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Learning Styles and Technology Implementation of Special Education Teachers in the New Normal

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Abstract

This research evaluates special education teachers' learning styles and technological implementation at SpEd Schools in Mandaue City, Cebu, and Kananga Leyte, both in the Philippines, during the school year 2020–2021. It aimed to determine the Special Education Teachers' learning styles as well as the status of technology implementation of new learning modes during a pandemic. Because of the new setup for the educational platform in Special Education, this research also sought to gather information on the numerous concerns and problems associated with technology deployment, as well as the essential support and assistance in addressing such challenges. This study used a mixed-methods approach. A survey design will be used in quantitative research. Qualitative research, on the other hand, will employ a pragmatic qualitative research approach. Respondents in this study included twenty (20) Special Education Teachers from Mandaue City Central SpEd School - Elementary, ten (10) Special Education Teachers from Mandaue City Central SpEd School - High School, and twenty (20) Special Education Teachers from Kananga Central School. They answered the modified survey form as well as the interview. Frequency count and percentage, weighted mean and standard deviation, Chi-square test of independence, and theme analysis are among the statistical treatments applied to the data. The majority of Special Education teachers are reasonable, proactive, spontaneous, and clear, according to the data. It establishes that computer technology is commonly used for organizational and educational purposes. In general, it shows that a teacher's profile has a significant link to their learning styles, level of technological integration, and process integration. The creation of an intervention strategy is proposed as a solution to this problem.

Keywords: Special Education Teachers, Learning Styles, Technology Implementation, New Normal, Qualitative Approach, Mandaue City, Kananga Leyte

Introduction

Face-to-face teaching has been the preferred method of imparting knowledge to the learners. Education takes place naturally within the four walls of the classroom, with the teacher facilitating the children's learning while participating in face-to-face classroom education. In the study of Barak

& Usher2019, reveal that Face-to-face interactions amongst students resulted in more creative projects that would be useful in their life as learners. However, in 2020, there was a huge educational backlash. Most educational institutions around the world must be temporarily closed, to contain the COVID-19 pandemic and reduce infection. As a result of the pandemic, community lockdown and community quarantine in various countries force students and teachers to study and work from home, with an emphasis on the delivery of online learning platforms. The global COVID-19 outbreak substantially impacted education due to the closure of educational facilities (Ali, 2020).

Despite the pandemic, the Philippines' Department of Education has always maintained that providing free proper education to its citizens is a priority. Teacher competences in both pedagogy and technology should be enhanced to satisfy the country's new educational system amid the covid-19 epidemic. To respond to the new educational format, it emphasizes teacher training to support online instruction, blended learning, and remote learning. Blended learning was the most appropriate learning technique to use during the Covid-19 pandemic, teacher readiness to facilitate blended learning during the COVID-19 pandemic played a critical part in enhancing the educational process(Alqahtani & Rajkhan, 2020).

The change in classroom set-up causes problems for students with special needs, teachers, and parents in this time of Covid-19 pandemic. One of the Special Education approaches, the structured routine for students with special educational needs, has also been disrupted and, worst of all, significantly weakened. Parents of special-needs children have taken on the roles of teacher, recess and lunch monitors, school nurse, and even researchers in order to identify the ideal routine to implement, that would best cater the needs of the learners. According to (Jariono et al., 2021), parents can participate in the online learning process by collaborating with, assisting, guiding, and supporting designers, innovators, and learning media for their children with special needs.

Special Education is working towards the educational needs for the children with special needs, the pandemic significantly affects this concept. The technology implementation adopted in the light of the COVID-19 pandemic to make education possible is not accessible and not compatible to address the needs of these special education students. The use of technology has spread to all learning domains, but it is primarily focused on regular students and resource classes; however, the implementation of educational technology-supporting special education does not support children with special needs because these students have various types and levels of disabilities (Cheng & Lai, 2020).

Students with special needs, on the other hand, require more technological aid than these online platforms can provide. Students struggle to keep up with their academics in a digital learning environment due to a lack of digital literacy abilities (Tohara, 2021). To read the content for themselves, a student with vision impairment, for example, needs screen-reader software or a braille reader. The internet platform is incompatible with assistive technologies. Because there are too many students presented on the screen, making them smaller, classrooms in Zoom make it impossible for a deaf or hard of hearing student to meet his communication demand, which is American Sign Language.

Conceptual framework

Many would believe that learning at a distance can be at least as effective as the traditional face-to-face partly because of the many critical challenges, and one of them is the lack of appropriate interaction practices. It examines that Kolb's theory of Learning Styles impacts culture along with education-related variables such as level of education and area of specialization. It shows in the

study of (Damary et al., 2017), in which they viewed that instructors are to play an increasingly essential role in the new environment. Since it is novel, launching a particular professional development course for online instructors could be beneficial. Furthermore, seeking ways to facilitate the students' online learning experience is another strategy.

According to (Reid-Martinez & Grooms, 2018), 21st-century technology is rapidly closing the gap of the communication immediacy essential in knowledge building. The open-source networks and these new technologies encourage and actively support constructivist pedagogy in the distance education paradigm. Through its constructivist pedagogy and latest technologies, distance education has capacitated individuals technically to fulfill its most tremendous potential in the knowledge-building process.

With this, educational adaptations and innovations about technological advancement were implemented incoherent to the constitution. Attached to this great leap are the financial and acceptance factors that remain a problem that limits the potential of embracing the new learning space (Alipio, 2020). Also, technology would leverage inclusive and alternative education of marginalized and disadvantaged groups by benefitting from new ways of learning and participation(Moldavan et al., 2022).

This technology enhancement is a response to the predicament brought by the pandemic. Still, reality tells that the Philippines has the slowest internet connectivity in Asia (Tria, 2020). It challenges equity gaps, student security and safety, quality of learning compromised, and poor assessment results (Winthrop, 2020). The Philippines does not just face this dilemma, in the study of Nenko et al. (2020), the problems facing Ukrainian students in distance education inadequate teacher qualifications, excessive bureaucracy in distance education, lack of funding for the development of distance education technology, and types of computer equipment, distance education.

Low public awareness of the appropriate technical equipment and rural internet areas conclude that distance education in Ukraine does not meet the requirements of the modern information society. In this rough time, the concern is not about whether online teaching-learning methods can provide quality education; instead, how academic institutions will adopt online learning in such a massive manner (Carey, 2020). Another significant challenge herewith is how to provide and deliver quality education amidst exceptional times and prepare when another crisis comes in the future. According to (Karalis, 2020), it defines the effects that became apparent the next day after it became normal again: what adjustments were made, the scope of the situation, the basic aspects of education, that is worth studying to learn in formal education systems and organizations amid educational disruptions.

Purpose of the study

The study determined the learning styles and the technology implementation of special education teachers in the identified SpEd centers in the Division of Mandaue City and Division of Leyte during 2020-2021 in the Philippines. Specifically, it sought answer to the following question.

1. What is the profile of the respondents in terms of demographic; age and gender, civil status, highest educational attainment, field of specialization, designation; and years of teaching experience? And average class size that they teach; type of disability they are currently handling; and teachers' training on the different learning delivery modalities?
2. As perceived by the respondents, what are their learning styles?
3. What is the level of technology implementation of the respondents as to: professional views on computer technology; and process of integration?

4. Is there a significant relationship between the profile of the respondents and learning styles of the respondents; level of technology implementation; and process integration?

5. What are the challenges encountered by the teacher participants relevant to the implementation of the technology used in the learning modality platform?

Materials and Methods

The research design, respondents, instrument, data gathering procedure, and statistical treatment are all covered in this section.

Research design

This study used a mixed-methods approach. A survey design will be employed in quantitative research. In qualitative research, a pragmatic qualitative research approach will be applied. A survey of Special Education instructors will be conducted as part of the data collection process. The researchers will apply Cochran's technique for an infinite population to get the Sample Size. The researchers will employ simple random sampling.

Respondents

The study's respondents will be fifty (50) public special education teachers from Mandaue City, Cebu, and Kananga, Leyte, both in the Philippines. Thirty (30) Mandaue Special Education Teachers and twenty (20) Kananga, Leyte Special Education Teachers are among them.

Instrument

The instrument used to determine the teacher's profile and teachers' learning styles is adopted in Kolbs' Learning style questionnaire. Technology Implementation question from CSLP, will determine the level of technology implementation in terms of professional views on computer technology and the integration process, and the Thematic Analysis will be used to determine the perceived challenges faced by the teacher participants in relation to the performance of the technology.

Data Gathering Procedure

The researchers secured a written permit from the school division offices to conduct the study. Consent letters from the participants were also obtained, ensuring that the established ethical standards in special education research, including protecting the data sources and that the data generated in the study exclusively use for educational purposes only. Similarly, the researchers allocate enough time for the respondents and participants to answer the questionnaire.

Statistical Treatment

Researchers analyze teacher profiles using population ratios to generate frequency scores, percentages, confidence intervals, and weighted averages and standard deviations. Also, mention your learning style. Teachers, weighted averages, and standard deviations reflect the technology's implementation level in terms of expert judgments on information technology and integration procedures and topic analysis experience. The following statistical treatments were used in the study: frequency, percentage, and weighted mean. Frequency and Simple Percentage. These are the profile of the teachers in terms of their age and gender, civil status, highest educational attainment, the field of specialization, designation, years of teaching service, the average class size that they teach, type of disability they are currently handling, knowledge on technology-based activities, teachers' training on the different learning delivery modality. Weighted Mean. To determine the extent of teachers' level of technology implementation as to professional views on computer technology and process of integration.

Results

Table 1. Demographic Profile of the Respondents (n = 50)

		Frequency	Percentage
A.	**Age [in years old]**		
	21 - 30	12	24.00
	31 - 40	31	62.00
	41 - 50	4	8.00
	More than 50	3	6.00
	Mean : 35.70 StDev : 7.04		
B.	**Gender**		
	Female	47	94.00
	Male	3	6.00
C.	**Civil Status**		
	Married	35	70.00
	Single	15	30.00
D.	**Highest Educational Attainment**		
	College Graduate	22	44.00
	Master Level	24	48.00
	Master Graduate	2	4.00
	Doctoral Level	2	4.00
E.	**Field of Specialization**		
	English	4	8.00
	General Education	2	4.00
	Mathematics	2	4.00
	Special Education	41	82.00
	TLE	1	2.00
F.	**Designation**		
	Teacher 1	11	22.00
	Teacher 2	2	4.00
	Teacher 3	2	4.00
	SPET 1	23	46.00
	SPET 2	6	12.00
	SPET 3	5	10.00
	Master Teacher 1	1	2.00
G.	**Years of Teaching Service**		
	1 - 3	16	32.00
	4 - 6	12	24.00
	7 - 10	15	30.00
	More than 10	7	14.00
	Mean : 6.90 StDev : 5.26		

According to the table, the majority of respondents are aged; 31-40 years old have a frequency of 31 or 62.00 percent, while those over 50 have a frequency of three or 6.00 percent. For the gender: Females have a frequency of 47 percent 94 percent, whereas males have a frequency of three or six percent. Civil status of respondents: 70 percent are married, with a frequency of 35, and for single a frequency of 15 or 30 percent. The respondents' highest educational attainment is master's degree level, which has a frequency of 24 or 48 percent. For the field of specialization Special Education had a frequency of 41 or 82 percent among the respondents. For the designation SPET 1 has the highest frequency of 23 or 46 percent, Years of teaching experience of respondents: 1 to 3 years have a frequency of 16 or 32 percent.

Table 2. Class Profile of the Respondents (n = 50)

		Frequency	**Percentage**
H.	**Average Class Size**		
	Less than 10	23	46.00
	10 - 15	13	26.00
	16 - 20	5	10.00
	21 - 25	0	0.00
	26 - 30	6	12.00
	More than 30	3	6.00
I.	**Type of Learning Disability Currently Teaching**	**Frequency**	**Rank**
	Intellectual disabilities	22	1
	Hearing impairment	16	2
	Emotional and behavioural disability	8	3
	Learning disabilities	7	4
	Gifted and talented	7	4
	Visual impairment	5	5
	Multiple disabilities	4	6
J.	**Teachers' Training on Different Learning Delivery Modality**		
	Yes	50	100.00

The table shows the class profile of the respondents; for average class size, less than 10 average class size has a frequency of 23 or 46 percent which is the highest, more than 30 average class size has a frequency of three or six percent is the lowest. Types of learning disability currently teaching are ranked as; Intellectual Disabilities are ranked first, while Multiple Disabilities is ranked number six. All of the teachers who responded to the survey had received training on various learning delivery methods.

Perceived Learning Styles

Table 3. Respondents' Perceived Learning Styles

	Indicators	**Mean**	**Interpretation**
1.	I have strong beliefs about what is right and wrong, good and bad.	3.68	Strongly agree

	Indicators	Mean	Interpretation
2.	I often act without considering the possible consequences.	2.34	Disagree
3.	I tend to solve problems using a step-by-step approach.	3.48	Strongly agree
4.	I believe that formal procedures and policies restrict people.	2.92	Agree
5.	I have a reputation for saying what I think, simply and directly.	2.80	Agree
6.	I often find that actions based on feelings are as sound as those based on careful thought and analysis.	3.06	Agree
7.	I like the sort of work where I have time for thorough preparation and implementation.	3.64	Strongly agree
8.	I regularly question people about their basic assumptions.	2.38	Disagree
9.	What matters most is whether something works in practice.	3.38	Strongly agree
10.	I actively seek out new experiences.	3.44	Strongly agree
11.	When I hear about a new idea or approach, I immediately start working out how to apply it in practice.	3.40	Strongly agree
12.	I am keen on self-discipline such as watching my diet, taking regular exercise, sticking to a fixed routine, etc.	3.00	Agree
13.	I take pride in doing a thorough job.	3.48	Strongly agree
14.	I get on best with logical, analytical people and less well with spontaneous, 'irrational' people.	3.04	Agree
15.	I take care of how I interpret data and avoid jumping to conclusions.	3.34	Strongly agree
16.	I like to reach a decision carefully after weighing up many alternatives.	3.40	Strongly agree
17.	I am attracted more to novel, unusual ideas than to practical ones.	2.74	Agree
18.	I do not like disorganized things and prefer to fit things into a coherent pattern.	3.26	Strongly agree
19.	I accept and stick to laid down procedures and policies so long as I regard them as an efficient way of getting the job done.	3.28	Strongly agree
20.	I like to relate my actions to a general principle, standard, or belief.	3.32	Strongly agree

Range: 1.00-1.74 Strongly disagree; 1.75-2.49 Disagree; 2.50-3.24 Agree; 3.25-4.00 Strongly agree

The table 3 shows indicators 1 to 20, there are three interpretations; strongly agree, agree, and disagree. For strongly agree indicator 1; I have strong beliefs about what is right and wrong, good and bad. got the highest mean of 3.68 with an interpretation of strongly agree. While indicator 2; I often act without considering the possible consequences has the lowest mean of 2.34 with an interpretation of disagree.

Table 4. Respondents' Perceived Learning Styles

	Indicators	Mean	Interpretation
21.	In discussions, I like to get straight to the point.	3.40	Strongly agree
22.	I tend to have distant, rather formal relationships with people at work.	2.56	Agree
23.	I thrive on the challenge of tackling something new and different.	3.18	Agree
24.	I enjoy fun-loving, spontaneous people.	3.80	Strongly agree
25.	I pay careful attention to detail before concluding.	3.38	Strongly agree
26.	I find it difficult to produce ideas on impulse.	3.14	Agree
27.	I believe in coming to the point immediately.	3.00	Agree
28.	I am careful not to jump to conclusions too quickly.	3.28	Strongly agree
29.	I prefer to have as many sources of information as possible – the more information to think over, the better.	3.22	Agree
30.	Flippant, superficial people who do not take things seriously enough usually irritate me.	2.72	Agree
31.	I listen to other people's points of view before putting my own view forward.	2.94	Agree
32.	I tend to be open about how I am feeling.	3.38	Strongly agree
33.	In discussions, I enjoy watching the plotting and scheming of the other participants.	3.12	Agree
34.	I prefer to respond to events in a spontaneous, flexible way rather than plan things out in advance.	3.06	Agree
35.	I tend to be attracted to techniques such as flow charts, contingency plans, etc.	3.20	Agree
36.	It worries me if I have to rush work to meet a tight deadline.	3.26	Strongly agree
37.	I tend to judge people's ideas on their practical merits.	2.40	Disagree
38.	Quiet, thoughtful people tend to make me feel uneasy.	2.30	Disagree
39.	I often get irritated by people who want to rush things.	2.46	Disagree
40.	It is more important to enjoy the present moment than to think about the past or future.	3.12	Agree

Range:
1.00-1.74 Strongly disagree; 1.75-2.49 Disagree; 2.50-3.24 Agree; 3.25-4.00 Strongly agree

Table 4 shows the indicators, which from 21 to 40, and offers three interpretations for each indicator, I could be: strongly agree, agree, and disagree. The indicator; I enjoy fun-loving, spontaneous people, got the highest mean of 3.80 amongst the interpretation of strongly agree. While the highest mean of 3.22 for indicators with agree as their interpretation for; I prefer to have as many sources of information as possible – the more information to think over, the better. Lastly there are three indicators with an interpretation of disagree, the lowest mean is 2.30 for indicator; Quiet, thoughtful people tend to make me feel uneasy.

Table 5. Respondents' Perceived Learning Styles

	Indicators	Mean	Interpretation
41.	I think that decisions based on a careful analysis of all the information are better than those based on intuition.	3.24	Agree
42.	I tend to be a perfectionist.	2.36	Disagree
43.	In discussions, I usually produce lots of spontaneous ideas	3.06	Agree
44.	In meetings, I put forward practical, realistic ideas.	3.32	Strongly agree
45.	More often than not, rules are there to be broken.	2.68	Agree
46.	I prefer to stand back from a situation and consider all the perspectives.	3.18	Agree
47.	I can often see inconsistencies and weaknesses in other people's arguments.	2.98	Agree
48.	On balance, I talk more than I listen.	2.48	Disagree
49.	I can often see better, more practical ways to get things done.	3.50	Strongly agree
50.	I think written reports should be short and to the point.	3.58	Strongly agree
51.	I believe that rational, logical thinking should win the day.	3.22	Agree
52.	I tend to discuss specific things with people rather than engaging in social discussion.	3.18	Agree
53.	I like people who approach things realistically rather than theoretically.	3.48	Strongly agree
54.	In discussions, I get impatient with irrelevant issues and digressions.	2.68	Agree
55.	If I have a report to write, I tend to produce lots of drafts before settling on the final version.	3.12	Agree
56.	I am keen to try things out to see if they work in practice.	3.52	Strongly agree
57.	I am keen to reach answers via a logical approach.	3.06	Agree
58.	I enjoy being the one that talks a lot.	2.58	Agree
59.	In discussions, I often find I am a realist, keeping people to the point and avoiding wild speculations.	3.04	Agree
60.	I like to ponder many alternatives before making up my mind.	3.20	Agree

Range: 1.00-1.74 Strongly disagree; 1.75-2.49 Disagree; 2.50-3.24 Agree; 3.25-4.00 Strongly agree

Table 5 will present indicators 41–60. Each indicator has its own interpretation, which could be strongly agree, agree, or disagree. Among the interpretations of strongly agree, the indicator; I think written reports should be short and to the point, has the highest mean of 3.58. While the highest mean for those indicators with an interpretation of agree is 3.24, I think that decisions based on a

careful analysis of all the information are better than those based on intuition. There are two indicators with an interpretation of disagree, the lowest mean is 2.36; I tend to be a perfectionist.

Table 6. Respondents' Perceived Learning Styles

	Indicators	**Mean**	**Interpretation**
61.	In discussions with people, I often find I am the most dispassionate and objective.	2.32	Disagree
62.	In discussions, I am more likely to adopt a 'low profile' than take the lead and do most of the talking.	3.00	Agree
63.	I like to be able to relate current actions to the longer-term bigger picture.	3.06	Agree
64.	When things go wrong, I am happy to shrug it off and 'put it down to experience.' When things go wrong, I am happy to shrug it off and 'put it down to experience.'	3.20	Agree
65.	I tend to reject wild, spontaneous ideas as being impractical.	2.62	Agree
66.	It is best to think carefully before taking action.	3.58	Strongly agree
67.	On balance, I do the listening rather than the talking.	3.26	Strongly agree
68.	I tend to be tough on people who find it difficult to adopt a logical approach.	2.18	Disagree
69.	Most times, I believe the end justifies the means.	3.00	Agree
70.	I do not mind hurting people's feelings so long as the job gets done.	2.52	Agree
71.	I find the formality of having specific objectives and plans stifling.	3.18	Agree
72.	I am usually one of the people who put life into a party.	3.28	Strongly agree
73.	I do whatever is practical to get the job done.	3.50	Strongly agree
74.	I quickly get bored with methodical, detailed work.	2.36	Disagree
75.	I am keen on exploring the basic assumptions, principles, and theories underpinning things and events.	3.10	Agree
76.	I am always interested in finding out what people think.	2.76	Agree
77.	I like meetings to be run on methodical lines, sticking to a laid down agenda.	2.88	Agree
78.	Steer clear of subjective (biased) or ambiguous (unclear) topics.	2.54	Agree
79.	I enjoy the drama and excitement of a crisis.	2.20	Disagree
80.	People often find me insensitive to their feelings.	2.20	Disagree
	Aggregate Mean	**3.03**	**Agree**

Range: 1.00-1.74 Strongly disagree; 1.75-2.49 Disagree; 2.50-3.24 Agree; 3.25-4.00 Strongly agree

In Table 6, present the indicators for respondents' perceived learning styles from 61 to 80 indicators. Strongly agree, agree, and disagree are the three interpretations for the indicator. For indicator, the highest mean for strongly agree is 3.58; It is best to think carefully before taking action. When things go wrong, I am happy to shrug it off and 'put it down to experience, has the highest mean of 3.20 for indicator with an interpretation of agree. Whereas the lowest mean for disagree is 2.18 for; I tend to be tough on people who find it difficult to adopt a logical approach.

Perceived Level of Technology Implementation

Table 7. Respondents' Perceived Level of Technology Application as to Professional Views on Computer Technology

	Indicators	Mean	Interpretation
1.	The use of computer technology in the classroom.	3.32	Highly implemented
2.	Increases academic achievement (e.g., grades).	3.32	Highly implemented
3.	Results in students neglecting important traditional learning resources (e.g., library books).	2.48	Less implemented
4.	It is effective because I believe I can implement it successfully.	3.12	Moderately implemented
5.	Promotes student collaboration.	2.90	Moderately implemented
6.	Makes classroom management more difficult.	2.14	Less implemented
7.	Promotes the development of communication skills (e.g., writing and presentation skills).	3.60	Highly implemented
8.	It Is a valuable instructional tool.	3.64	Highly implemented
9.	It Is too costly in terms of resources, time, and effort.	2.56	Moderately implemented
10.	Is successful only if teachers have access to a computer at home	3.14	Moderately implemented
11.	Makes teachers feel more competent as educators.	3.30	Highly implemented
12.	Is successful only if there is adequate teacher training in the uses of technology for learning.	3.54	Highly implemented
13.	Allows teachers to be learning facilitators instead of information providers.	3.30	Highly implemented
14.	Is successful only if technical staff regularly maintains computers.	3.24	Moderately implemented
15.	Demands that too much time be spent on technical problems.	2.52	Moderately implemented
16.	Is successful only if there is the support of parents.	3.18	Moderately implemented
17.	It Is an effective tool for students of all abilities.	3.46	Highly implemented
18.	It Is unnecessary because students will learn computer skills on their own, outside of school.	2.38	Less implemented
19.	Enhances my professional development.	3.80	Highly implemented
20.	Eases the pressure on me as a teacher.	3.58	Highly implemented

Range: 1.00-1.74 Not implemented; 1.75-2.49 Less implemented; 2.50-3.24 Moderately implemented; 3.25-4.00 Highly implemented

In table 7, present the respondents' perceived level of technology application as to professional views on computer technology. Highly implemented, moderately implemented, and less implemented are the three interpretations. The highest score for highly implemented is 3.80 for indicator; Enhances my professional development. The maximum mean for indicator for moderately implemented is 3.24; The lowest mean for the interpretation of less implemented is 2.14, which means; Makes classroom management more difficult.

Table 8. Respondents' Perceived Level of Technology Application as to Professional Views on Computer Technology

	Indicators	**Mean**	**Interpretation**
21.	Is effective if teachers participate in the selection of computer technologies to be integrated.	3.56	Highly implemented
22.	Helps accommodate students' personal learning styles.	3.30	Highly implemented
23.	Motivates students to get more involved in learning activities.	3.58	Highly implemented
24.	Could reduce the number of teachers employed in the future.	2.26	Less implemented
25.	Limits my choices of instructional materials	2.58	Moderately implemented
26.	Requires software-skills training that is too time-consuming.	2.46	Less implemented
27.	Promotes the development of students' interpersonal skills (e.g., ability to relate or work with others).	3.28	Highly implemented
28.	Will increase the amount of stress and anxiety that students experience.	2.42	Less implemented
29.	It is effective only when extensive computer resources are available.	3.34	Highly implemented
30.	It is difficult because some students know more about computers than many teachers do.	3.02	Moderately implemented
31.	It is only successful if computer technology is part of the students' home environment.	3.06	Moderately implemented
32.	Requires extra time to plan learning activities	3.24	Moderately implemented
33.	Improves student learning of critical concepts and ideas.	3.58	Highly implemented
34.	Becomes more important to me if the student does not have access to a home computer.	2.76	Moderately implemented
	Aggregate Mean	**3.09**	**Moderately implemented**

Range: 1.00-1.74 Not implemented; 1.75-2.49 Less implemented; 2.50-3.24 Moderately implemented; 3.25-4.00 Highly implemented

Table 8 shows the indicator for respondents' assessed level of technology application in terms of professional views on computer technology, from 21 to 34. Each indicator might be regarded as strongly, moderately, or less implemented the highest mean for highly implemented is

3.58 for indicators; Motivates students to get more involved in learning activities, and Improves student learning of critical concepts and ideas. The indicator with the highest mean of 3.24 for moderately implemented was: Requires extra time to plan learning activities. A lowest mean for less implemented of 2.26 for indicator; could reduce the number of teachers employed in the future.

Table 9. Respondents' Perceived Level of Technology Application as to Process of Integration

	Indicators	**Mean**	**Interpretation**
A.	**Instructional**		
1.	Use WebQuests in your lessons.	2.08	Less implemented
2.	Use tutorials for self-training.	2.70	Moderately implemented
3.	Have students use tutorials for remediation	2.96	Moderately implemented
	Aggregate Mean	**2.58**	**Moderately implemented**
B.	**Communicative**		
4.	Use e-mail to communicate with other teachers.	3.28	Highly implemented
5.	Use e-mail to communicate with students.	2.34	Less implemented
6.	Use e-mail to communicate with parents.	3.14	Moderately implemented
7.	Use an LCD projector in class.	3.38	Highly implemented
8.	Create PowerPoint presentations to use in class.	3.42	Highly implemented
	Aggregate Mean	**3.11**	**Moderately implemented**
C.	**Organizational**		
9.	Keep track of student grades or marks.	3.12	Moderately implemented
10.	Prepare handouts, tests/quizzes, and homework assignments for students.	3.48	Highly implemented
11.	11. Create lesson plans.	3.88	Highly implemented
	Aggregate Mean	**3.49**	**Highly implemented**
D.	**Analytical Programming**		
12.	Create charts or graphs.	3.22	Moderately implemented
13.	Create a class/school website or put student work on-line.	2.42	Less implemented
14.	Analyze data.	3.26	Highly implemented
15.	Statistics or data analysis.	3.20	Moderately implemented
	Aggregate Mean	**3.03**	**Moderately implemented**
E.	**Recreational**		
16.	Have students play games (in class).	3.56	Highly implemented
17.	Use computer time as a reward for completing classwork or good behavior.	2.88	Moderately implemented
	Aggregate Mean	**3.22**	**Moderately implemented**

Range: 1.00-1.74 Not implemented; 1.75-2.49 Less implemented; 2.50-3.24 Moderately implemented; 3.25-4.00 Highly implemented

According to the table, the Instruction indicator has an aggregate mean of 2.58 and an interpretation of moderately implemented. It has an aggregate mean of 3.11 for Communicative, with an interpretation of moderately implemented. Organizational, on the other hand, received an aggregate

mean of 3.49 with an interpretation of highly implemented. Analytical Programming got an aggregate mean of 3.03 with a moderately implemented interpretation. Recreational received an aggregate mean of 3.223.11 with a moderately implemented interpretation.

Table 10. Respondents' Perceived Level of Technology Application as to Process of Integration

	Indicators	**Mean**	**Interpretation**
F.	**Expansive**		
18.	Have students conduct experiments or laboratory exercises (in-class/school lab).	2.30	Less implemented
19.	Have students use 3-D modeling software or simulations (in-class/school lab).	1.98	Less implemented
	Aggregate Mean	**2.14**	**Less implemented**
G.	**Creative**		
20.	Use drawing or paint programs.	3.18	Moderately implemented
21.	Scan pictures or images.	2.78	Moderately implemented
22.	Use digital video, digital cameras	2.80	Moderately implemented
	Aggregate Mean	**2.92**	**Moderately implemented**
H.	**Expressive**		
23.	Use a word processor.	2.80	Moderately implemented
24.	Maintain an on-line journal or discussion board.	2.18	Less implemented
	Aggregate Mean	**2.49**	**Less implemented**
I.	**Evaluative**		
25.	Test or assess student learning.	3.32	Highly implemented
26.	Use digital portfolios.	2.28	Less implemented
	Aggregate Mean	**2.80**	**Moderately implemented**
J.	**Informative**		
27.	Search the Internet for information for a lesson.	3.46	Highly implemented
28.	Access CD-ROM reference material.	2.24	Less implemented
	Aggregate Mean	**2.85**	**Moderately implemented**
	Overall Aggregate Mean	**2.92**	**Moderately implemented**

Range: 1.00-1.74 Not implemented; 1.75-2.49 Less implemented; 2.50-3.24 Moderately implemented; 3.25-4.00 Highly implemented.

Table 10 shows that the respondents' Perceived Level of Technology Application as to Process of Integration had an overall aggregate mean of 2.92, with an interpretation of moderately implemented.

Table 11. Respondents' Perceived Level of Technology Application as to Six-Stages on the Process of Integrating Computer Technology in Teaching Activities

	Indicators	Mean	Interpretation
A.	**Awareness**		
	I am aware that technology exists but have not used it – perhaps I'm even avoiding it. I am anxious about the prospect of using computers.	2.54	Moderately implemented
B.	**Learning**		
	I am currently trying to learn the basics. I am sometimes frustrated using computers, and I lack confidence when using them.	2.98	Moderately implemented
C.	**Understanding**		
	I am beginning to understand the process of using technology and can think of specific tasks in which might be useful.	3.66	Highly implemented
D.	**Familiarity**		
	I am gaining a sense of self -confidence in using the computer for specific tasks. I am starting to feel comfortable using the computer.	3.44	Highly implemented
E.	**Adaptation**		
	I think about the computer as an instructional tool to help me, and I am no longer concerned about it as technology. I can use many different computer applications.	3.74	Highly implemented
F.	**Creative Application**		
	I can apply what I know about technology in the classroom. I can use it as an instructional aid and have integrated computers into the curriculum.	3.86	Highly implemented
	Aggregate Mean	**3.37**	**Highly implemented**

Range: 1.00-1.74 Not implemented; 1.75-2.49 Less implemented; 2.50-3.24 Moderately implemented; 3.25-4.00 Highly implemented

Table 11 shows the respondents' perceived level of technological application. For Respondents' Perceived Level of Technology Application according to Six-Stages on the Process of Integrating Computer Technology in Teaching Activities, the overall aggregate mean was 3.37, with an interpretation of highly implemented.

Table 12. The Relationship between Profile of Respondents and the Level of Technology Implementation

Variables	Chi-Square	df	Critical Value	Significance	Result
A. Learning Styles and Profile of the Respondents					
Age	1.374	3	7.815	Not significant	Ho accepted

Variables	Chi-Square	df	Critical Value	Significance	Result
Gender	1.931	1	3.841	Not significant	Ho accepted
Civil Status	6.614	1	3.841	Significant	Ho rejected
Highest Educational Attainment	4.672	3	7.815	Not significant	Ho accepted
Field of Specialization	12.195	4	9.488	Significant	Ho rejected
Designation	16.162	6	12.592	Significant	Ho rejected
Years of Teaching Service	6.296	3	7.815	Not significant	Ho accepted
Average Class Size	8.063	4	9.488	Not significant	Ho accepted
B. Technology Implementation and Profile of the Respondents					
Age	1.608	3	7.815	Not significant	Ho accepted
Gender	1.375	1	3.841	Not significant	Ho accepted
Civil Status	1.299	1	3.841	Not significant	Ho accepted
Highest Educational Attainment	7.781	3	7.815	Not significant	Ho accepted
Field of Specialization	3.980	4	9.488	Not significant	Ho accepted
Designation	7.655	6	12.592	Not significant	Ho accepted
Years of Teaching Service	2.296	3	7.815	Not significant	Ho accepted
Average Class Size	14.549	4	9.488	Significant	Ho rejected
C. Process Integration and Profile of the Respondents					
Age	1.529	3	7.815	Not significant	Ho accepted
Gender	0.798	1	3.841	Not significant	Ho accepted
Civil Status	0.000	1	3.841	Not significant	Ho accepted
Highest Educational Attainment	6.795	3	7.815	Not significant	Ho accepted
Field of Specialization	2.782	4	9.488	Not significant	Ho accepted
Designation	14.280	6	12.592	Significant	Ho rejected
Years of Teaching Service	4.643	3	7.815	Not significant	Ho accepted
Average Class Size	14.454	4	9.488	Significant	Ho rejected

The data reveal that the Technology Implementation and Profile of the Respondents have significant relationship with their Average Class Size. The computed Chi-square value of 14.549 is significantly higher than the critical value of 9.488, at a df of 4. Also, the table reveals that the Process Integration and Profile of the Respondents have significant relationship with their Designation. The computed Chi-square value of 14.280 is significantly higher than the critical value of 12.592, at a df of 6.

Also, the data reveal that the Process Integration and Profile of the Respondents have significant relationship with their Average Class Size. The computed Chi-square value of 14.454 is significantly higher than the critical value of 9.488, at a df of 4.

Discussion

According to the findings, most of the respondents are female teachers inclined to teach students with special educational needs because of their maternal instinct. This maternal tendency has

been employed as a teaching paradigm, and female teachers have internalized their care for children (Belliappa & deSouza, 2021). Majority of the respondents have field of specialization in Special education, and pursued their advance studies to be more effective in their teaching profession. Graduate studies programs can improve teachers' effectiveness in the classroom.

Based on respondents' class profile, the data suggest that people should consider various factors to determine how professionally competent teachers are in dealing with students with special educational needs. The teacher's knowledge and skills on the technology-supported special education make teaching easier because students with special educational needs have varied types and levels of disabilities that can be cater with the technology. Majority of learning disability currently teach by the respondents are intellectual disabilities. Children with intellectual disabilities must be encouraged to participate in a variety of activities by their parents and teachers. Increasing the amount of knowledge and education available to relevant others could be a good way to turn roadblocks into opportunities (McGarty & Melville, 2018)(McGarty & Melville, 2018). In this new normal, school teachers have challenges due to a lack of training on numerous online platforms for online teaching and learning processes, as well as assessment of learning (Abante et al., 2021). To become effective and efficient teachers, the respondents have attended different training with regards differentiated learning delivery modality used in the time of Covid-19 pandemic.

The significance of studying teachers' perceptions of learning styles, teachers' instruction, and classroom approaches is important. Teachers can promote awareness about establishing teaching techniques that recognize different students' learning styles. In the study of (Azzi et al., 2020), the automatic recognition of learners' learning styles provides a real approach for teachers to personalize the learning available to learners. The study of (Hartman et al., 2019) revealed the importance of professional development and training, self-motivation, and excitement about how technology can improve learning. However, it also shows that there are worries about the lack of infrastructure and support for integrating technology as well as students' capacity to use technology tools for higher ordered thinking.

The data imply that teacher uses different materials, methods and strategies in the classroom. Researchers and investigators explore styles to formulate complementary learning environments and to teach adaptation styles to more students to foster learning and motivation. The classroom is a dynamic environment where students from different backgrounds with diverse abilities and personalities gather. To be effective teacher, you need to be creative and innovative educational strategies to meet the individual needs of your students. Another study by (Cohen & Henry, 2019)shows how important it is to understand learning styles and their role in effective education and learning. Learning improves as teachers and students become aware of how they learn.

In his research, (Nancekivell et al., 2020) found that if students know their type of learner, they can have a real picture of the learning process and more awareness to learn. Can they understand why they are happy to learn one trait but feel uncomfortable learning another? Teachers should be aware that students' learning styles may not be the same. Therefore, teachers need to adopt and apply a variety of balanced teaching methods.

For the perceived level of technology implementation, the data show that the technology-supported environment further encourages students' learning styles. Teachers can use a variety of technologies that can attract students and support constructivist learning approaches. In addition, teacher preparation and skills in the use of ICT play a fundamental role in using ICT in education program.

Teachers needs sufficient ICT skills to implement technology in teaching and learning process and have a high level of confidence in using it in the classroom. In addition, teachers need to know the pedagogical role of ICT in order to use it in educational process (Chikileva, 2019). According to (Guillén-Gámez et al., 2021), teachers who pass the ICT course are more effective in technically assisted education than teachers who have no experience in such training. Irish schools report that teachers who are not confident enough avoid ICT.

It is important for educators to understand that the way they are taught today has changed significantly and that a new generation of students will need a very different approach. The reason for focusing on technology is to produce decisive results (Raja & Nagasubramani, 2018). Many schools offer in-class technology to create more academic opportunities for students' academic growth and development. However, the use of technology in the classroom depends on how teachers adjust the technology (Petko et al., 2018). Study of (Rashid et al., 2021) suggest that technology adoption depends on teachers' goals and perceptions. The results of their study show that teachers are more pessimistic in using technology within the classroom setting due to the lack of trainings.

As to the respondents' perceived level of technology application as to process of integration, students will benefit from ICT integration if practical activities in technology-based courses are designed to stimulate understanding of the topic. It means deaf. It also helps teachers plan lessons with an effective, creative and engaging approach, leading to active learning for students. According to (Pal & Vanijja, 2020), teachers must appreciate and consider technology for effective instruction through integration, improvement, and complementarity.

Teachers are considered the most important player in using ICT in everyday classrooms as well as preparing students for the current digital age. This is due to the ability of ICT to provide a dynamic and proactive educational learning environment. The purpose of ICT integration is to improve and enhance the quality, accessibility and cost-effectiveness of education for students, but it also refers to the benefits of networks of learning communities to address learning challenges. The ICT acceptance process is not a single step, but a continuous and continuous step that fully supports education and learning and information resources (Huang & Teo, 2020)

According to (Szymkowiak et al., 2021), teachers need to know the importance and benefits of ICT in order to learn meaningful lessons using ICT. In fact, teachers need to be enrolled in training courses to learn about the integration of ICT into the teaching and learning process. However, many schools used a peer-to-peer education system. A competent ICT teacher assists and guides another teacher with little ICT experience during the preparatory work of the teaching and learning process.

To the test of significant relationship, the data reveal that the Technology Implementation and Profile of the Respondents have significant relationship with their Average Class Size. The computed Chi-square value of 14.549 is significantly higher than the critical value of 9.488, at a df of 4. Also, the table reveals that the Process Integration and Profile of the Respondents have significant relationship with their Designation.The computed Chi-square value of 14.280 is significantly higher than the critical value of 12.592, at a df of 6. Also, the data reveal that the Process Integration and Profile of the Respondents have significant relationship with their Average Class Size. The computed Chi-square value of 14.454 is significantly higher than the critical value of 9.488.

In addition, according to a study of Perienen, 2020 (Perienen, 2020), school students have great expectations for the integration of ICT in the classroom, as new generations are born and grow with technology and can be defined as digital-specific phenomena. The younger the students, the

higher their expectations for ICT integration in the classroom. He also showed that ICT integration relies primarily on personal factors defined as self-awareness. The study also shows that the acceptance of ICT by teachers and students in and out of the classroom is likely to use technology outside the classroom. They found that the barriers to ICT integration in the classroom were teachers' self-confidence, ability and attitude to reduce the rate of ICT integration.

In the study of (Rana & Rana, 2020) shows that teachers only need a tradition-centric approach to develop ICT skills in the classroom. Teachers are not representative of the type of ICT, but they have a high level of confidence and ability to use ICT in the classroom. This is because they believe that ICT is a useful tool for the learning process, especially when it comes to real-world practice. This factor has reformed teaching methods for integrating ICT to create and build knowledge for students. Studies show that the relationship between competence and trust may reflect the difference between training and pedagogy-centric approaches in ICT professional development. This ensures that school managers receive sufficient support for teachers to integrate ICT into their classrooms.

Conclusion and Recommendation

From the facts presented in the study, it was concluded that majority of the teachers are rational on what is right and wrong. It was also concluded that technology implementation enhances their professional development and motivates students to be more involve in the learning process. Computer technology is frequently used for organization and as an instructional aid in delivering the lesson. It was also concluded that the majority have understanding and familiarity of the usefulness of computers and they were able to capitalize the different computer applications. Generally, there is a significant relationship between teachers' profile and to their learning styles, level of technology implementation and process integration. Hence, giving enough assistance and opportunities for teachers to fully utilize and implement technology in the classroom through provision of enough computer technology for teachers and students to use and ICT development trainings and seminars are highly advised to ensure quality education under the new normal setting.

Based conclusions attained in the study, it is recommended that intervention plan would be developed and adapted in order to enhance the teachers' competency to continuously deliver quality education especially in the implementation of the learning delivery modality. More so, relevant trainings and seminars are requested for professional growth and ICT development that will capacitate teachers to deliver instruction under the new normal scheme.

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