Problem-Solving And Decision-Making Skills of School Administrators Influenced by their Individual Preferences

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ABSTRACT

Decision-making and problem-solving processes play a crucial role in enabling organizations to deal with a complex global environment. This analytical investigation aimed to determine the perceptual levels of problem-solving and decision-making skills of administrators belonging to top-and-middle-level administrators in Nueva Vizcaya State University Bayombong and Bambang campus influenced by their individual preferences. It identified the prevailing organizational decision-making models and the relationship of profile variables with problem-solving and decision-making skills. The study made use of descriptive-correlational-comparative research design. In gathering the individual preferences, a three-factor model based on Carl Jung's study with the primary tool, "Problem-Solving and Decision-Making Questionnaire." The results showed that respondents belonging to the ambivert type have "high" problem-solving and decision-making skills, critical thinking, risk assessment, alternative weighing, data gathering and processing, perception and judgment, tool selection, and "moderate" lateral conceptualization skills. The prevalent organizational decision-making models employed are routine and creative. It was identified that educational attainment, designation, and the number of years in a position influence the respondent's problem-solving and decision-making practices. Individual preferences significantly relate to critical thinking skills than other problem-solving and decision-making skills.

Keywords: problem-solving, decision making, individual preferences, school administrators

INTRODUCTION

Every day, human beings are presented with contradictory situations containing obstacles that must be overcome to attain the goal; this is known as a problem (Dostál, 2015). According to Nielsen and Minda (2019), a problem can be described as an impasse or difference between present and future target states.
Problem-solving is the method of resolving the challenges encountered in achieving an objective by exploring the causes and implications (Büyüköztürk, Çakmak, Akgün, Karadeniz & Demirel, 2013; Karasar, 2012). According to Doyle (2020), problem-solving abilities necessitate promptly identifying the root cause and executing a solution. It is seen as a soft skill (a personal strength) rather than a hard talent acquired via school or training.
People make decisions all the time in their life. Although the importance of decisions varies, the ability to make excellent judgments is critical. Furthermore, the outcomes of everyday decision-making may be examined objectively and subjectively (Geisler & Allwood, 2015). It is common to confront many challenges, some of which are tough to address yet can be accomplished. When attempting to address these challenges, people either utilize tactics they have previously employed to handle comparable difficulties or employ other ways; this is where decision-making comes into play (Ince, 2018). As observed by Dacles (2010), making decisions is never easy, mainly if it involves the welfare of a group or an organization. Perhaps, when it concerns only the individual decision-maker, it becomes easier to make because nobody except himself would be in danger. The situation becomes deplorable if this decision affects another individual or group of individuals. Managers of organizations cannot decide alone, especially in matters affecting the entire organization.
Complex, higher-order thinking is demonstrated through problem-solving and decision-making. Both entail assessing the surroundings, using working memory or short-term memory, relying on long-term memory, the consequences of knowledge, and using heuristics to finish an activity (Nielsen & Minda, 2019). Talanker (2016) noted that problem-solving and decision-making (PSDM) algorithms share a remarkable resemblance,

which is why these two research variables are coupled together in determining the capability of an administrator in this aspect of management. In addition, he mentioned in his study that "naturalistic" patterns of PSDM, both efficient and unproductive, are comparable.

From the preceding definitions of decision-making, one can infer that the entire process of decision-making involves skills development. It has been identified by Warner (2002) that there are seven skills involved in problem-solving and decision making, namely: critical thinking, lateral conceptualization, risk assessment, alternative weighing, data gathering and processing, perception and judgment, and tool selection.

According to a research article by Turan, Fidan, and Yildiran (2019), critical thinking skills explore the opportunity to think thoroughly and deeply about obstacles, concerns, and topics to maximize a person's approach to potential alternatives that may work in a challenging situation that needs decision-making. Also, Heidari and Ebrahimi (2016) stated that the willingness to think critically would encourage individuals to think differently, make informed choices, and make more attempts to reflect on circumstances. Lateral conceptualization skills consider the degree to which concepts, theories, or even possible alternatives that are not the most urgent or most visible to some are tried to be taken through (Aithal & Suresh Kumar, 2017). Risk assessment skills indicate the degree to which the consequences of future courses of action or actions are routinely measured. According to Wright (2018), as a safeguard against the various cognitive biases that are likely to exist, risk management should be based on a quantitative approach to risk analysis, and managers should be taught to understand the most prevalent cognitive biases and decision errors. Moreover, risk management also recognizes the negative and positive results. Alternative weighing skills can select a good option from two or more alternatives (Kolmar, 2021). The skill demonstrates the degree to which evidence, concepts, alternatives, and possibilities are reasonably analyzed to ensure that the right choices are likely to be made, relying on one's own experience and those of others as appropriate (Eshlaghy & Farokhi, 2011). Data gathering and processing skills: How one uses to address challenges efficiently and effectively is gathered regularly and comprehensively. According to Jeble, Kumari, and Patil (2018), data allows management to make better choices rather than speculation based on facts. Perception and judgment skills look at the degree to which one synthesizes what one sees, experiences, or senses successfully to form a coherent picture of what would be realistic and feasible as a plan of action (Zhang & Highhouse, 2018). Tool selection skills examine how easily one decides how it can 'unfold' or plan to solve a dilemma or decide; this means that good decision-making adds to the well-articulated group strategy (Březinová, Brelik, & Kozák, 2016).

A central component of human personality is the Extraversion-Introversion feature. The ideas of Introversion and Extraversion were popularized first by Carl Jung (2016). Since extraversion and introversion are commonly taken as a continuous spectrum, one must be high on one and low on the other. Moreover, according to Matthews (2019), extraversion-introversion is a well-established personality dimension that is included in the standard Five-Factor Model of personality characteristics.

Extraversion is the conduct, state of being, or activity primarily concerning oneself seeking gratification outside of oneself (Merriam-Webster Dictionary, 2020b). In an article by Batey and Hughes (2017), they stated that extraversion encompasses two components of personality: enthusiasm and assertiveness. Enthusiasm may imply that a role for cooperation, networking, and the connection is required due to one's own beliefs of personal creativity. Moreover, Extraversion is one of the Big Five dimensions, indicating the common variance of more specific qualities, including gregariousness, assertiveness, enthusiasm, talkativeness, activity level, and excitement-seeking (McNaughton, DeYoung, & Corr, 2016).

Introversion is the state of or propensity to be entirely or primarily obsessed with and involved in an individual's own mental life (Merriam-Webster Dictionary, 2020c). According to Ikiugu (2007), they are better listeners than speakers. They have few relationships, but those that they do have are passionate. They ponder and consider before speaking, and as a result, they are frequently certain of what they say; their words are well-calibrated. They are entirely focused on the task at hand. In addition, introversion has been connected to personality qualities associated with a proclivity to feel more strong emotions and more difficulty managing these feelings (Wei, 2020).

Ambiversion is used to characterize people who fall in the middle more or less explicitly and show all community tendencies (Merriam-Webster Dictionary, 2020a). In an article by Pertric (2019), an ambivert possesses traits of both introversion and extraversion and can switch between the two based on their mood, context, and goals.

In 2015, Chen, Jiang, and Mu conducted a study on the correlation between introversion or extroversion and oral English learning outcomes. They found out that extroverted learners have better chances of engaging in oral interaction than introverts who show inactivity. Al Harbi (2017) conducted a cross-sectional study on the effect of introversion on educational attainment. Focusing on college students' health, he used a self-administered questionnaire to obtain the data needed. He then found out that most of the students are ambiverts, followed by extroverts, then introverts. However, the result showed that personality types are not significant with the educational attainment of learners.

Introvert, ambivert, and extrovert are defined as a spectrum of personality traits rather than personality types. Having someone who is pure introvert or extrovert happens rarely. Ambiverts has the most adaptive personality traits by possessing both extroversion and introversion. Moreover, most personalities only lie

between the extremities of extroversion and introversion. Therefore, introversion-extraversion rates are part of a single, continuous personality dimension (Petric, 2019).

The research illustrates the connection between PSDM skills and the respondents' profile variables (sex, age, ethnicity, civil status, computer literacy level, personality type, number of eligibilities, highest educational attainment, academic rank, designation, number of years in the position, length of service, and number of relevant training). The possible connection among the variables had to be determined to test if the "presumed factor variables" influenced the respondents' problem-solving and decision-making.

METHODOLOGY
Research Design
This study made use of descriptive-correlational and qualitative research methods. The first part of the study described the profile characteristics of the Nueva Vizcaya State University administrators in terms of sex, age, ethnicity, civil status, computer literacy, personality type, academic rank, number of eligibilities, highest educational attainment, designation, number of years in the position, length of service, and relevant training attended. The second part determined the school administrators' individual preferences and levels of problem-solving and decision-making skills through a self-report survey, which included some skills and values per skill category. Interpretation of problem-solving and decision-making levels was based on the Worldwide Center for Organizational Development. The Interpretation Scale was adapted by Dacles (2010) in his study, which the researchers then adapted to interpret the data gathered. The third part comprises individual skills, and organizational decision-making models through a case example. The fourth part showed significant differences when grouped according to the profile variables. The fifth part determined the relation or influence of the respondents' individual preferences and their PSDM skills. The sixth part determined the significant differences in the skills of the respondents, according to campus. The final part presents the proposed management intervention based on the significant findings of the study.

Respondents and Sampling Procedure
This research is a population study that included the top-and-middle level management of the Nueva Vizcaya State University, both campuses, comprising the President and Vice-Presidents, the College Deans, Directors and Administrative Heads. These groups of respondents' offices are where most problems relative to educational organization management abound and where crucial educational decisions are therefore made.

Research Instruments
The researchers used a questionnaire to gather data from the respondents, and the following are its contents:

Demographic profile
A Personal Data Sheet used for eliciting information to establish the respondents' profile was developed by the researchers based on the variables sex, age, ethnicity, civil status, computer literacy, personality type, number of eligibilities, highest educational attainment, academic rank, designation, number of years in the position, length of service and number of relevant training attended.

Problem Solving and Decision Making Skills Self-Report Survey
The researchers developed the three-factor model based on Carl Jung's study to gather data from the respondents' individual preferences. The 84-item research instrument on Problem Solving and Decision-Making Skills has a computed reliability coefficient of $\alpha= 0.9869$, implying that the instrument is highly reliable based on the generally accepted rule that a reliability coefficient of 0.60 and above is considered reliable according to Hudson and Ferguson (2016).

The data gathered through this tool comprises the main bulk of the findings. They were utilized in determining the respondents' levels of problem-solving and decision-making skills, namely: (1) critical thinking, (2) lateral conceptualization, (3) risk assessment, (4) alternative weighing, (5) data-gathering and processing, (6) perception and judgment, and (7) tool-selection.

Measuring personality preferences is generally measured by self-report. In this study, the administrators were asked to respond to 20 items; 10 of these have some learnings on extroversion, while the other ten items are for introversion. The administrators were asked if they agree or disagree with the statements in determining the type of personality preferences of the administrators, frequency counting, and percentage.

Data-Gathering Procedure
The list of top-and-middle-level managers on both campuses was secured from the Records Office to determine the sample size to represent the population statistically. This list served as the sampling frame for the random selection of the respondents. After identifying the 52 randomly selected respondents, the Personal

Data Sheet, checklist, and questionnaire were administered. The retrieval took place after three weeks through a conduit retrieval of the questionnaires. After which, the researchers scored the accomplished research instruments to gather the data needed to answer the specific questions in this study. The findings were tabulated in a worksheet following the research instruments' administration, which served as the basis for the statistical treatment of the collected data to answer the specific questions posed in the Introduction. It was accompanied by analysis and interpretation of the results, after which the conclusions were given based on the findings discovered in the investigation.

RESULTS AND DISCUSSIONS
Individual Preferences of the Respondents in their Problem Solving and Decision-Making Practice

Table 1. Individual Preferences of the Respondents in their Problem Solving and Decision Making Practices

Individual Preferences	f	%
Ambivert	46	88.46
Extrovert	4	7.69
Introvert	2	3.84
Total	**52**	**100.00**

In table 1, the data were identified by gathering the ratings of the respondents to themselves. The result indicates that the majority of administrators are categorized as ambiverts. According to research conducted by Hudson and Ferguson (2016) about leadership personalities, ambiverts, based on their personality type, fit a model of good leadership. They also noted that the ambivert person could behave like a chameleon, adapting to the team's make-up as required. Thus, it can be implied that ambiverts make up most administrators since this personality type can easily lead or manage a group.

Respondents' Levels of Problem-Solving and Decision-Making Skills in Terms of Individual Skills and Preferred Organizational Decision-Making Models

Table 2. Problem-solving and decision-making skills

Individual skills	Mean	SD	QD
Critical Thinking	4.10	0.57191	High
Lateral Conceptualization	3.69	0.5557	Moderate
Risk Assessment	3.91	0.5206	High
Alternative Weighing	4.01	0.5707	High
Data Gathering and Processing	4.01	0.5460	High
Perception and Judgement	3.96	0.3840	High
Tool Selection	3.69	0.6013	High

WCOD Interpretation Scale: 3.75 and above- High; 2.75-3.74- Moderate and 2.74 and below –Low
In table two, the results show that administrators exhibit high skills in critical thinking, risk assessment, alternative weighing, data gathering and processing, perception and judgment, and tool selection, while moderate in lateral conceptualization skills.
In a study conducted about critical thinking as a decision-making tool, the researchers found out that critical thinking is indeed an essential prerequisite for effective decisions to be made by individuals, and it significantly affects the quality of the decision one makes, according to Turan, Filan, and Yildiran (2019).
The result indicates that administrators highly utilize their risk assessment skills in making decisions in risk assessment skills. It is noted in a research study that a significant part of project management is risk assessment. In the same study results, the respondents were reported to use several risk assessment methods that play a significant role in decision-making and lead to the acceptance or rejection of submitted projects (Junkes, Tereso, & Afonso, 2015).
The results indicate alternative weighing skills that administrators have honed in handling daily problem-solving and decision-making activities. They also tend to be more rational and think thoroughly about the impacts of the decisions they make. Moreover, the results further strengthen Aydin (2010) claimed in his research that choosing and evaluating the best alternative option is always done during the decision-making process. Thus, this explains the high overall total mean of administrators in terms of their alternative weighing ability.
In data gathering and processing skills, the administrators believe that gathering and processing data can differentiate or distinguish perception from evidence, cause effects, specify the main problems to be solved and

put into table form the complex data for tabulation purposes. The results of data gathering and processing skills imply that administrators are highly utilizing this skill to address problems and make decisions since the mean overall total is also high. Moreover, this further strengthens the result of research by Albritton (2011) that the area in which administrators use data most is on school improvement, which includes making decisions and addressing problems for the betterment of the school.

In perception and judgment skills, the administrators believe that they have to look for criteria to base their decisions to avoid bias and subjectivity in making reasonable judgments or decisions about an issue or a problem. The results of this skill imply that administrators highly rely on their perception and judgment skills since the mean overall score is rated high. The results also indicate that these administrators' perceptions or intuition and judgment can help produce more accurate or correct results in choosing a solution to a problem. Moreover, the results further strengthen the claim of Selart (2021) in his book that leaders are more likely to produce correct or partially correct judgments by using these skills. Lastly, he also stressed the importance of leaders' ability to evaluate their capacity in decision-making to yield better outcomes.

In the tool selection skills, the administrators believe that they still feel a need to improve their ability to use other tools or means of studying the problem or issue and not just traditional ways of solving it. This skill indicates that the administrators are open to learning new methods or techniques in solving problems that come their way. In addition, the results further support the claim of Szarucki (2013) in his research wherein he stresses the importance of selecting a suitable method to resolve a specific managerial problem and the usefulness of these skills for discovering other factors for organizational challenges.

The results in lateral conceptualization skills indicate administrators moderately use this skill in daily decision-making and problem-solving activities. Also, since the results vary only between high and moderate, it can be implied that there is more to improve when it comes to the lateral conceptualization skills of administrators. A reason for this is because a similar study found out that there is a high correlation between managerial skills and lateral conceptualization skills among school headmasters (Gnanamalar & Raja, 2017). This means that when administrators' lateral conceptualization skills are high, their managerial skills are also better.

Table 3. Organizational Decision-Making Models

Organizational Decision-Making Models	Mean per Item	Overall Mean
A. Routine Decision-Making Model		
1. Our institution follows a definite procedure in solving institutional problems, and choices are motivated by proactive means and are oriented toward long-term goals.	3.34	3.73
2. Solutions to problems are approached by predictable means, which makes decision-making too obvious. When a unique problem arises and is solved, the institution sets policies to deal with them for the future.	4.13	
B. Participative/Negotiated Decision-Making Model		
1. Each one is consulted with his or her opinion/stand about a problem to help decide which one best solves the problem and compromise between and among factions.	4.19	4.39
2. Because of differences in norms, values, and interests, opposing factions confront each other concerning either end or means. However, it is customary in our institution to listen to all stakeholders' opinions or views about institutional problems to help solve problems and make appropriate decisions.	4.59	
C. Creative Decision-Making Model		
1. The problem's personality processing pervades our institution, bringing unique approaches to problems yet uncertain about their outcomes.	3.21	3.75
2. Reliance on judgment, intuition, and creativity pervades our institution in solving problems.	4.13	
3. There is a lack of an agreed-upon method of dealing with institutional problems in our school, and so innovative means are introduced to solve institutional problems that may change earlier-established goals.	3.92	

In table three, the respondents believed that most decisions fell under the Routine Type or Programmed Decision Making Model as collected from the overall mean, which ranked first (overall x¨ = 3.73). Ranked second in the table is the Creative Decision-Making Model (overall x¨ = 3.75). The administrators believe that when individual processing of the problem pervades the institution, which brings time, reliance on judgment, intuition, and creativity pervades the institution in solving problems. At times there is a lack of an agreed-upon method of dealing with institutional problems in the school. So innovative means are introduced to solve institutional problems that may change an earlier-established goal. Lastly, ranked third is the Participative or

Negotiated Decision-Making Model (overall ẍ = 4.39). The administrators believe that there are instances when each university is consulted with his or her opinion/stand about a problem to help decide which one best solves the problem. A compromise between and among factions is usually arrived at. Because of differences in norms, values, and interests, opposing factions confront each other concerning either end or means. However, it is customary to listen to all stakeholders' opinions or views about institutional problems to help solve problems and make appropriate decisions.

Table 4. Significant Differences in the Levels of PSDM Skills of the Respondents When Grouped according to Sex

	t	df	P	Mean Diff.	Decision
Overall PSDM skills for Sex	0.382	50	0.704	0.05490	**Accept Ho**

In table five, the independent t-test samples were used to test whether there was a significant difference between male and female administrators' skills. The outcome shows that probabilities greater than 0.05 are present in the computed t-values. This does not indicate any significant differences between male and female respondents' problem-solving and decision-making skills. Therefore, sex as a variable does not have any bearing on male and female administrators' decision-making skills and capabilities. The result seen in the table further strengthens the claim in research about leadership and gender differences. In terms of leadership styles, they noted the possibility of leaders cultivating a set of abilities that are not generally usually related to their gender (Radu, Deaconu, Frasineanu, 2017).

Table 5. Significant Differences in the Levels of PSDM Skills of the Respondents When Grouped according to Age

	Source of Variations	Sums of Squares	df	Mean Square	F	Sig.	Decision
Overall PSDM skills for Age	between groups	0.306	2	0.153	0.569	0.570	**Accept Ho**
	within groups	13.152	49	0.268			

In table six, the One-Way Analysis of Variance (ANOVA) was used to compute significant differences. Results reveal that with the significance level set at 0.05, all the computed F-values show probabilities greater than 0.05, indicating no significant differences in the administrators' PSDM skills regardless of age clusters. Age does not have any bearing on the respondents' decision-making skills. The results further strengthen Rosing and Jungmann's (2015) study, wherein they stated that old and young leaders are equally effective in their job.

Table 6. Significant Differences in the Levels of PSDM Skills of the Respondents When Grouped according to Personality Type, Academic Rank, and Length of Service

	Source of Variations	Sums of Squares	df	Mean Square	F	P	Decision
Personality Type	between groups	2.616	7	0.374	1.516	0.187	**Accept Ho**
	within groups	10.842	44	0.246			
Academic Rank	between groups	0.716	3	0.239	0.899	0.449	**Accept Ho**
	within groups	12.742	48	0.265			
Length of Service	between groups	0.865	2	0.433	1.684	0.196	**Accept Ho**
	within groups	12.592	49	0.257			

Table seven shows no significant difference between the levels of PSDM skill and the respondents' personality type, academic rank, and length of service.

In terms of personality types, the administrators were grouped into eight: enthusiast, helper, leader, motivator, reformer, romantic, skeptic, and thinker. Based on the computed F value, the probability levels are all greater than 0.05. This means that whether one is a leader or a thinker, a romanticist or an enthusiast, the level of their PSDM skills does not significantly differ. Personality type has no bearing on the decision-making skills and capabilities of the administrators.

In computing for the significant difference in their PSDM skills when grouped according to academic rank, the administrators were clustered into four, namely: those with a rank of Professor (sub –ranks 1-6), those with a rank of Associate Professor (sub-ranks 1-5), those with a rank of Assistant Professor (sub-ranks 1-4) and those labeled "Others" (Administrative Officer, Medical Officer, and such). Based on the results, the computed F-value has greater probabilities than 0.05. This means that whether one is a professor, associate, or assistant Professor, the respondents' levels of PSDM skills are the same. In this study, the administrators are on equal footing concerning their decision-making skills and capabilities.

To test if there existed a significant difference in the respondents' decision-making skills when grouped according to the length of service. They were clustered into three groups, namely: those whose length of

services is between "8 to 20 years", those whose length of services are "between 21 to 27 years", and those whose length of services are from "28 and above". Results show no significant differences as indicated by the computed F- values with probabilities greater than 0.05. This means that administrators' decision-making skills and capabilities do not considerably differ irrespective of service length. In this study, the length of service is not a factor for dissimilarity in the administrators' PSDM skills.

Table 7. Significant Differences in the Levels of PSDM Skills of the Respondents When Grouped according to Educational Attainment and Designation

	Educational Attainment	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P	Decision
Educational Attainment	with Master's	12	18.42	221.00	143.0	0.035*	Reject Ho
	with Doctorate	40	28.93	28.93			
	Designation	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P	Decision
Designation	Top-level Manager	5	43.00	215.00	35.00	0.010	Reject Ho
	Middle-level Manager	47	24.74	1163.00			

In computing for significant differences in their PSDM skills when the administrators were grouped according to the highest educational attainment, the non-parametric type using the Mann-Whitney U test was utilized. Results indicate significant differences in the administrators' decision-making skills and capabilities, as evidenced by computed U values that show lesser probabilities than 0.05. Administrators who finished their doctorate studies rated themselves higher than those with master's degrees. In this study, the decision-making skills of the administrators are influenced by their educational attainment. The computer U values for alternative weighing, perception, judgment, and tool selection skills yielded higher values than 0.05, indicating no significant difference in these categories of PSDM; thus, educational attainment does not affect PSDM skills.

The administrators were also grouped according to management designation, namely, top-level management consisting of the University president and vice presidents; and middle-level management consisting of the deans, directors, head of offices, and others. Based on the result, all the computed U test results have probabilistic levels lower than 0.05. This means that top-level and middle-level managers' problem-solving decision-making skills differ in the skill mentioned above categories. The top-level administrators rated themselves higher than the middle managers in all decision-making skill categories based on the mean rank. It is logical since institutional problems are solved at the top level, where decision-making is almost every day.

Table 8. Significant Differences in the Levels of PSDM Skills of the Respondents When Grouped according to Number of Eligibilities

	t	df	P	Mean Difference	Decision
Number of Eligibilities	-0.470	50	0.640	-0.06798	Accept Ho

In table nine, to test if there existed a significant difference in the administrators' PSDM skills when grouped according to the number of eligibility, the parametric tool using independent samples t-test was used. The result indicated that all the computed t-values have probabilities greater than 0.05. This means that the number of eligibility does not have any bearing on the administrators' problem-solving and decision-making skills in this study.

Table 9. Significant Differences in the Levels of PSDM Skills of the Respondents When Grouped according to Years in Position

Groups Compared	Mean Difference	Std. Error	P
1 to 5 Years vs 6 to 10 Years	-0.14575	0.16589	0.384
1 to 5 Years vs 11 and above Years	0.33952	0.18960	0.080
6 to 10 Years vs 11 and above Years	0.48526*	0.19319	0.015

In table ten, in terms of years in the position as administrator, the respondents were grouped into three, namely: those years in position are "between 1 to 5 years", those whose years in position are "between 6 to 10 years," and those "with 11 and above years". The analysis of variance test indicates no significant difference in six skill categories except for data gathering and processing skills (F=3.195, p=.050). The results would mean that years in position among administrators are considered in the problem solving and decision-making skill level in this skill category. This is understandable because the respondents would most likely consider the office they represent and the amount of data or information gathered during their incumbency to solve problems and make

critical decisions. All other skill categories showed no significant difference. The post hoc test indicates the mean difference between and within variables. The difference could be seen between those whose years in position longer obtained higher mean scores for data gathering and processing skills.

Significant Differences in the Levels of PSDM Skills of the Respondents When Grouped according to Number of Relevant Training

Table 10. Significant Differences in the Levels of PSDM Skills of the Respondents When Grouped according to International training

Relevant training	t	df	P	Mean Diff.	Decision
Overall PSDM for International Training	-0.282	50	0.779	-0.04060	Accept Ho

The results show in table twelve that there is no significant difference between the Levels of PSDM Skills of the Respondents and relevant International training.

Table 10. Significant Differences in the Levels of PSDM Skills of the Respondents When Grouped according to National, Regional, Provincial training, and Institutional training

Relevant Training	Source of Variation	N	Mean Ranks	Sum of Ranks	Mann-Whitney U	P	Decision
National Training	No Training	6	27.17	163.00	134.0	0.909	Accept Ho
	With Training	46	26.41	1215.00			
Regional Training	No Training	15	23.60	354.00	234.0	0.380	Accept Ho
	With Training	37	1024.00	1024.00			
Provincial Training	With 3 or more	46	26.35	1212.00	131.0	0.841	Accept Ho
	With 1 to 2	6	27.67	166.00			
Institutional Training	With 1 to 2 Training	12	26.83	322.00	236.0	0.931	Accept Ho
	With 3 or more	6	26.40	1056.00			

In terms of relevant national training, the administrators were grouped again into two, namely, those without national training and national training. To create fairness in the respondents' distribution, the non-parametric type of tool using the Mann-Whitney U test was used. The results indicate no significant differences between the two groups, as indicated by the U values, which have probability values greater than 0.05. This means that regardless of the number of national training attended, the administrators' levels of PSDM skills do not vary.

Regarding relevant regional training, the respondents were again grouped into those without training and regional training. The non-parametric test using the Mann-Whitney U test was utilized to balance the number of respondents. Results show no significant differences between the two groups, as indicated by the computed U values with probabilities greater than 0.05. This means that regardless of the number of regional training, the administrators are still on equal footing concerning their level of PSDM skills.

In terms of relevant provincial training, the administrators were grouped again into two, namely, those "with three or more training" and those with 1 or 2 training." Results indicated that the computed U values have probabilities greater than 0.05. This means that regardless of the number of provincial training available, the respondents' level of PSDM skills does not vary.

As regards relevant institutional training attended, the administrators were again grouped into two: those "with 1 or 2 training" and those "with three or more training." The result shows no significant difference, as indicated by the computed p-values, all greater than the set significance level at 0.05. This means that regardless of the number of institutional training available, the administrators are on equal footing about PSDM skills.

Significant Relation/Influence between Individual Preferences of Administrators and Their Problem Solving and Decision Making Skills

Table 11. Summary of Correlation between Respondents' Individual Preferences and PSDM Skills

PSDM Skills	r-values	P	Decision
Critical Thinking	-0.282*	**0.043**	**Reject Ho**
Lateral Conceptualization	-0.262	0.061	Accept Ho
Risk Assessment	-0.194	0.167	Accept Ho
Alternative Weighing	-0.174	0.218	Accept Ho
Data Gathering and Processing	-0.172	0.223	Accept Ho
Perception and Judgement	-0.115	0.418	Accept Ho
Tool Selection	-0.166	.239	Accept Ho
Overall PSDM Skills	-0.228	0.104	Accept Ho

Table thirteen's results indicate that lateral conceptualization, risk assessment skills, alternative weighing, data gathering and processing, perception and judgment, and tool selection do not significantly correlate with the three types of individual preferences. All the computed r-values have probabilities greater than 0.05. However, critical thinking skills showed a significant correlation with the three types of individual preferences (r=0.282, p=.043), leading to the rejection of the null hypothesis. This could mean that the three types significantly relate to or influence the school administrators' critical thinking skills in critical thinking.

CONCLUSIONS

1. Generally belonging to the ambivert type, the administrator respondents rated their problem-solving and decision-making skills as "high."
2. The respondents rated themselves "high" in critical thinking skills, risk assessment, alternative weighing, data gathering and processing, perception and judgment, and tool selection and "moderate" in lateral conceptualization. The university's most prevalent organizational decision-making models are routine or programmed models, followed by a creative or non-programmed model and a participative or negotiated decision-making model. Meanwhile, the top-most priority among administrators in hiring teacher applicants for the proper position in ascending order is the applicants' academic preparation or degree finished, teaching experience, relevant training, performance rating/s for the past year, and dedication to one's work. The three last factors in their priorities are the applicant's age, civil status, and political clout.
3. Educational attainment, designation, and the number of years in position can influence the respondents' problem-solving and decision-making.
4. Individual preferences significantly relate to the respondents' critical thinking skills than problem-solving and decision-making skills.

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