implied by the notable concentration of respondents in the outstanding and very satisfactory ranges. This favorable result implies a solid basis for efficient teaching methods, which has important ramifications for educational establishments. By identifying and utilizing these assets, professional development programs can be specifically tailored to address areas that could use more help or improvement. Recognizing exceptional performance can also help to create a culture of excellence in education and continuous improvement, as well as a positive and inspiring work environment.

This result goes to show that most of the respondents are highly functional in terms of their work as teachers. This is in consonance to the report of Department of Education in Region X (2018) that 60% of teaching workforce has teaching performances that are above average.

Problem 3: Is there a significant relationship between the respondents' thinking styles and their teaching performance?

Table 3. Relationship between the Respondents' Thinking and Their Teaching Performance

Thinking Styles	Correlation Coefficient (rho)	p-value
Thinking Styles	Legislative	.950
	Executive	-.228*
	Judicial	.315*
	Hierarchic	.091
	Monarchic	-.028
	Oligarchic	.003
	Anarchic	-.108
	Global	.373*
	Local	-.283*

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External	.105	.519
Internal	-.034	.836
Conservative	.257*	.045
Liberal	-.172	.288

Table 3 shows the relationship of the thinking styles versus teacher performance. For thinking styles, it could be seen that Judicial, Global, and Conservative thinking styles are positively correlated with the teaching performance of the respondents with Correlation Coefficient values of 0.315, 0.373, and 0.275, respectively.

Positive correlations between specific thinking styles and respondents' performance as teachers are found in the analysis. With a correlation coefficient of 0.315, the Judicial thinking style—which is marked by analytical and evaluative tendencies—indicates that teachers who adopt this style may be more effective in the classroom. The Global Thinking style, which is representative of an expansive and all-encompassing viewpoint, also shows a positive correlation with teaching performance, with a correlation coefficient of 0.373. Furthermore, the Conservative way of thinking, which reflects a cautious and well-balanced approach, has a positive correlation with instructional competence ($p>0.275$). These correlations underscore the significance of comprehending and accommodating diverse thinking styles in educational practices by highlighting the possible impact of cognitive preferences on teaching effectiveness.

These positive correlations highlight how important it is to identify and use particular thinking styles in order to improve teaching effectiveness. Teachers who think conservative, globally, or judicially might gain from specialized professional development courses that play to their cognitive advantages. Institutions should also consider thinking style considerations when creating hiring procedures and teamwork opportunities in order to support a varied but complementary cognitive landscape among teachers. Ultimately, recognizing these relationships creates opportunities for focused tactics meant to maximize learning competency according to unique cognitive profiles.

This means that these thinking styles are the most effective and optimal styles in improving the teaching performances of the respondents. This is in consonance to the study of Ovunda, Oluowo, and Onyeike (2018) wherein they have found out that these thinking styles are the most effective thinking styles in both the job satisfaction and performance of teachers in a university setting.

Problem 4: What development program can be crafted based on the results of the study?

Based on the data and the results obtained in the study, the researcher proposes the following development program:

SUSTAINABLE THINKING STYLE PROGRAM FOR TEACHERS

Rationale

Drawing upon the findings gleaned from the study's responses, the researcher formulated a program that exposes teachers to diverse thinking styles, with the aim of enhancing their teaching performance and ultimately delivering education more effectively to learners. In light of the disruptions caused by the on-going COVID-19 pandemic to traditional classroom settings, this program is designed to support educators, providing them with an opportunity for professional growth in the challenging landscape of remote and hybrid teaching.

Furthermore, the envisioned program not only seeks to address the challenges posed by the COVID-19 pandemic but also recognizes the evolving educational landscape. By fostering an understanding of various thinking styles among teachers, it aims to promote adaptability and innovation in instructional approaches. This, in turn, can empower educators to navigate the complexities of modern teaching methods, ensuring a more dynamic and responsive educational experience for both teachers and learners. The program thus serves as a proactive response to the changing educational paradigm, offering a pathway for continuous improvement and resilience in the face of unprecedented challenge.

I. Objective: To be able to provide a sustainable Thinking Style Program for Teachers

II. Matrix of the program

AREA OF CONCERN	PROGRAM/PROJECT/ ACTIVITIES	PERSONS INVOLVED/RESOURCES	TIMEFRAME	EVALUATION
Thinking Styles	Thinking Styles assessment for teachers	Administrators Guidance Counselor Teachers	Annual	Assessment of Dominant Thinking Styles through the use of Thinking Styles Inventory as designed by Sternberg (1997)
	Conduct a Symposium on	Administrators	Annual	Demonstration Teaching

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	Thinking Styles	Teachers		
	Teachers Forum and Training on Developing Critical Thinking Skills in the classroom	Administrators Teachers	Semestral	Classroom Observation Session evaluation
	Unit planning-Designing individual lessons	Administrators Teachers	Monthly	Unit Plans
Assessment of Work Performance	Conduct Exam/Assessment to check Work Performance	Standardized Work Performance test	Monthly	Examination/Assessment about School Standards and Performance
	Instructional mentoring	Administrators Teachers	Year round	Mentoring program Mentoring session assessment reports
	Classroom Evaluation	Administrators Teachers	Semestral	Performance Evaluation Results

4.0 CONCLUSION AND RECOMMENDATIONS

Undoubtedly, a discernible correlation exists between thinking styles and teachers' teaching performance. Given this connection, it becomes imperative to regularly evaluate educators' thinking styles, discerning which approaches are most conducive to imparting knowledge and education effectively to students. In addition to on-going assessments of thinking styles, there is a parallel necessity to periodically scrutinize their work performance. This dual evaluation process ensures not only the alignment of teaching strategies with optimal thinking styles but also guarantees that learners attain the highest levels of educational achievement.

Expanding on this imperative, a continuous and nuanced examination of teachers' thinking styles fosters a dynamic teaching environment. By regularly reassessing their cognitive approaches, educators can adapt and refine their instructional methods to cater to the diverse needs of their students. This reflective practice is essential in a constantly evolving educational landscape, ensuring that teaching methodologies remain responsive and effective.

Furthermore, the correlation between thinking styles and teaching performance underscores the importance of professional development initiatives. Offering targeted training and resources to educators can not only enhance their awareness of different thinking styles but also provide them with the tools to integrate this understanding into their teaching practices. This proactive approach not only benefits individual teachers but contributes to the overall enhancement of the educational experience for students.

In the context of evaluating work performance, the focus extends beyond the individual teacher to the collective goal of optimizing student learning outcomes. Regular assessments of teachers' work contribute to a culture of accountability and excellence within the educational institution. This dual assessment approach, encompassing thinking styles and work performance, thus becomes a holistic strategy for fostering an environment where both educators and learners can thrive in their pursuit of knowledge and academic success.

Recommendations

As per the results of the study, the following recommendations were forwarded by the researcher:

To School Administrators that they should conduct a testing in the thinking styles of teachers in order to tailor-fit their lessons, pedagogical processes and other related teaching concepts in the delivery of knowledge to learners; To Teachers that they should employ their thinking styles within the classroom level that would make them more efficient in teaching and to the Researchers that they would conduct a more in-depth analysis in the relationship of thinking styles and the teaching performance of teachers.

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