



# 21<sup>st</sup> Century Instructional Leadership and Strategic Management of Technical Vocational Education and Training Programs

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**Abstract:** The present study attempted to examine the relationship between 21<sup>st</sup> century leadership and strategic management of school principals concerning their strategy formulation, implementation, and evaluation. This is with an end-view of preparing actions and activities to help strengthen their leadership skills in the 21<sup>st</sup> century era. The study is descriptive-correlational in nature, employing a survey questionnaire responded to by 80 TLE teachers from public secondary schools in Districts II and V of Batangas Province. Quantitative analysis indicated that concerning the 21<sup>st</sup> century leadership skills of TLE teachers, they generally agree that their school heads manifest strong advocacy and leadership (3.45) while they strongly agree that they display adult professional core (3.52), continuous improvement of teaching expertise (3.50), and results-oriented team (3.51). In terms of the strategic management of TVET programs during this time of the pandemic, they agree that their school heads employ various strategies for strategy formulation (3.36), strategy implementation (3.40), and strategy evaluation (3.41). Pearson's R correlation revealed a moderate to very high correlation between strong advocacy and leadership, adult professional core, continuous improvement of teaching expertise, and results-oriented teams with their strategic management of the school heads. It was therefore suggested that school heads explore and initiate actions that will help foster their 21<sup>st</sup> century leadership skills as it was found that it is influential in the strategic management of the TVET programs, particularly during this time of global health emergency.

**Keywords:** Education and training, 21<sup>st</sup> century instructional leadership, strategic management, TVET

## 1. Introduction

Management of Technical-Vocational Institutions and programs differ from regular academic programs as there are other areas that must be considered by the school administrators like teachers, facilities and learning facilities, equipment, tools and materials, instructional materials, and assessment strategies (Mbatha, 2021). Technical Vocational education is a training process, in addition to general education that develops an individual's acquisition of theoretical and practical skills relating to occupations in various economic and social sectors. All of these must be equally managed by the school principal to achieve the intended learning outcomes and the curriculum goals of Technology and Livelihood Education. The COVID-19 pandemic has greatly challenged the education sector as many schools have closed or adopted distance learning modalities to ensure the continuity of education. Among the challenges faced by school administrators includes policies and guidelines relative to the implementation of Technical Vocational education in times of pandemic (Majumdar & Araiztegui, 2020), providing hands-on practical training using tools and machines

through online training (Hayashi et al, 2021), access and competence in the use of ICT and internet tools (Diaz et al, 2020), and alternative plans for changes on TVET curriculum implementation (Martineau et al, 2020).

Similarly, the impact study conducted by Ndahi (2020) presented that inhibition on the use of Information and Communications Technology (ICT) for instructional design and delivery, and assessment during the pandemic was lacking and there is limited knowledge on the use of the Learning Management System (LMS). Vocational training institutions that use ICT for distance learning provide limited or no training to their instructors concerning the use of e-learning resources and technologies. With these global problems and obstacles in the implementation of Technical Vocational programs, school leaders bear the heavy weight of devising effective ways to meet these concerns. In fact, a study disclosed that 21<sup>st</sup> century leadership is related to the strategic management of school principals (Kaume-Mwinzi, 2016). Even though teachers who responded to the survey felt that the traditional management style predominated, these teachers did not always exhibit 21<sup>st</sup> century leadership abilities, which include fundamental literacies, competencies, and character traits. It was noted that for school administrators to build the leadership qualities necessary for the twenty-first century, they should work to cultivate the knowledge, talents, and attitudes necessary to enable them to embrace lifelong learning. Davidson (2014) emphasized key approaches for improving student performance levels must seek to turn principals from primary managers to instructional leaders. Lessons from around the world show that instructional leaders have common knowledge, attitudes, and values, even though the needs of instructional leadership vary with cultural differences.

Numerous authors have presented different dimensions and aspects of 21<sup>st</sup> century leadership skills, but this study considered the model of Baldanza as cited in Vecaldo (2019) to be highly appropriate for the objectives of the study. It was considered the facets of school leadership that she had personally seen and witnessed throughout her time serving as a principal. A broad-based theory of action is included, centred on four major concepts. This includes a broad-based theory of action around four big ideas strong advocacy and leadership, adult professional culture, continuous improvement of teaching expertise, and results-oriented teams. According to Wooi (2017), strategic educational management entails changing school administration to improve basic education. This entails a long-term change process with a core set of practices, carried out by the educational stakeholders including parents, teachers, students, and school administrators. Numerous studies have demonstrated the connection between the leadership traits and philosophies of school administrators and their tactical management abilities. It is obvious that school administrators should demonstrate the crisis management, change management, and critical thinking skills essential to handle the problems the pandemic brings to the educational sector in this time of global health catastrophe. The researcher was prompted to identify the leadership qualities of the school heads and examine its correlation with their strategy formulation, implementation, and evaluation as the identified indicators to describe their strategic management because they were aware that the 21<sup>st</sup> century leadership of school heads presented an obvious relationship with their strategic management. It is timely since there are many factors that need to be taken into consideration, especially when implementing Technical-Vocational programs in schools, and this pandemic needs our school leaders to think and act strategically.

## 1.1 Objectives of The Study

This paper described the 21<sup>st</sup> century leadership skills of public secondary high school principals in the Districts II and V of Batangas as framed from the 21<sup>st</sup> century Instructional Leadership of Baldanza (2018) and finds its relationship with the strategic management of TVET programs in this time of the pandemic.

- a) To assess the 21<sup>st</sup> century instructional leadership of school principals relative to their (1.1.) strong advocacy and leadership, (1.2) adult professional core, (1.3) continuous improvement of teaching expertise and (1.4) results-oriented teams.
- b) To determine the strategic management of school principals in managing technical-vocational programs as to (2.1.) strategy formulation, (2.2.) strategy implementation and (2.3.) strategy evaluation
- c) To examine the relationship between 21<sup>st</sup> century instructional leadership and strategic management of TVET school principals.
- d) To find the difference between the assessment of school heads and teachers.
- e) To develop a school leadership management program to improve the management of technical-vocational education programs

## 1.2 Research Hypotheses

H<sub>1</sub> = There is no significant relationship between the 21<sup>st</sup> century leadership skills of school principals and their strategic management in managing technical-vocational programs. Ozdemir et al (2020) found a 21<sup>st</sup> century skills are significant predictor of strategic leadership behaviors.

H<sub>2</sub> = There is no significant difference between the assessment of the school heads and teachers.

H<sub>3</sub> = There is no significant difference between the assessment of the respondents when grouped relative to their gender and work experience profile. Benson (2011) found leadership skills to vary across respondent's profiles.

## 2. Literature Review

The researchers' grasp of the following ideas and concepts related to 21<sup>st</sup> century leadership abilities and strategic management was substantially expanded by the findings presented and drawn by many authors. Syauqi et al (2020) noted that Indonesian vocational education institutes implemented online learning since the pandemic had a significant impact on the industry. It was discovered that the introduction of online learning in this period of pandemic highlighted the need of educational institutions to be ready to design and carry out learning. Some students reported that they have no trouble accessing resources, but they acknowledged that they are doubtful that this will continue in the future. In order to improve online learning, develop relevant learning materials, and produce more interactive learning media, it was suggested that educational institutions need to provide teachers with additional training (Lemay et al, 2021).

Additionally, according to McLeod and Dulsky (2021), school administrators have little to no expertise in managing crises and haven't dealt with any similar to the one that is now occurring. The focus of the qualitative interviews was on the vision and values, family and community engagement, leadership in instruction, increasing organizational capacity, equity-oriented leadership practices, and the identification of potential future prospects. The results have significant ramifications for school leaders' predicted beliefs, behaviours, and support systems during crisis situations and are consistent with the larger research literature on crisis leadership. Similarly, Aytac (2020) outlined the issues that some school administrators encountered during the COVID-19 epidemic in various cities and presented their thoughts on the procedure. Most school administrators saw that teachers were hesitant to instruct in real-time lectures using the EBA education portal or other tools for a variety of reasons and that this lowered their motivation over time. It has been noted that half of the school administrators simply followed the school orders because they did not have an emergency action plan for the pandemic process. According to school administrators, leadership in technology and crisis management abilities are crucial during the pandemic process. Therefore, it was advised that school administrators cultivate digital/technology leadership and crisis management abilities.

Majumdar et al. (2020) carried out a study to ascertain the reflection of the ongoing problems to shed some insight into how TVET and the educational system could react to the difficulties brought on by a worldwide disruption like COVID-19. Governments will need to set up an education and training system and its governance that allows for TVET Institutions to be flexible, recognize their inherent value to society and the economy, and be acknowledged as partners in problem-solving throughout the entire skill ecosystem. It was suggested that TVET teachers' capacity for managing pandemic situations be increased. In instance, Francisco and Nuqui (2020) found that among school administrators in the Philippines during the COVID-19 pandemic, a situational leadership style known as "new normal leadership" emerged. Results showed that: (1) New Normal Leadership is the capacity to be flexible while maintaining a strong sense of commitment; (2) It involves making wise decisions regarding instruction; and (3) A leader who is a competent planner, watchful, and starter. As the study came to a close, conclusions were made and suggestions made, such as the highly suggested further quantitative testing of this extracted idea for confirmatory and more in-depth investigations. Francisco (2019) also looked into how teachers' self-efficacy was impacted by the transformational leadership styles of school principals. This indicates that for every unit gain in effectiveness and contingent incentive, instructors' self-efficacy is considerably impacted. Although not significantly, the other variables also have an impact on the teachers' sense of self-efficacy. The report strongly advised school principals to continue developing their leadership abilities and additional innovations and reforms in schools.

Murashkin and Tyrväinen (2020) looked into how managers adjusted to the rapid digitalization of their daily tasks brought on by the COVID-19 outbreak. The empirical results of this study reveal that, in order to effectively communicate with their team during times of crisis, managers who lead their teams using digital means need to possess a certain set of social and task-related skills. The findings also position the COVID-19 pandemic as a catalyst for organizational change toward digitalization and digital transformation. It is determined that businesses with the required digital infrastructure, a workforce with the relevant skills, and flexible operations have and will continue to be better equipped for comparable disasters in the future. As a result, by investigating digital leadership in the context of a crisis and offering helpful advice on how to set up a pandemic-proof business continuity architecture, this study contributes to our understanding of digital leadership. The difficulties in delivering TVET due to CoViD-19 were also noted by Castillo (2020), including the lack of practical skill training due to social gathering restrictions, the insufficient preparation of administrators, trainers, and trainees for remote/distance education, and TVI/trainers/trainees' limited or nonexistent access to internet connections, learning platforms, devices, or media, among other relevant resources. In addition, as a means of addressing these issues, institutions adopt TVET's flexible learning delivery model while considering their own capacity, the skills of their trainers, the accessibility of learning resources to students, their access to technology, the internet, and connectivity, as well as quality control.

Schlebusch and Mokhatle (2016) also highlighted the position of strategic management within the management process. The school is connected to the shifting internal and external environment thanks to strategic planning. This planning, which is created by top management, is directed towards the entire company. The study's conclusions show that few schools in the Motheo district engage in strategic planning. When strategic planning does take place, the chairpersons of the School Governing Body (SGB) are frequently left out of the creation and implementation of these plans. Oyedele et al. (2016) found that although administrators shared their visions, missions, and values with others, the public was not given access to these higher-level policy documents. The study also found that most schools lacked

the financial resources necessary to put their strategic management abilities into practice. The study also showed that most administrators in government secondary schools lacked strategic leadership, which had a favourable impact on strategic management. The report advised government secondary school administrators to take part in training and other awareness programs to educate all stakeholders about strategic management concerns in schools. Teachers and residents would organize assistance in developing and putting strategic management abilities into practice. Government should decentralize power and consequently obligations, especially when deciding how to allocate resources. The requirement for government support should be strategic planning and strategic plans. Finally, management competency must be considered when considering promotions than the length of service or other factors.

In an educational complex, Amoli and Aghashahi (2016) investigated the success criteria for strategic management. Strategic management is thought to be something that should be suggested to productive and commercial institutions and businesses, and the greatest places to apply it are schools because they are institutions where people are the primary inputs and outputs. By identifying environmental opportunities, they may also take use of current dangers, transform them into opportunities, and use all available school resources to take advantage of the opportunities. Placing everyone in a position that is clearly defined encourages employees to carry out their tasks and jobs properly and motivates them. Shirley et al. (2014) revealed the following barriers to obtaining quality TVET programs in Nigerian tertiary institutions include a lack of necessary TVET facilities, inadequate funding for TVET programs, subpar teaching strategies used by teachers, and subpar competency assessments of TVET students. According to the report, further improvement measures for high-quality TVET programs in Nigeria include enough finance, teacher training and retraining, provision of necessary TVET facilities, adequate internal and external supervision, and public-private partnerships. Therefore, it was advised that Nigeria's government, stakeholders, policy makers, and TVET providers concentrate on TVET quality assurance best practices that have been successful in other nations.

Osam (2013) investigated Rivers State's implementation of programs for technical and vocational education. According to the report, the teaching staff quality in vocational and technical schools is moderately good but comparatively insufficient. In Rivers State, the facilities for vocational and technical schools are similarly subpar and damaged. The mean scores of technical teachers and principals on the government's funding schemes do not differ significantly. The mean scores of principals and technical teachers on the strategies used by the government to improve the implementation of vocational and technical education programs showed no significant differences either. This study suggests that the system only hires technical and science teachers who are professionally prepared. It is necessary to encourage those already employed in the system without professional credentials to enrol in post-graduate diploma programs in education. To provide comprehensive and practical education in our technical institutions, co-operative vocational education programs should be implemented into the technical education curriculum.

## 2.1 Conceptual Model

Figure 1 shows the framework which shows the connection of the concepts and ideas in this study, referred from the theories and ideas of Baldanza (2018). The four aspects of 21<sup>st</sup> century leadership skills namely: strong advocacy and leadership, continuous improvement of teaching expertise, adult professional culture, and results-oriented teams were placed at the middle of the circle since these are the dimensions that will be referred in preparing the school leadership management program that will help school heads in improving their 21<sup>st</sup> century leadership skills. After which, a bigger circle represents the strategic management of the school heads with respect to their strategy formulation, implementation, and evaluation. This means that the school leadership management program, which is the intended output of the study based on the 21<sup>st</sup> century leadership skills model that is influential to the strategic management of the school heads in managing the TVET programs in this time of pandemic. It is assumed that the four dimensions of 21<sup>st</sup> century leadership skills influence the strategic management of the school heads, especially in this era where they are expected to be wise decision-makers, planners, and implementers.



Fig. 1 - Conceptual model

### 3. Methodology

#### 3.1 Research Design

Given the objectives and nature of the study, the descriptive-correlational method of research was considered as the appropriate design for the study. In coming up with a prepared leadership development program to improve the management of TVET in this time of the pandemic, the researcher used this method to examine the relationship between the 21<sup>st</sup> century leadership skills of school principals and their strategic management in managing technical-vocational programs based on the assessment of teacher-respondents from public high schools in Districts II and V of Batangas City.

#### 3.2 Population and Sample

The study was participated by eighty (80) participants 6 of them were school heads while 74 of them were public Junior High School TLE Teachers from Districts II and V of Batangas. Selected schools in the Division of Batangas Province were considered given that these districts accommodate the largest number of TVET schools. Other schools outside the province were not considered given the limitations for the conduct of the research. No sampling method was required since it made use of the entire population. In this case, those who are teaching TLE subjects in this time of pandemic were considered in the pool of respondents. No gender, age, civil status, length of work experience, training attended, and learning modality adopted by the schools will be specified in choosing the participants.

#### 3.3 Data Gathering Instrument

The survey questionnaire was used as the main data-gathering instrument. The instrument was composed of two parts. The first part shows the indicators to describe the 21<sup>st</sup> century leadership skills of the school heads as to strong advocacy and leadership, adult professional core, continuous improvement of teaching expertise and results-oriented teams which was patterned from the model of Baldanza (2018) while the second part includes statements relative to the assessment of the extent of strategic management of respondents in terms of strategic formulation, implementation and evaluation constructed by the researcher himself. The entirety of the instrument was checked for grammatical coherence, statistical appropriateness, content and construct validity by the expert-validators and reliability test using Cronbach's Alpha, which revealed a score of 0.984 which implies that the items were excellent and is ready for distribution.

**Table 1 - Reliability test on the items**

Cronbach's Alpha	Verbal Interpretation
0.984	Excellent

#### 3.4 Data Gathering Procedures

Once the final draft of the instrument has been prepared, it has been subjected to validation and reliability testing. A letter seeking permission for the conduct of the study in the public schools in Batangas province was secured. The researcher visited the school heads and asked for their assistance in answering and distributing the survey questionnaire to their teachers. The purpose and objectives of the study were carefully explained to the respondents, and they were informed of their rights to voluntary participation. Two weeks were allotted for the administration of the questionnaire, thereafter, the data were reviewed, tallied, and subjected to data analysis and interpretation.

#### 3.5 Data Analysis and Interpretation

After the quantitative data have been retrieved, and recorded, it was subject to statistical analysis and interpretation using weighted mean to determine the average perspective and assessment of the respondents on the 21<sup>st</sup> century leadership skill and the strategic management of TVET institutions. Meanwhile, a t-test was used to examine the assessment between the school heads and teachers and ANOVA was used to find the difference between their assessment across their gender and work experience profile.

### 4. Results and Discussion

This part shows the discussion of the results based on the data obtained.

#### 4.1 21<sup>st</sup> - Century Leadership of School Principals as Assessed by The Respondents

The 21<sup>st</sup> century leadership of the school heads were determined based on the assessment of the respondents relative to the theories of action proposed by Baldanza (2018) like strong advocacy and leadership, adult professional core, continuous improvement of teaching expertise, and results-oriented teams.

#### 4.1.1 Strong Advocacy and Leadership

This has to do with the school leaders' capacity to create, promote, and implement a common goal, vision, and fundamental values. Having this core will act as a powerful catalyst for better teaching and learning for everyone. Table 2 below presents the assessment of the respondents relative to their strong advocacy and leadership. Yielding the highest mean value of 3.54, respondents strongly agreed that their school heads empower them to achieve a collective set of goals despite the change.

**Table 2 - 21<sup>st</sup> Century leadership of school principals relative to their strong advocacy and leadership**

<b>Strong Advocacy and Leadership</b>		<b>WM</b>	<b>VI</b>	<b>SD</b>
1.	Empowers teachers to accomplish a group of objectives despite the shift.	3.54	Strongly Agree	0.50
2.	Aims for equity and cultural sensitivity while allocating resources for objectives and better results.	3.48	Agree	0.53
3.	Cultivates effective and reliable connections between and among stakeholders	3.46	Agree	0.57
4.	Develops a mentor and personal learning network.	3.43	Agree	0.55
5.	Leads a community of learners and is knowledgeable about change management	3.36	Agree	0.51
<b>Composite Mean</b>		<b>3.45</b>	<b>Agree</b>	

This could be because one of the 21<sup>st</sup> century leadership traits that should be displayed by the school principals is to empower their teachers. Since there are new and different challenges being imposed by the present situation, school heads need to prioritize establishing goals that will be collectively achieved. This supports Vecaldo's (2019) assertions that the majority of participants saw instructional leadership as a collaborative activity. They see it as a process in which all school community members must be included by the authorities. Also, the mean rating of 3.46 indicates that respondents agreed that their school heads foster productive and trusting relationships among and between stakeholders. Depending on the learning modality and strategies adopted by the school, it is important that we maintain rapport and network with our stakeholders (LGUs, Alumni, Community Partners, etc) in achieving our goals. These educational stakeholders may help us provide the needed resources and assistance in the proper implementation of our school policies and programs. According to Majumdar et al. (2020), TVET needs to adapt to the difficulties the global health crisis presents. They emphasized the need for networking and collaboration in order to share and learn from one another.

Moreover, the lowest mean value of 3.36 implies that respondents agreed that their school heads lead a learning community with an understanding of change management. No training can even prepare us for this pandemic. The role of the school heads to lead their community in facing the challenges brought by abrupt changes is highly sought. This would guarantee the efficacy of the school policies and programs being implemented. Since not all teachers have much understanding and competence in change management, school principals are expected to show leadership and the ability to deal with these changes. This was corroborated by McLeod and Dulsky (2021), who noted that school administrators have little to no experience managing change or crises similar to the ones that are currently occurring. Aytac (2020) advised school administrators to hone their crisis management abilities. The grand mean of 3.45 is a great indicator that respondents agreed that their school heads manifest strong advocacy and leadership, given that they assessed the given indicators to be highly observed from the 21<sup>st</sup> century leadership of their school heads. This further implies that school heads hold leadership for the improvement of teaching and learning for all.

#### 4.1.2 Adult Professional Core

The principals of the schools ought to demonstrate it as one of the qualities of 21st century leadership. This speaks to behaviors that are moral, in line with accepted standards for the field, and demand that others follow suit.

**Table 3 - 21<sup>st</sup> century leadership of school principals relative to their adult professional core**

<b>Adult professional core</b>		<b>WM</b>	<b>VI</b>	<b>SD</b>
1.	Establishes oneself as a role model who is aware of his goals, obligations, and responsibilities in the classroom.	3.56	Strongly Agree	0.50
2.	Develops a compassionate and welcoming environment focused on moral behavior that puts students first.	3.54	Strongly Agree	0.50
3.	Uses adult learning theory to assist professional development and help others become more capable.	3.51	Strongly Agree	0.50
4.	Offers chances for teamwork and job-integrated learning.	3.49	Agree	0.50
5.	Coaches and encourages teachers to support practice in role-playing, asking questions, and watching	3.48	Agree	0.53
<b>Composite Mean</b>		<b>3.52</b>	<b>Strongly Agree</b>	

It may be viewed from Table 3 that when it comes to the adult professional core of the school heads, the highest mean of 3.56 implies that the respondents strongly agreed that they set themselves as role models who understand their purpose, roles, and responsibilities in the school. It could be that school heads are expected to display these favourable characteristics that may be influential to the behaviour and development of the individuals in the school community. This rests on the fact that school leaders should be positive role models not just for the teachers, but for the stakeholders of the academic community. According to Francisco and Nuqui (2020), a new type of leader needs to be capable of making sound instructional decisions, planning ahead, being proactive and watchful, and being able to adjust while maintaining a commitment. Similarly, the weighted mean of 3.51 reveals that respondents strongly agreed that they apply adult learning theory to develop capacity in others and support professional learning. This is so since there is a need to apply distinct support and intervention based on the diverse learning styles and preferences of our teachers. When providing professional support, our strategies differ from that of the training provided to our students or to the children. Thus, more of the professional support provided to our teachers is aimed for them to exercise independent, collaborative, self-pacing and many andragogic techniques. Initiating teacher professional development for senior teachers boosted improvement in subject understanding and leadership capacity, according to Taylor et al. (2011), and it also proved helpful for reviving established instructors in the profession.

Lastly, the lowest mean of 3.48 shows that the respondents agreed that their school heads coach and mentor them to support modelling, questioning, and observing practice. As observed, there are teachers who are confused about how are they going to perform their responsibility given that there are lots of challenges that they have to face. It is important that the school head leads in the mentoring and clarification of unclear roles in the implementation of strategies during this time of the pandemic. By applying different practices, teachers will be able to perform their roles effectively and productively. In general, the composite mean of 3.52 implies that they strongly agreed that their school heads possess the indicators which revealed their adult professional core. This means that school heads appreciate the need for everyone to recognize their purpose, roles, and responsibilities and consider themselves as full partner in the life of the school.

#### 4.1.3 Continuous Improvement of Teaching Expertise

This one goes beyond creating and promoting tough curricula to creating a future-focused culture centered on the needs of the teachers both now and in the future.

**Table 4 - 21<sup>st</sup> century leadership of school principals as to their continuous improvement of teaching expertise**

Continuous improvement of teaching expertise		WM	VI	SD
1.	Embraces and uses technology to improve communication and teamwork	3.56	Strongly Agree	0.50
2.	Reorient teaching toward instructional requirements and redesign priorities	3.53	Strongly Agree	0.50
3.	Encourages innovative and coherent curricula that center goals, assignments, and evaluations on the school's mission and vision statements.	3.53	Strongly Agree	0.50
4.	Creates a culture that is forward-looking and centered on the needs of each student, both now and in the future.	3.51	Strongly Agree	0.53
5.	Provides programs and initiatives for professional development to support the requirements of the instructors.	3.49	Agree	0.53
6.	Visits classrooms and provides insightful comments.	3.39	Agree	0.56
<b>Composite Mean</b>		<b>3.50</b>	<b>Strongly Agree</b>	

From the Table 4 above, the highest mean of 3.56 indicates that respondents strongly agreed that their school heads embrace and incorporate digital tools to enhance the collaboration and communication. One of the challenges brought by the pandemic is the limited face-to-face interaction of the teachers, with that, school heads opt to utilize different electronic means to make communication and interaction to its stakeholders and teachers possible. Through the use of different communication outlets, school heads are able to connect with the external partners and sought assistance from other organization and interact with their teachers. Murashkin and Tyrväinen (2020) suggested in order to effectively communicate with their team during times of crisis, managers who lead their teams using digital platforms need to possess a variety of social and task-related abilities. This was followed by establishing a forward-thinking culture focused on the current and future needs of each teacher. This got a weighted mean of 3.51, strongly agreed. The pandemic should not strike us down but rather provide us with the drive and motivation to become optimistic, that despite these sudden changes, we are able to perform our sworn duties and responsibilities and grow personally and professionally. Furthermore, respondents agreed that their school heads visit them frequently and deliver a meaningful feedback. This garnered the lowest mean of 3.39.

This could be since feedback is essential not just in the communication process but also in school leadership. School heads need to recognize the matters and factors affecting or might have affected the accomplishment of the organizational goals. Right after acknowledging some problems they must be able to provide interventions to make sure that the objectives will be attained. Day and Sammons (2014) said that strong school leaders give the school a clear

vision and sense of direction. Murashkin and Tyrväinen (2020) suggested that managers that lead their teams using digital tools demand special social and task-related skills. Communication in order to effectively communicate with their team in times of crisis. Principals and the school community need to develop vision sharing, cohesion, and self-esteem in order to sustain students' outcomes (Zuraida, 2013). All in all, the grand mean of 3.50 is a strong indication that respondents strongly agreed that their school heads manifest the different indicators of continuous improvement of teaching expertise. This suggests that school heads are committed towards that improvement of the teaching expertise, thus adopting strategies to make sure that actions are geared towards the achievement of the organization's vision and monitor everyone's performance and provide feedback. Syauqi et al (2020) suggested that school administrators should give teachers the chance to enhance online learning, generate relevant learning resources, and develop more interactive learning media.

#### 4.1.4 Results-Oriented Teams

A school principal who can participate in professional learning communities, involve a variety of stakeholders, and carry out meaningful work stands out in this area of 21<sup>st</sup> century leadership ability. Table 5 below shows the respondents' evaluations of the indicators focusing on the teams of their school heads that are results-oriented. The highest mean rating of 3.55 implies that respondents strongly agreed that their school heads monitor and support high quality standards-aligned curriculum, instruction, and assessment. The actions and decisions of the school head should be congruent to the curriculum standards set by the Department of Education. The indicators set the expected goals to be attained by the school, thus, it boils down to maintaining a rigid monitoring process to make sure that these standards are attained. Pasia (2019) recommends school's curriculum and instruction should be updated with ongoing professional development training and support to ensure that they are in line with both the state standards and the school's educational philosophy.

**Table 5 - 21<sup>st</sup>- Century leadership of school principals relative to their results-oriented team**

<b>Results-oriented teams</b>	<b>WM</b>	<b>VI</b>	<b>SD</b>
1. Oversees and promotes the use of high-quality, standardized curriculum, instruction, and evaluation	3.55	Strongly Agree	0.53
2. Collects and evaluates performance information to inform decisions about instruction and support.	3.55	Strongly Agree	0.50
3. Identifies teachers who are leaders, including examples of onboarding and mentoring	3.53	Strongly Agree	0.55
4. Creates groups of effective problem solvers with the accountability and power to take actions and make decisions that support one another.	3.46	Agree	0.57
5. Creates support strategies for instructors that focus on acceleration rather than remediation.	3.44	Agree	0.57
<b>Composite mean</b>	<b>3.51</b>	<b>Strongly Agree</b>	

In addition, respondents strongly agreed that their school heads identify and develop teacher leaders including models for induction and mentoring. This obtained a mean of 3.53. It could be since our school heads want what is best for the school. Part of which is influencing their colleagues to become teacher leaders through different activities and training programs. It is a rewarding experience on the part of the school head if he is able to inspire and develop a teacher to become educational leaders. Majumdar et al. (2020) stressed the significance of TVET instructors' capacity development to improve their management of the pandemic crisis. Lastly, the lowest mean value of 3.44 indicates that they agree that their school heads design acceleration, not remediation, models of support for teachers. This shows the determination of the school heads to upskills and support the professional development of the teachers by steering various techniques to accelerate the support for the needs of the teachers. The overall mean of 3.51 shows that respondents strongly agree to the components characterizing the results-oriented teams of the school heads. This further implies that school heads are able to involve the professional community of teachers and other stakeholders to develop a team of high functioning problem solvers with accountability and authority to make shifts and decisions that support the growth of the teachers.

## 4.2 Strategic Management in Managing Technical-Vocational Programs

Strategic management involves the transformation of school management for the improvement of basic education which entails a long-term change process with a core set of practices performed by the school community and other stakeholders. Tables 5 to 7 reveal the assessment of the respondents on the strategic management of the school heads in managing TVET programs in this time of pandemic pertaining to the strategy formulation, strategy implementation and strategy evaluation.



#### 4.2.1 Strategy Formulation

This focuses on creating an organization's vision and mission, identifying internal and external elements that affect the company, and choosing the methods to be employed. Table 6 below summarizes the respondents' opinions regarding the formulation of the school heads' management strategy for TVET programs during this pandemic. The highest mean, 3.43, indicates that teachers are in agreement with their school leaders' decision to involve them in face-to-face or virtual planning exchanges. This is the case given that the current global health crisis discourages face-to-face interactions, which would reduce the spread of the virus. School leaders use virtual modes to communicate with their teachers in order to make the planning contacts productive and enable them to make decisions as a group.

**Table 6 - Strategic management in managing technical-vocational programs in terms of strategy formulation**

	<b>Strategy formulation</b>	<b>WM</b>	<b>VI</b>	<b>SD</b>
1.	Engages teachers through virtual or face-to-face planning interactions.	3.43	Agree	0.63
2.	Relates previous performance in making strategic plans and actions.	3.43	Agree	0.52
3.	Selects the best course of action to be undertaken after considering organizational goals, SWOT and the general environment.	3.43	Agree	0.50
4.	Sets short and long-term objectives of the school based on the overall goal of the Department of Education.	3.40	Agree	0.49
5.	Identifies and considers the strengths, weaknesses, opportunities, and threats.	3.39	Agree	0.61
6.	Assesses the school environment in which the organization operates.	3.36	Agree	0.58
7.	Incorporates teachers' perspectives into the creation of strategic plans and the use of resources for addressing both internal and external difficulties.	3.34	Agree	0.55
8.	Benchmarks from other school heads regarding their practices and considers what would be best for the organization.	3.15	Agree	0.71
	<b>Composite mean</b>	<b>3.36</b>	<b>Agree</b>	

Meanwhile, relating previous performance in making strategic plans and actions and selecting the best course of action to be undertaken after considering goals, SWOT and the general environment shared the similar mean value of 3.43, agree. These mean that in coming up with a decision, the school heads consider the school previous performance and other internal and external factors in developing the strategic plans and actions. Previous records and statistics are vital in coming up with an intelligent decision to make sure that unfortunate circumstances are less likely to occur. Strategic management in schools has an impact on planning, predicting changes, and managing, according to Amoli and Aghashahi (2016). By identifying environmental opportunities, they may also take use of current dangers, transform them into opportunities, and use all available school resources to take advantage of the opportunities. Placing everyone in their right roles motivates and encourages personnel to carry out their tasks and jobs correctly. In addition, the mean of 3.34 implies that teachers agree that their school heads integrate their views in mapping out strategic plans and utilizing available resources in managing internal and external challenges. This is important in order to develop a practical and enforceable plan that will be adopted by the school. There is a need to consider all resources, allocate and utilize them intelligently during the implementation phase. It is equally important for school heads to consider all internal and external challenges in order to minimize the threats that will affect the attainment of the organizational goals and objectives. Schlebusch and Mokhatle (2016) stressed the value of stakeholder cooperation to support the successful creation and execution of strategic plans. The best instructional leaders, according to Vecaldo (2019), involve people who are actively participating in the process of negotiated leadership while taking into account a variety of opinions.

The lowest mean value, 3.15, indicates that instructors concur that their school heads compare their methods to those of other school heads and take into account what would be best for the organization. It is crucial that we take note of other schools' best practices and put them to the test in our own to see if they can improve the situation as it is or provide a solution to a problem preventing the achievement of organizational goals and objectives. According to Schlebusch and Mokhatle (2016), the School Management Team's (SMT) leadership style and that of the principal may have an impact on how well the strategic plan is implemented. The success or failure of the implementation of strategic planning may be influenced by how managers encourage, direct, and treat staff workers involved in the process. The composite mean of 3.36 is an indication that teachers agree that their school heads manifest acceptable actions in formulating strategies by involving them in decision making and planning process, selecting the best course of action out of the different internal and external factors and plan within the curricular goals of the education department. To create a clear vision to satisfy the demands of schools and society, comprehensive quality schools should employ the strategic tool of strategic formulation (Latorre & Blanco, 2013).

### 4.2.2 Strategy Implementation

In this phase, the plan is broken down into more manageable, operational actions while managing resources, people, and change. Table 6 showed the respondents' evaluations of how well the school heads' strategic administration of TVET programs was being carried out. The highest mean score of 3.44 shows that the TLE teachers concur that it is important for school leaders to involve stakeholders when putting plans into practice in order to achieve the desired results. Participatory management places a strong emphasis on involving all relevant parties, not just during the planning stage but also during execution. Their collective intellectual inputs and shared resources are significant in the achievement of the strategy formulated.

**Table 7 - Strategic management in managing technical-vocational programs in terms of strategy implementation**

	<b>Strategy implementation</b>	<b>WM</b>	<b>VI</b>	<b>SD</b>
1.	Involves stakeholders in the process of turning plans into action to reach the intended outcomes.	3.44	Agree	0.57
2.	Encourages collaboration, brainstorming, and decision-making among teachers in all departments to determine the best ways to implement the school's curriculum.	3.43	Agree	0.55
3.	Develops communication procedures and executes actions based on the available budget, materials and facilities.	3.41	Agree	0.57
4.	Reinforces instructional needs of TVE teachers.	3.41	Agree	0.57
5.	Defines and analyses strategic risks.	3.39	Agree	0.52
6.	Takes actions based on the assessed organizational capabilities.	3.38	Agree	0.56
7.	Institutes and modifies best practices yielded from other schools	3.38	Agree	0.54
8.	Reviews and creates an effective organizational structure.	3.36	Agree	0.53
	<b>Composite Mean</b>	<b>3.40</b>	<b>Agree</b>	

As observed, most of the stakeholders serve as volunteers or partners in the conduct of school programs or are donating materials and equipment needed in the school. Some of them who are experts and known individuals in their fields are contributing as they were invited as guest speaker for the school programs like commencement exercises or during teachers training. Oyedele et al. (2016) stressed the importance of involving school administrators in training and other awareness programs aimed at educating all stakeholders about strategic management concerns in schools. Teachers and local residents would organize assistance in developing and putting strategic management abilities into practice. Additionally, they agree that their school heads engage them to collaborate, brainstorm and decide on the modalities for implementing the school curriculum. This yielded a mean value of 3.43, ranked second. The significance of this one is also reflected to that of the first indicator as it is not only the stakeholders that are engaged, but most importantly, the teachers who are implementing the curriculum. Since the teachers are the ones who are greatly affected with the changes in the curriculum, school heads should consult them of their concerns and suggestions in the implementation of the adopted modality for them to make sure that everyone understand the new roles that they will be assuming in the school.

Moreover, instituting and modifying best practices yielded from other school obtained a mean of 3.38, agree. This could be since most of the respondents identified on the previous part of the survey that not all school heads are giving priority to the conduct of benchmarking activity from other schools. This is done to identify the best practices adopted by other schools in the adoption of different strategies, specifically the effective techniques in managing TVET in the new normal education. In their findings, Ayonmike et al. (2015) stressed the value of partnerships (public and private) for enhancing strategies for high-quality TVET programs and putting a special emphasis on TVET quality assurance best practices that have been successful in many institutions throughout the world. Furthermore, the lowest weighted mean of 3.36 indicates that teachers agree that they are reviewing and creating an effective organization structure. Although agreed by the TLE teachers, this may be since the school hierarchy is also structure but school heads should also ensure that TLE teachers have representation in the organization to be able to communicate and raise their concerns. The general mean of 3.40 implies that relative to the strategy implementation of school heads in managing TVET programs, TLE teachers agree with the indicators pertaining to the activities in the implementation of the strategy.

### 4.2.3 Strategy Evaluation

It was claimed that documenting and evaluating outcomes is a crucial task in strategic management. The performance of the school must be compared to what was anticipated in order to determine what efforts or modifications are necessary. The evaluation of the TLE teachers' administration of TVET programs is shown in Table 8 in terms of strategy evaluation. The mean values of 3.48 and 3.46 indicates that teachers agreed that their school heads take immediate remedial and/or corrective actions and compare actual results with expected results and adjust strategies if needed. This is one of the indicators of evaluation that has to be practiced by school heads in order to make sure that all

actions are geared towards the attainment of the organization’s objectives. Identifying the areas that require interventions or corrective actions will likely yield a more favorable outcome since some problems are prevented. This is consistent with the findings of Ayonmike et al. (2015), who found that TVET trainers are necessary for proper internal and external monitoring to raise the caliber of TVET program offerings.

**Table 8 - Strategic management in managing technical-vocational programs in terms of strategy evaluation**

Strategy evaluation	WM	VI	SD
1. Takes immediate remedial and/or corrective actions.	3.48	Agree	0.55
2. Compares actual results with expected results and adjust strategies if needed.	3.46	Agree	0.50
3. Monitors if actions are geared towards the achievement of the indicators and provide interventions for identified gaps	3.43	Agree	0.52
4. Includes teachers in the performance evaluation.	3.41	Agree	0.57
5. Examines the internal and external variables that form the foundation of the current tactics.	3.40	Agree	0.52
6. Applies online tools in monitoring and assessing the actions undertaken.	3.35	Agree	0.58
7. Solicits the suggestions of other stakeholders in analyzing the results of the strategy implementation	3.31	Agree	0.65
<b>Composite mean</b>	<b>3.41</b>	<b>Agree</b>	

Additionally, they agreed that their school heads apply online tools in monitoring and assessing the actions undertaken. This garnered a mean of 3.35. In order to maintain the safety of the stakeholders and the teachers, school heads utilize online means and tools in order to make the monitoring and assessment of the actions taken possible. This may include the use of google forms and other software to facilitate in the collection of the comments and suggestions of the organization members. Encio (2017) in Ramos (2012), it takes more than just good evaluation methods and research to give teachers and students the support and checks they need to succeed in all facets of school growth.

The lowest mean of 3.31 indicates that TLE teachers agreed that their school heads solicit the suggestions of other stakeholders in analyzing the results of the strategy implementation. School principals adopt different techniques to communicate with the stakeholders by holding a virtual conference or conducting an online interview to gather their suggestions to improve the implementation of the strategy. Osam (2013) revealed that there are several opportunities that stakeholders should discuss and propose in order to better implement programs for vocational and technical education. All in all, the composite mean of 3.41 shows that teachers agree that their school heads practice and observe the different strategies in program implementation. This involves spotting some errors that calls for immediate feedback or corrective actions. They also consult the stakeholders and the teachers to make sure that they are able to hear all suggestions that will be helpful in modifying the programs being implementation and guarantee success and achievement of the organizational objectives.

### 4.3 Relationship Between the 21<sup>st</sup> century Leadership and Strategic Management of School Principals in Managing Technical-Vocational Programs

This study aims to support Kaume-(2016) Mwinzi's theory that school principals' strategic management is linked to 21st century leadership. Therefore, it was hypothesized in this study that a school principal's strategic management would be influenced by their 21st century leadership qualities. This statistical outcome of the data correlation is shown in Tables 9 to 11.

**Table 9 - Relationship between the strong advocacy and leadership and strategic management of school heads in managing TVET**

Strong advocacy and leadership VS	Pearson’s R	p-value	Interpretation
Strategy Formulation	0.660	2.81 x 10 <sup>-11</sup>	Moderate Positive Correlation
Strategy Implementation	0.744	2.54 x 10 <sup>-15</sup>	High Positive Correlation
Strategy Evaluation	0.692	1.16 x 10 <sup>-12</sup>	Moderate Positive Correlation

*Pearson’s r (95% confidence interval)*

Table 10 shows that strong advocacy and leadership is correlated with the strategic management of the school heads in general. The Pearson’s R of 0.660 and p-value of 2.8 x 10<sup>-11</sup> indicated that strong advocacy and leadership shows a moderate positive correlation with the strategy formulation which is similar of the strategy evaluation which presented a Pearson’s R value of 0.692 and p-value of 1.16 x 10<sup>-12</sup>. On the other hand, a high positive correlation was seen between the strong advocacy and leadership of the school heads and their strategy implementation. This suggests that school head’s manifestation of that core of 21<sup>st</sup> century leadership skill is relatively influential to their strategic management of TVET programs in this time of pandemic. Francisco and Nuqui (2020) pointed that a new type of

leader needs to be capable of making sound instructional decisions, planning ahead, being proactive and watchful, and being able to adjust while maintaining a commitment.

**Table 10 - Relationship between the adult professional core and strategic management of school heads in managing TVET**

Adult professional core VS	Pearson's r	p-value	Interpretation
Strategy Formulation	0.853	$1.02 \times 10^{-23}$	High Positive Correlation
Strategy Implementation	0.882	$3.58 \times 10^{-27}$	High Positive Correlation
Strategy Evaluation	0.980	$3.00 \times 10^{-56}$	Very High Positive Correlation

*Pearson's r (95% confidence interval)*

It may be gleaned from the table 10 above that adult professional core of the school principals shows a high positive correlation to their strategy formulation, as disclosed by the Pearson's R value of 0.853 and p-value of  $1.02 \times 10^{-23}$ . Similarly, the strategy implementation and adult professional core indicated a high positive correlation as revealed by the Pearson's R value of 0.882 and p-value of  $3.58 \times 10^{-27}$ . Meanwhile, a very high positive correlation was shown on the adult professional core and strategy evaluation of the teachers as indicated by the Pearson's r value of 0.980 and p-value of  $3.00 \times 10^{-56}$ .

**Table 11 - Relationship between the continuous improvement of teaching expertise and strategic management of school heads in managing TVET**

Continuous improvement of teaching expertise VS	Pearson's r	p-value	Interpretation
Strategy Formulation	0.681	$3.79 \times 10^{-12}$	Moderate Positive Correlation
Strategy Implementation	0.761	$2.42 \times 10^{-16}$	High Positive Correlation
Strategy Evaluation	0.720	$4.97 \times 10^{-14}$	High Positive Correlation

*Pearson's r (95% confidence interval)*

Relative to the comparison of the continuous improvement of teaching expertise and strategy formulation, a moderate positive correlation was revealed by the Pearson's R value of 0.681 and p-value of  $3.79 \times 10^{-12}$ . In addition, strategy implementation and continuous improvement of teaching expertise got a Pearson's R value of 0.761 and a p-value of  $2.41 \times 10^{-16}$  which was interpreted to having a high positive correlation. Lastly, continuous improvement of teaching expertise and strategy evaluation noted a high positive correlation as revealed on the Pearson's R value of 0.720 and p-value of  $4.97 \times 10^{-14}$ . Initiating teacher professional development for senior teachers boosted improvement in subject understanding and leadership capacity, according to Taylor et al. (2011), and it also proved helpful for reviving established instructors in the profession. It can be seen from table 12 that the comparison of the results-oriented teams of the school heads and their strategic management presented a no significant relationship. This can be implied that all items pertinent to the result-oriented teams of the school heads are not influential to the management of TVET programs. The Pearson's R value of 0.654 and p-value of  $4.62 \times 10^{-11}$  were recorded on the results - oriented teams and strategy formulation of school heads, interpreted as moderate positive correlation.

**Table 12 - Relationship between the results-oriented teams and strategic management of school heads in managing TVET**

Results-oriented teams VS	Pearson's r	p-value	Interpretation
Strategy Formulation	0.654	$4.62 \times 10^{-11}$	Moderate Positive Correlation
Strategy Implementation	0.709	$1.80 \times 10^{-13}$	High Positive Correlation
Strategy Evaluation	0.654	$4.61 \times 10^{-11}$	Moderate Positive Correlation

*Pearson's r (95% confidence interval)*

On the other hand, strategy implementation got a Pearson's R value of 0.709 and p-value of  $1.80 \times 10^{-13}$  which shows a high positive correlation between the variables. In terms of strategy evaluation, statistical analysis obtained a Pearson's R value of 0.654 and p-value of  $4.61 \times 10^{-11}$ , meaning there is a moderate positive correlation.

#### 4.4 Difference between the Assessment of the School Heads and Teachers

Independent t-test were utilized through SPSS to compare the assessment of the school heads and TLE teachers on the 21<sup>st</sup> century leadership skills and strategic management of the school. The statistical analysis on table 13 below presents that the null hypothesis which states that there is no significant difference on the assessment of the school heads and teachers is rejected on the items like strong advocacy and leadership (t-test value of -2.811 and p-value of 0.006), adult professional core (t-test value of -1.970 and p-value of 0.052), results-oriented teams (t-test value of -2.433 and p-value

of 0.017), strategy formulation (t-test value of -2.576 and p-value of 0.012), strategy implementation (t-test value of -2.013 and p-value of 0.048) and strategy evaluation (t-test value of -2.048 and p-value of 0.044). These indicate that there is a significant difference on the following items. On the other hand, the computed t-test value of -1.323 and p-value of 0.190 shows that the null hypothesis will be accepted, which means that there is no significant difference on the assessment of the school heads and teachers when it comes to their continuous improvement of teaching expertise.

**Table 13 - Difference on the assessment of the school heads and teachers**

Teachers VS School heads	Computed t-value	p-value	Decision on H <sub>0</sub>	Interpretation
Strong Advocacy and Leadership	-2.811	0.006	Reject	Significant Difference
Adult Professional Core	-1.970	0.052	Reject	Significant Difference
Continuous Improvement of Expertise	-1.323	0.190	Accept	No significant Difference
Results-Oriented Teams	-2.433	0.017	Reject	Significant Difference
Strategy Formulation	-2.576	0.012	Reject	Significant Difference
Strategy Implementation	-2.013	0.048	Reject	Significant Difference
Strategy Evaluation	-2.048	0.044	Reject	Significant Difference

#### 4.5 Difference Between the Assessment of the Respondents when Grouped Relative to Their Gender and Length of Work Experience

In determining the significant difference between the assessment of the respondents relative to their gender, an independent t-test was used using SPSS. Meanwhile, ANOVA was used to determine the significant difference on their assessment as to their length of work experience. The independent t-test results on table 14 shows that the null hypothesis which states that there is no significant difference on the assessment of the participants when grouped relative to their gender is accepted. This means that there is no significant difference on the assessment of the respondents when grouped relative to their gender as shown on the computed t-test values and p-values of -0.763 and 0.448 for strong advocacy and leadership, -1.041 and 0.301 for adult professional core, -0.956 and 0.342 for continuous improvement of teaching expertise, -0.501 and 0.618 for results-oriented teams.

**Table 14 - Difference on the assessment of the respondents as to their gender**

Gender VS	Computed t-value	p-value	Decision on H <sub>0</sub>	Interpretation
Strong Advocacy and Leadership	-0.763	0.448	Accept	No significant Difference
Adult Professional Core	-1.041	0.301	Accept	No significant Difference
Continuous Improvement of Expertise	-0.956	0.342	Accept	No significant Difference
Results-Oriented Teams	-0.501	0.618	Accept	No significant Difference
Strategy Formulation	-1.356	0.179	Accept	No significant Difference
Strategy Implementation	-0.596	0.553	Accept	No significant Difference
Strategy Evaluation	-1.344	0.183	Accept	No significant Difference

For strategy formulation, -1.356 t-test value 0.179 p-value were recorded, -0.596 and 0.553 for strategy implementation and -1.344 and 0.183 for strategy evaluation. In addition, ANOVA results on table 15 below revealed that the null hypothesis which states that there is no significant difference on the assessment of the school heads and teachers is rejected on the items like strong advocacy and leadership (f-value of -3.256 and p-value of 0.016), adult professional core (f-value of 5.032 and p-value of 0.001), continuous improvement of teaching expertise (f-value of 2.503 and p-value of 0.049), strategy formulation (f-value of 7.591 and p-value of 0.00003), strategy implementation (f-value of 6.528 and p-value of 0.0001) and strategy evaluation (f-value of -6.061 and p-value of 0.0002).

**Table 15 - Difference on the assessment of the respondents as to their length of work experience**

Work Experience VS	Computed f-value	p-value	Decision on H <sub>0</sub>	Interpretation
Strong Advocacy and Leadership	3.256	0.016	Reject	Significant Difference
Adult Professional Core	5.032	0.001	Reject	Significant Difference
Continuous Improvement of Teaching Expertise	2.503	0.049	Reject	Significant Difference
Results-Oriented Teams	2.387	0.058	Accept	No significant Difference
Strategy Formulation	7.591	0.00003	Reject	Significant Difference
Strategy Implementation	6.528	0.0001	Reject	Significant Difference
Strategy Evaluation	6.061	0.0002	Reject	Significant Difference

These indicate that there is a significant difference on the following items. Contrarily, the computed f-value of 2.387 and p-value of 0.058 shows that the null hypothesis will be accepted, which means that there is no significant difference on the assessment of the respondents regarding their results-oriented teams.

#### 4.6 School Leadership Management Program to Improve the Management of Technical-Vocational Education Programs

A school leadership management program designed with the appropriate components is expected to improve the management of TVET programs in time of changes given that the results of the study shown a moderate to very high correlations between the 21<sup>st</sup> century leadership skills and their strategic management. It is ideal during this time that school heads are manifesting 21<sup>st</sup> century leadership skills to effectively deal with the sudden changes in the school community and make sure that the implementation of the programs are aimed to the attainment of the objectives. In reality, Lingam and Lingam (2014) noted that despite significant changes in the job expected of them, school leaders face difficult obstacles. Nevertheless, many jurisdictions continue to forego requiring candidates for school leader roles to complete mandatory training programs. Tobin (2014) argued that school administration programs should offer building leader candidates opportunity and activities to learn about and solve the various everyday leadership and management issues that face principals today. Programs, according to Day and Sammons (2014), offer possibilities for the training and development of school leaders who want to advance and maintain their success. In order to help school principals, manage programs for technical and vocational education, the researcher suggests the following program. In coming up with the development of the programs, the researchers carefully analyzed the results of the quantitative analysis. Given that the statistical correlation revealed a positive correlation between the 21<sup>st</sup> century leadership and the strategic management of TVET school heads, it is just proper to identify weak points on the leadership skills of the school heads. This is so since it is obvious that a school head imbued with 21<sup>st</sup> century leadership skills are likely to manifest strategic management. Hence, indicators of the leadership skills which obtained the lowest mean values were identified, and were provided with suggested actions and activities to strengthen these key areas. The researcher thereafter included objectives that must be met in ascertaining a doable and research-based presentation of the study’s output.

Indicators	Suggested Actions / Activities	Objectives
Leads a community of learners and is knowledgeable about change management	Participate in Seminar Workshop Relative to Change Management	<ul style="list-style-type: none"> <li>Acquire skills in change management.</li> <li>Apply change management skills in managing TVET programs.</li> <li>Manifest understanding of change management in the school</li> </ul>
Provides opportunities for collaboration and job-embedded learning.	Design programs that will promote collaboration and partnership among TLE teachers	<ul style="list-style-type: none"> <li>Establish a local professional networks of TLE teachers</li> <li>Maximize opportunities and resources for collaboration and job-embedded learning opportunities.</li> </ul>
Manifests own personal learning network and mentor.		<ul style="list-style-type: none"> <li>Display ideal qualities of school leadership through mentoring programs.</li> </ul>
Offers professional development initiatives and program to support the needs of the teachers	Encourage teachers to join in different professional development programs	<ul style="list-style-type: none"> <li>Allow teachers to propose a professional development program.</li> <li>Propose or design professional development activities for TLE teachers.</li> </ul>
Visits teachers frequently and deliver meaningful feedback.	Utilize online platforms and conventions to communicate and interact with the teachers	<ul style="list-style-type: none"> <li>Identify virtual conference platforms that will enable interaction with the teachers.</li> <li>Consult teachers on the matters affecting their job roles.</li> <li>Provide immediate and effective feedback to the teachers.</li> </ul>
Creates groups of effective problem solvers with the accountability and power to take actions and make decisions that support one another.	Involve teachers in task rotations and committee chairmanship	<ul style="list-style-type: none"> <li>Identify the strengths and weaknesses of the teachers.</li> <li>Provide an opportunity for teachers to develop their problem-solving, accountability and decision-making by assigning them to do school roles.</li> </ul>

## 5. Conclusions and Recommendations

### 5.1 Conclusion

The study examined the relationship between 21<sup>st</sup> century instructional leadership and strategic management of school heads. Findings revealed that respondents agreed that their school heads manifest the dimensions of being a 21<sup>st</sup> century leader as exemplified in their strong advocacy and leadership, adult professional core, continuous improvement of teaching expertise and result-oriented teams. They generally agreed that their school heads do the different approaches relative to the formulation, implementation, and evaluation of the strategies for managing the TVET program during this time of the pandemic. A moderate to very high correlation was seen between the 21<sup>st</sup> century leadership skills and strategic management of the school heads in managing TVET programs in this time of COVID-19 pandemic. The null hypothesis which states that there is no significant difference in the assessment of the school heads and teachers was rejected, thus analysis revealed a significant difference between the assessment of the two groups of respondents. Relative to the gender of the participants, no significant difference was seen while a significant difference was noted when they were grouped in terms of their work experience except for the results-oriented teams. A school leadership program constructed based on the approved parts is appropriate to improve the 21<sup>st</sup> century leadership skills of the school heads.

### 5.2 Recommendations

It was suggested that the Department of Education may spearhead seminars/training and other capacity-building programs to improve the 21<sup>st</sup> century skills of the teachers and strategic management of the school heads and the prepared school leadership program may be considered in the preparation of leadership training programs for the school heads. Also, a parallel study may be conducted on a larger population of TLE teachers to determine the 21<sup>st</sup> century leadership skills and strategic management of the school heads.

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### Reference

- Amoli, S. , & Aghashahi, F. (2016). An Investigation on Strategic Management Success Factors in an Educational Complex. *Procedia - Social and Behavioral Sciences*, 230.
- Ayonmike, C.S, Okwelle, P.C., & Okeke, B.C. (2015). Towards Quality Technical Vocational Education and Training (Tvet) Programmes in Nigeria: Challenges and Improvement Strategies.
- Ayeni, A.J. (2018). Principals' Strategic Management and Students' Learning Outcome in Secondary Schools in Ondo State, Nigeria.
- Aytac, T. (2020). The Problems and Opinions of School Administrators during COVID-19 Pandemic: A Qualitative Study from Turkey. *European Journal of Educational Sciences*, 7 (4).
- Baldanza, M. (2018). Baldanza's Model of 21st Century Instructional Leadership. Professional Practices. Retrieved Jan 20<sup>th</sup>, 2022 from <https://justaskpublications.com/just-ask-resource-center/e-newsletters/professionalpractices/baldanzas-model-of-21st-century-instructional-leadership/>
- Benson, K. (2011). Assessment of Leadership Training of Head Teachers and Secondary School Performance in Mubende District Uganda. Retrieved Jan 27<sup>th</sup>, 2022 from <https://files.eric.ed.gov/fulltext/ED531062.pdf>
- Castillo, E. (2020). Delivery of TVET in the New Normal. *Center for Technical Education*
- Davidson, D. (2014). Preparing principals and developing school leadership associations for the 21st century. Retrieved Jan 18<sup>th</sup>, 2022 from [www.internationalschoolsleadership.com](http://www.internationalschoolsleadership.com)
- Day, C. & Sammons, P. (2014). Successful School Leadership. Education Development Trust. The University of Nottingham. Retrieved Jan 27<sup>th</sup>, 2022 from <https://www.educationdevelopmenttrust.com/EducationDevelopmentTrust/files/a3/a359e571-7033-41c7-8fe7-9ba60730082e.pdf>
- Diaz, L.E., Fernandez-Caminero, G., Hernandez-Lloret, CM., Gonzalez-Gonzalez, H. & Alvarez-Castillo, J.L. (2020). Analyzing the Impact of COVID-19 on Education Professionals. Toward a Paradigm Shift: ICT and Neuroeducation as a Binomial of Action. *Sustainability* 2020, 12(14)
- Francisco, C.DC., & Nuqui, A.V. (2020). Emergence of a Situational Leadership during COVID-19 Pandemic called New Normal Leadership. *International Journal of Academic Multidisciplinary Research (IJAMR)*, 4 (10), 15-19.

- Francisco, C.D.C. (2019). School Principals' Transformational Leadership Styles and their Effects on Teachers' Self-efficacy. *International Journal of Advanced Research*, 622-635.
- Hayashi, R., Garcia, M., Don Sudarshana, H., & Balasuriya, A. (2021). COVID-19 Impact on Technical and Vocational Education and Training in Sri Lanka. Retrieved Jan 26<sup>th</sup>, 2022 from <https://www.voced.edu.au/content/ngv%3A89786>
- International Labour Organization. (2020). COVID-19 and the English and Dutch-speaking Caribbean labour market. Retrieved Jan 30<sup>th</sup>, 2022 from [https://www.ilo.org/wcmsp5/groups/public/---americas/---ro-lima/---sro-port\\_of\\_spain/documents/publication/wcms\\_760354.pdf](https://www.ilo.org/wcmsp5/groups/public/---americas/---ro-lima/---sro-port_of_spain/documents/publication/wcms_760354.pdf)
- Kaume-Mwinzi, R.K. (2015). Administrative and leadership innovation in the 21st century: a secondary school subsector perspective in Kenya. *Research in Pedagogy*, 6 (2), pp. 85-94.
- Latorre, M. J., Blanco, F. J. (2013). Strategic management is key to improving the quality of education. *Procedia - Social & Behavioural Sciences*, 81, 270-274.
- Lemay, DJ., Bazalais, P., & Doleck, T. (2021). Transition to online learning during the COVID-19 pandemic. *Computers in Human Behavior Reports. Science Direct. Computer in Human Behaviour Reports*.
- Lingam, G.I. & Lingam, N. (2014). Leadership and Management Training for School Heads: A Milestone Achievement for Fiji. *ISEA 42 (2)*.
- McLeod, S., & Dulsky, S. (2021). Resilience, Reorientation, and Reinvention: School Leadership During the Early Months of the COVID-19 Pandemic. *Frontiers in Education*.
- Majumdar, S. and Araiztegui, I. (2020) Technical Vocational Education & Training - reflections in the issues facing TVET and its potential in the time of COVID-19. Retrieved Jan 27<sup>th</sup>, 2022 from <https://drive.google.com/file/d/1jj-drtBHoE--UoOY56yRydbkITsnG-ra/view>
- Martineau, D.M, Charland, P., Arvisais, O., & Vinuesa, V. (2020). Education and COVID-19: challenges and opportunities. Retrieved Jan 29<sup>th</sup>, 2022 from <https://en.ccunesco.ca/idealab/education-and-covid-19-challenges-and-opportunities>
- Mbatha, J.T. (2021). Managing Educational Resources in a TVET context: A Case Study of Campus Managers. School of Education. Edgewood Campus. Retrieved Jan 18<sup>th</sup>, 2022 from <https://core.ac.uk/download/pdf/491675942.pdf>
- Mjaku, G. (2020). Strategic Management and Strategic Leadership. *International Journal of Scientific and research Publication*, 10 (8), 914-918.
- Murashkin, M., Tyrväinen, J. (2020). Adapting to the New Normal. A Qualitative Study of Digital Leadership in Crisis. Department of Business Administration. Master's Program in Management. Master's Thesis in Business Administration II.
- Ndahi, H., (2020). The impact of the COVID-19 pandemic on the delivery of TVET in CARICOM Member States. International Labour Organization. Retrieved Jan 30<sup>th</sup>, 2022 from [bit.ly/3N1miyX](http://bit.ly/3N1miyX)
- Osam, I. (2013). Implementing Vocational and Technical Education Programmes in South Nigeria: A Case of Rivers State. *International Journal of Scientific Research in Education*, 6(2), 128-148.
- Oyedele V., Chikwature, W., & Mhandu, E. (2016). Evaluating the Strategic Management Skills Exhibited by Government Secondary School Administrators in Mutare District. *European Journal of Research and Reflection in Management Sciences*, 4 (3), 1-23.
- Özdemir, S., Çoban, Ö., & Bozkurt, S. (2020). Examination of the relationship between school principals' 21st century skills and their strategic leadership according to teachers' opinions. *Pegem Eğitim ve Öğretim Dergisi*, 10(2).
- Pasia, A.J.I. (2019). Educational Leadership Strategies to Facilitate a School Transition into the Philippine K to 12 Basic Education Curriculum. *International Journal of Education and Research*, 7 (7).
- Ramos, F. G. (2021). An Evaluation of the Technical Vocational Livelihood Track in Public Senior High Schools in the Division of Batangas: Basis for an Enhancement Program. *International Journal of Academic Research in Progressive Education and Development*, 10(2),
- Schlebusch G. & Mokhatle M. (2016). Strategic Planning as a Management Tool for School Principals in Rural Schools in the Motheo District. *International Journal of Educational Science*, 13(3).
- Syauqi, K., Munadi, S., & Triyono, MB. (2020). Students' perceptions toward vocational education on online learning during the COVID-19 pandemic. *International Journal of Evaluation and Research in Education (IJERE)* 9 (4).



Taylor, M., Yates, A.S., Meyer, L.H. (2011). Teacher professional leadership in support of teacher professional development. *Teaching and teacher education* 27(1), 85-94.

Vecaldo, R.T. (2019). Instructional leadership beliefs of Filipino pre-service teachers. *International Journal of Evaluation and Research in Education (IJERE)*, 8 (4), Retrieved Jan 27<sup>th</sup>, 2022 from <http://iaescore.com/journals/index.php/IJERE>

Wooi, T. (2017). Strategic Management in Education. Retrieved Jan 29<sup>th</sup>, 2022 from <https://www.slideshare.net/timothywooi/strategicmanagement-in-education>