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Leading Education for the Future: Foresight Knowledge and Foresight Practice in Education Development Planning

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Abstract

Aim: The principal intent of this research is to ascertain the level of foresight knowledge and the level of foresight practice among education development planners in the Schools Division Offices throughout the Department of Education, Region IV-A CALABARZON.

Methodology: This study employed a descriptive, comparative-correlational design using surveys to determine the relationship between the variables. This study was participated by the 97 members of the Division Education Development Planning committees from the 23 Schools Division Offices in the region. Purposive sampling was employed with the criteria that they are part of the division's education development planning committee, and then, after, total enumeration of all qualified. Utilizing a validated questionnaire, this study measured foresight knowledge and foresight practices across several components.

Results: Findings indicate that respondents possess a moderate level of foresight knowledge (mean = 2.95) and foresight practice (mean = 2.71), with significant differences in knowledge observed between different positions but not across other demographics. A strong positive correlation ($r = 0.779$, $p < 0.001$) between foresight knowledge and practice was identified, suggesting that increased knowledge leads to better implementation.

Conclusion: The findings of this study shed light on the relationship between foresight knowledge and foresight practice among educational planners and administrators in the DepEd CALABARZON Region. Through the use of Pearson's *r* correlation analysis, it was determined that as the level of foresight knowledge increases, so does the level of foresight practice.

Keywords: Strategic Foresight, Educational Planning, Foresight Knowledge, Foresight Practices, CALABARZON

INTRODUCTION

There is a new imperative in leading education plans. Education, as a cornerstone of societal progress, stands at the nexus of transformation in an increasingly complex and dynamic world. Leading education in this current landscape is marked by evolving challenges, emerging technologies, changing demographics, and shifting global dynamics (Amihan, Sanchez & Carvajal, 2023). To navigate this intricate terrain, educators, policymakers, and institutions must embrace a proactive approach that transcends traditional planning - enter the realm of strategic foresight.

In the context of education development planning, which entails the comprehensive roadmap for the enhancement and evolution of educational systems (Webster & Litchika, 2020), strategic foresight represents a paradigm shift. It signifies a departure from reactive, short-term decision-making to a proactive and visionary approach, predicated on holistic understanding, foresight, and anticipation. Foresight planning in education involves the systematic exploration and evaluation of emerging trends, uncertainties, and scenarios, empowering education stakeholders to devise policies and strategies that are agile, resilient, and forward-looking (Dzhabrailova, 2019). Strategic foresight is concerned with strengthening a leader's decision-making abilities and capacity to execute change (Carvajal & Sanchez, 2023; Muńoz & Sanchez, 2023; Salendab, Ocariza-Salendab & Sanchez, 2023). The

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implementation and practice of strategic foresight influences planning, goal setting, and decision-making behaviors. (Holland, 2021).

In the past five years, the discourse on strategic foresight in education development planning has proliferated (Bengston, 2018; Bishop, 2018; Bourmistrov, 2020; Kononiuk, 2020; Oliveira Hopf Díaz, Giovanella, & Rocha de Souza, 2022). Empirical research, theoretical frameworks, and practical applications have illuminated the potential of strategic foresight to catalyze education systems toward greater adaptability, innovation, and responsiveness. A plethora of factors underscore the pressing need for this transformative approach.

Globalization, technological advancement, and socio-economic shifts have disrupted traditional models of education, demanding a recalibration of educational objectives and methods (US Department of Education, 2017). The digital age has redefined pedagogy, student engagement, and the role of educators, compelling a reimagining of the educational landscape (Carvajal & Sanchez, 2024; Sanchez, 2022; Sanchez, 2020; Sanchez, 2023a; Sanchez, et al., 2024a; Scott, 2015). Amid these transformations, a growing recognition of the importance of inclusivity, diversity, and equity calls for a vision that transcends immediate challenges to embrace long-term sustainability (UNESCO, 2022).

In parallel, the COVID-19 pandemic, which swept across the globe in 2020, laid bare the vulnerabilities of education systems to unforeseen crises. It served as a stark reminder of the critical importance of strategic planning, resilience, and adaptability in education (UP College of Education, 2020; Tadesse & Muluye, 2020). This wake-up call led to a renewed focus on strategic foresight as a means to anticipate and prepare for disruptions while ensuring continuity of education.

This research is situated at the confluence of these transformative trends. By examining the evolving reality of strategic foresight in education development planning over the past five years, it sought to distill critical insights that can guide future educational policy and practice. This exploration is timely, given the imperative for educational systems to not only respond to immediate challenges but also to envision the future of learning in a dynamic and uncertain world.

In the subsequent sections, this research delved into the conceptual foundations of strategic foresight in education, elucidate the key drivers of change, analyze the methods and tools utilized, and present literature and studies that exemplify its practical applications. By contextualizing strategic foresight within the evolving educational ecosystem, this study aimed to provide a comprehensive understanding of its significance and potential in shaping the future of education.

In the realm of education, the practice of strategic foresight takes on a pivotal role in today's rapidly evolving educational landscape (Sanchez, et al., 2024b; Sanchez & Sarmiento, 2020; Sanchez, Sanchez & Sanchez, 2023). It allows educational institutions to anticipate and adapt to a myriad of factors, including technological advancements, changing learning environments, disruptive events such as the COVID-19 pandemic, evolving pedagogical approaches, globalization, economic trends, sustainability imperatives, shifting demographics, government policies, evolving student expectations, and a fiercely competitive educational landscape. By proactively addressing these complex and interconnected factors, educational institutions can better prepare their students, remain relevant, and effectively meet the diverse needs of learners in an increasingly dynamic and interconnected world (Sandal, 2023).

In the Philippines, the Department of Education (DepEd) plays a central role in shaping the educational landscape. The Basic Education Development Plan (BEDP) 2022-2030, devised by DepEd, serves as the comprehensive roadmap for enhancing and evolving the country's educational systems. It is within this framework that the principles of strategic foresight are particularly pertinent (DepEd, BEDP 2022-2030).

The BEDP 2022-2030 aligns with the broader national development vision, such as the Philippine Development Plan (PDP), Ambisyon Natin 2040, and with the global education agenda, as set forth by UNESCO (2022). These documents collectively underscore the imperative of inclusive, equitable, and sustainable education. The strategic foresight approach recognizes the importance of long-term sustainability and relevance in education development planning, transcending immediate challenges to envision the future of learning in the Philippines (NEDA, 2017; Philippine Statistics Authority, 2016).

The DepEd, through various policies and DepEd Orders, fosters a culture of strategic development planning in education. These documents provide guidelines and directives that encourage educational institutions and stakeholders to adopt a forward-looking perspective, emphasizing resilience and adaptability in the face of unforeseen crises and disruptions. The COVID-19 pandemic, for instance, highlighted the importance of strategic planning and the necessity of embracing strategic foresight to ensure the continuity of education (UP College of Education, 2020; Tadesse & Muluye, 2020).

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In the wake of the COVID-19 pandemic, the Philippines' Department of Education has implemented a range of measures to ensure that education continues despite the disruption and crisis. These measures include the implementation of alternative modes of learning, such as online and distance learning, the use of broadcast media, and the distribution of self-learning modules (DepEd, 2020). Consequently, DepEd issued Department Order No.12, s.2020 entitled Adoption of the Basic Education Learning Continuity Plan (BE-LCP) for School Year 2020-2021, and the Basic Education Learning Recovery and Continuity Plan (BE-LRCP) for the succeeding school years have come to the forefront. These plans address the disruptions caused by the pandemic and provide a vision for future-proofing basic education learning delivery. The strategic foresight approach is essential in shaping these plans to ensure resilience, adaptability, and the continuity of education in the face of unforeseen crises.

In terms of strategic planning framework, the DepEd has been employing the Morato's Farmework of using Top-Down Planning and Bottom-Up Planning (PAHRODF, 2017). This consists of full spectrum from Vision, Mission, Objectives, Key Result Areas (KRAs), Performance Indicators (PIs), Strategies, Actions, Programs, Activities, Tasks, and Resources, also known as VMOKRAPISPATRes framework. However, this design only incorporates the two dimensions of planning, viz., the top-down planning and the bottom-up planning. It fails to capture the other sights or vantage points in planning such as the hindsight and foresight aspects of planning. There is a dearth in the strategic planning framework to be more responsive of the contemporary realities and be future-proof by fostering sustainability of academic institutions' plans and operations.

One indicator of the country's state of basic education is the performance in the Programme for International Student Assessment (PISA) which showed dismal bottom ranking of the Philippines - 78/78 in 2018 and 77/81 in 2022. PISA serves as a benchmark for evaluating educational outcomes and performance on a global scale (Organisation for Economic Co-operation and Development [OECD], 2019; 2022). Recent PISA assessments have underscored the challenges faced by the Philippines in achieving desired levels of student proficiency in core subjects such as mathematics, science, and reading literacy (OECD, 2019; 2022). Despite some modest improvements observed in student performance over time, Filipino students continue to lag behind their counterparts from other participating countries, indicating persistent deficiencies in the Philippine education system (OECD, 2019; 2022).

Another international education metric is the Trends in International Mathematics and Science Study (TIMSS). TIMMS provides valuable insights into the performance of students in mathematics and science across different countries. In recent TIMSS assessments, the Philippines has faced challenges in achieving competitive scores, highlighting areas for improvement in mathematics and science education (TIMSS & PIRLS International Study Center, 2021). The latest TIMSS results revealed that the Philippines scored below the international average in both mathematics and science. Specifically, in the most recent assessment conducted in 2021, the Philippines scored an average of 372 in mathematics and 357 in science, which were below the international average scores (TIMSS & PIRLS International Study Center, 2021).

Previously, in the Year One Report, entitled "Miseducation", the Second Congressional Commission on Education (EDCOM 2) (EDCOM 2, 2024) highlights critical issues within the Philippine education system. A significant concern is the quality of education, which continues to impact learning outcomes. Outdated curricula, inadequate teaching methods, and overcrowded classrooms hinder the development of critical thinking skills, creativity, and problem-solving abilities. As a result, the overall quality of education remains suboptimal, affecting the nation's human capital development.

The report emphasizes disparities in access to quality education across different regions and socio-economic backgrounds. Urban centers benefit from better infrastructure and resources, while rural areas struggle with limited facilities and qualified teachers. This inequity perpetuates cycles of poverty and limits upward mobility (EDCOM2, 2024). There is a pressing need to prioritize equal access to education in the education development planning (Amihan & Sanchez, 2023; Carvajal, et al., 2024; Dizon & Sanchez, 2020; Salendab & Sanchez, 2023). Initiatives such as scholarship programs, mobile learning centers, and targeted teacher deployment can bridge the gap and ensure that every Filipino child has a fair chance at quality education. Given these challenges, the Philippines urgently needs a comprehensive strategic development plan for education. The EDCOM 2 report serves as a wake-up call for policymakers, educators, and stakeholders.

Given these findings, there is a pressing need to enhance strategic planning processes within education development plans in the Philippines. By integrating principles of strategic foresight, education policymakers and planners can better anticipate future challenges and opportunities, develop proactive strategies, and align planning efforts with the evolving needs of students, educators, and society (Bishop, Hines, & Collins, 2007).

Hence, this exploration is timely and relevant, given the imperative for educational systems in the Philippines to not only respond to immediate challenges but also to envision the future of learning in a dynamic and

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uncertain world. This is the new imperative in education leadership, the impetus to integrate foresight planning and develop a tenable framework for its practice.

Objectives

The principal purpose of this research is to ascertain the level of foresight knowledge and level of foresight practice among education development planners in the Schools Division Offices throughout the Department of Education, Region IV-A CALABARZON. This served as an essential feature for the development of a strategic foresight framework as reference to education development planning.

Specifically, it sought to answer the following research questions:

1. What is the profile of the division education development planning members in terms of:
   1.1. Position;
      1.1.1. Assistant Schools Division Superintendent;
      1.1.2. Chief Education Supervisor – School Governance and Operations;
      1.1.3. Senior Education Program Specialists – Planning and Research; and
      1.1.4. Planning Officer III;
   1.2. Schools Division Office they belong;
   1.3. Sex; and
   1.4. Number of involvements in the development of strategic education plans (DEDP) based on the cycles?
2. What level of foresight knowledge do the respondents have, in terms of:
   2.1. Mega Trends and Trends;
   2.2. Change Drivers;
   2.3. Scenarios;
   2.4. Discontinuities & Emerging Issues;
   2.5. Weak Signals;
   2.6. Wild Cards; and
   2.7. Science Fiction?
3. Are there significant differences in the level of foresight knowledge when grouped according to profile?
4. What level of foresight practices do the respondents have, in terms of:
   4.1. Forecasts and Predictions;
   4.2. War Game Simulations;
   4.3. Roadmaps;
   4.4. Backcasting;
   4.5. Trends Analysis;
   4.6. Horizon Scanning;
   4.7. Scenario Planning; and
   4.8. Delphi Method?
5. Are there significant differences in the level of foresight practices when grouped according to profile?
6. Is there significant relationship between the level of foresight knowledge and the level of foresight practices?

Hypothesis

Based on the statement of the problem, the researcher tested the following null hypotheses at 0.05 level of significance:

Hypothesis 1: There are no significant differences in the level of foresight knowledge when grouped according to profile.

Hypothesis 2: There are no significant differences in the level of foresight practices when grouped according to profile.

Hypothesis 3: The is no significant relationship between the respondents' level of foresight knowledge and level of foresight practices.

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METHODS

Research Design

This study employed a descriptive, comparative-correlational design using surveys to determine the relationship between foresight knowledge and foresight practice among education development planning members within the Department of Education, Region IV-A (CALABARZON).

Population and Sampling

The study consists of an inter-division survey that was distributed to all division education development planning committee members within the 23 Schools Division Offices (City and Province Divisions) of the Department of Education, Region IV-A CALABARZON. Purposive sampling approach is initially done to identify the qualified members of the division education development planning committee. Then, after, total enumeration or census of all the qualified division planning committee members in the Schools Division Offices of the Department of Education, Region IV-A CALABARZON were invited to participate in the study from April to May, 2024. In each division office, there are four (4) target members of the division planning committee.

For the inclusion criteria, the researcher considered the following:

1. Position in the Division Education Development Planning Committee: Individuals must hold one of the following positions within the Division Education Development Planning committee in the 23 Schools Division Offices of the Department of Education, Region IV-A CALABARZON: a. Assistant Schools Division Superintendent (Chair of the Division Education Development Plan); b. Chief Education Supervisor – School Governance and Operations Division; c. Senior Education Program Specialists – Planning and Research; and d. Planning Officer III
2. Direct Involvement in Education Development Planning: Respondents must be actively involved in the education development planning process within their respective Schools Division Offices.
3. Availability and Willingness to Participate: Individuals must be available and willing to participate in the study by completing the survey and, if applicable, participating in key informant interviews.

For the exclusion criteria, the researcher considered the following:

1. Positional Ineligibility: Individuals who do not hold any of the specified positions within the Division Education Development Planning committee are excluded from participation.
2. Non-Involvement in Education Development Planning: Individuals who do not play an active role in education development planning within their respective Schools Division Offices are excluded.
3. Unwillingness to Participate: Individuals who are unwilling or unable to participate in the study, either due to scheduling conflicts or personal reasons, are excluded.

Instrument

Survey questionnaire was used to collect the necessary data in this study. Said instrumnet was validated by three (3) experts in the field of education development planning, pilot tested outside the CALABARZON region, and tested for reliability. The instrument is composed of three parts (3) parts: Parts 1 gathers the profile of the respondents with 4 items, Part 2 pertains to the level of foresight knowledge with 7 categories, and Part 3 refers to the level of foresight practices with 8 categories.

The profile section consists of four (4) items determining the position, division they belong, sex, and length of involvement in the cylces of planning. For the foresight knowledge section, respondents were asked to rate their knowledge across the seven (7) categories. Each of the category has three (3) item indicators to gauge the level of foresight knowledge. There are a total of 21 item indicators. While for foresight practice, there were eight (8) categories tested. Each of the category has also three (3) item indicators to gauge the level of foresight practice. There are a total of 24 item indicators. The item indicators for every category are randomized to dispel false familiarity or avoid skewed responses. The rubrics for each indicators are as follows:

Table 1
Rubrics of the Level of Foresight Knowledge and Foresight Practice

Rating Scale	Rating Description	Interval Scoring	Equivalent Verbal Interpretations
4	Highly Familiar/Knowledgeable | Fully/Comprehensively Implemented	3.51-4.00	High Foresight Knowledge or Practice
3	Moderately Familiar/Knowledgeable |	2.51-3.50	Moderate Foresight Knowledge or Practice

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2	Substantially Implemented Somewhat Familiar/Knowledgeable | Partially Implemented	1.51-2.50	Low Foresight Knowledge or Practice
1	Not Familiar/Knowledgeable | Not Implemented	1.00-1.50	Poor Foresight Knowledge or Practice

Data Collection

Respondents were asked to complete a structured questionnaire after they have been informed of the details of the research and questionnaire, as well as after securing their informed consent to partake in the study. The instrument also contained the Data Privacy Provision. Data were collected from the completed questionnaires. Quantitative data were collected, consolidated, processed, and analyzed following the objective of the study.

Data Validation and Quality Assurance

To ensure data quality, double-checking and validation processes were implemented. Data entry were verified for accuracy, and consistency checks were conducted to identify any discrepancies with the information shared by the respondents.

Data Analysis

Statistical Analysis were used to analyze the profile, level of foresight knowledge and foresight practice of the division education development planning committee members in the Schools Division Offices of Region IV-A. In particular, descriptive statistics were used to understand the distribution of respondents based on position, division they belong to, sex, and the length of involvement, in particular, the calculation of frequencies, and percentages. Descriptive statistics were also used to analyze the respondents' foresight knowledge and foresight practice, specifically, weighted means, standard deviations, and interval scoring. Inferential statistics, specifically, One-way Analysis of Variance (ANOVA), post hoc tests, and Independent Samples T-Test, were used to determine the significant differences when grouped using the profile of the respondents. Finally, Pearson's correlation was used to determine the relationship between the foresight knowledge and foresight practice.

Ethical Considarations

The researcher ensured that all research protocols involving ethics in research were complied with for the protection of all people and institutions involved in the conduct of the study. The researcher sought ethical approval from the Ethics Review Board/Committee, ensuring that the study aligns with established ethical standards. Research instrument validation, reliability and ethical review were conducted. Informed consent was an indispensably secured. Respondents were also assured of their right to withdraw from the study at any time without adverse consequences. The researcher ensured the data and information's confidentiality and their anonymity.

RESULTS and DISCUSSION

Profile of Division Education Development Planning Committee

The profile of division education development planning members in Region IV-A CALABARZON reflects a diverse representation of leadership roles, with significant participation from various positions. Among the respondents, Assistant Schools Division Superintendents constitute the majority at 29.17%, followed by Chief Education Program Supervisors and Division Planning Officers III at around 24% each. This distribution underscores the critical role of experienced leadership in educational planning.

The distribution of respondents across the 23 divisions within the region indicates a fairly balanced representation, with most divisions having four representatives. Province divisions have a slightly higher representation compared to city divisions. This balanced distribution facilitates inclusive and concurrent planning, ensuring that policies reflect the diverse needs and contexts of different areas.

In terms of gender representation, female respondents slightly outnumber male respondents, comprising 53.13% of the total sample. This near-equal gender distribution suggests progress toward gender equity in educational leadership, which can lead to more balanced decision-making processes and improved educational outcomes.

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Regarding the number of planning cycles involvement, the majority of respondents (46.88%) have been involved in two cycles of planning processes, indicating a remarkable level of experience among the respondents. This high level of experience ensures institutional memory and continuity in educational planning, enabling planners to anticipate challenges and implement effective strategies.

Level of Foresight Knowledge

The level of foresight knowledge among the respondents was assessed through seven sub-component indicators, resulting in an overall weighted mean of 2.95, and standard deviation of 0.533, indicating "Moderate Foresight Knowledge". *Mega Trends and Trends:* Respondents demonstrated a moderate understanding of mega trends and trends, showing proficiency in analyzing data and patterns. *Change Drivers:* Respondents displayed proficiency in identifying and analyzing change drivers, essential for developing responsive strategies in dynamic environments.*Scenarios:* Scenario-based thinking was relatively strong among respondents, enabling them to anticipate and prepare for unforeseen events. *Discontinuities & Emerging Issues:* Respondents showed a moderate understanding of anticipating disruptions and monitoring emerging issues, crucial for developing robust contingency plans. *Weak Signals:* Moderate proficiency was observed in recognizing weak signals, indicating an ability to identify early indicators of potential disruptions. *Wild Cards:* Respondents demonstrated moderate knowledge of wild cards and their impacts, essential for strategic planning and risk management. Science Fiction: Respondents showed moderate knowledge of using science fiction as a foresight tool, indicating its potential for fostering creative thinking about future scenarios.

Table 2
Level of Foresight Knowledge

#	Indicators	Weighted Mean	Standard Deviation	Verbal Interpretation
	Mega Trends and Trends	2.96	0.623	Moderate Foresight Knowledge
	Change Drivers	2.84	0.573	Moderate Foresight Knowledge
	Scenarios	3.05	0.64	Moderate Foresight Knowledge
	Discontinuities & Emerging Issues	3.00	0.536	Moderate Foresight Knowledge
	Weak Signals	3.03	0.591	Moderate Foresight Knowledge
	Wild Cards	2.98	0.548	Moderate Foresight Knowledge
	Science Fiction	2.79	0.552	Moderate Foresight Knowledge
	Overall Weighted Mean	**2.95**	**0.533**	**Moderate Foresight Knowledge**

Legend: 1.00-1.50 Poor Foresight Knowledge; 1.51-2.50 Low Foresight Knowledge; 2.51-3.50 Moderate Foresight Knowledge; 3.51-4.00 High Foresight Knowledge.

Overall, while the respondents possess a moderate level of foresight knowledge, there is room for further growth and development. Continued learning and experience enables them to gain a deeper understanding of foresight, ultimately leading to more effective planning and decision-making processes in the field of education.

Differences of Level of Foresight Knowledge

The analysis of significant differences in the level of foresight knowledge among respondents grouped according to their profiles provided valuable insights into the distribution of foresight capabilities within the educational planning context of CALABARZON Region IV-A. The findings indicated that among the four profile indicators, only the grouping variable of positions yielded significant difference, in particular, after post-hoc analysis, the Assistant Schools Division Superintendents demonstrated significantly higher foresight knowledge when compared with the Planning Officer III. The Tukey post-hoc test further identified that the significant difference lies primarily between Planning Officers III and Assistant Schools Division Superintendents (Mean difference = -0.629, $p < .001$), with Assistant Schools Division Superintendents demonstrating significantly higher foresight knowledge. The rest of the three (3) variables have no statistically significant differences in foresight knowledge levels across different school divisions, genders, or number of involvement in the development of strategic education plans.

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Table 3
Test of Significant Differences of Level of Foresight Knowledge when Grouped According to Profile

Profile	df	f-value/t-value	sig. (p-value)	Decision (Ho)	Interpretation
Position	3	6.99	<0.001	Reject	Significant
Division	22	1.40	0.145	Fail to Reject	Not Significant
Sex	1	1.17	0.243	Fail to Reject	Not Significant
Number of Involvement	2	0.306	0.737	Fail to Reject	Not Significant

*Note. * p < .05, ** p < .01, *** p < .001*

The absence of significant differences in foresight knowledge levels across schools division offices suggest that divisions within the region may have comparable access to resources, training programs, or institutional support for developing foresight capabilities. Additionally, the lack of significant differences based on gender and involvement cycles in the development of strategic education plans indicates that both male and female professionals, as well as individuals with varying levels of experience, have had equitable opportunities for training and professional development in strategic foresight. This suggests a relatively uniform distribution of foresight knowledge among schools division offices in the region, their gender and the engagement cycles they have with educational planning.

Level of Foresight Practice

The analysis of the respondents' level of foresight practice across various indicators provided valuable insights into the extent to which foresight methodologies are integrated into their strategic education development planning. The level of foresight practice of respondents has an overall weighted mean of 2.71, and a standard deviation of 0.590, indicating "Moderate Foresight Practice". *Moderate Foresight Practice Areas:* Areas such as forecasts and predictions, roadmapping, trends analysis, horizon scanning, scenario planning, and backcasting show moderate levels of implementation. Respondents demonstrate a solid understanding and utilization of these methodologies to inform strategic decisions and enhance future readiness. These practices align with contemporary literature on strategic foresight, emphasizing the importance of data-driven decision-making, scenario planning, and strategic alignment for navigating uncertainties in the education sector. *Low Foresight Practice Areas:* However, certain areas, such as war games simulations and the Delphi method, exhibit low levels of implementation. These methodologies, which are valuable for enhancing preparedness, decision-making, and expert consensus building, are underutilized within the division's strategic planning processes. Addressing these gaps in foresight practice can strengthen the division's capacity to anticipate and respond to future challenges effectively.

Table 4
Level of Foresight Practice

#	Indicators	Weighted Mean	Standard Deviation	Verbal Interpretation
	Forecasts and Predictions	2.95	0.654	Moderate Foresight Practice
	War Games Simulations	2.17	0.769	**Low Foresight Practice**
	Roadmapping	2.96	0.736	Moderate Foresight Practice
	Backcasting	2.71	0.710	Moderate Foresight Practice
	Trends Analysis	3.06	0.664	Moderate Foresight Practice
	Horizon Scanning	2.58	0.628	Moderate Foresight Practice
	Scenario Planning	2.84	0.610	Moderate Foresight Practice
	Delphi Method	2.45	0.682	**Low Foresight Practice**
	Overall Weighted Mean	**2.71**	**0.590**	**Moderate Foresight Practice**

Legend: 1.00-1.50 Poor Foresight Practice; 1.51-2.50 Low Foresight Practice; 2.51-3.50 Moderate Foresight Practice; 3.51-4.00 High Foresight Practice.

Overall, the respondents demonstrate a moderate level of foresight practice, with strengths in areas such as trends analysis, scenario planning, and roadmapping. However, there are opportunities for improvement, particularly in utilizing methodologies like war games simulations and the Delphi Method more effectively to enhance strategic decision-making and preparedness.

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Differences of Level of Foresight Practice

The analysis of the respondents' level of foresight practice, as well as the examination of potential differences based on their profiles, provides valuable insights into the current state of strategic planning within educational divisions in Region IV-A CALABARZON. On the differences based on profile variables, the study found no significant variation in foresight practice based on positions within the division planning committee. This indicates that despite differences in roles and responsibilities, individuals across various positions exhibit similar levels of engagement with foresight strategies. However, there were significant differences observed among different school divisions, suggesting that contextual factors may influence the adoption and effectiveness of foresight practices. The p-value of 0.019 is below the conventional alpha level of 0.05, suggesting that there are statistically significant differences in the level of foresight practice among respondents based on the Schools Division Office they belong to. This indicates that the division to which respondents belong influences their foresight practice. Moreover, the study found no significant differences in foresight practice between male and female respondents, indicating a similar level of engagement with foresight strategies regardless of gender. Finally, the study found no significant differences in foresight practice based on the number of involvement cycles in the development of strategic education plans. While consistent involvement in foresight activities can enhance strategic thinking and decision-making, the impact may vary based on context and implementation.

Table 5
Test of Significant Differences of Level of Foresight Practice when Grouped According to Profile

Profile	df	f-value/t-value	sig. (p-value)	Decision (Ho)	Interpretation
Position	3	2.46	0.068	Fail to Reject	Not Significant
Division	22	1.93	0.019*	Reject	Significant
Sex	1	0.146	0.884	Fail to Reject	Not Significant
Number of Involvement	2	1.14	0.323	Fail to Reject	Not Significant

*Note. * p < .05, ** p < .01, *** p < .001*

Relationship Between Foresight Knowledge and Foresight Practice

The findings of this study shed light on the relationship between foresight knowledge and foresight practice among educational planners and administrators in the DepEd CALABARZON Region. Through the use of Pearson's r correlation analysis, it was determined that as the level of foresight knowledge increases, so does the level of foresight practice. This correlation underscores the importance of comprehensive training and development programs that focus on both theoretical understanding and practical application of strategic foresight concepts and tools.

Drawing from similar studies, it is evident that strategic foresight knowledge is crucial for effective foresight practice. Studies by Rohrbeck and Kum (2018), Vecchiato (2020), Slaughter (2020), Schwarz (2024), and Muñoz (2020) have consistently demonstrated the importance of embedding foresight capabilities within organizational culture and professional competencies to enhance strategic planning and decision-making processes. These results align with previous researches in the field, indicating the critical importance of foresight knowledge in driving effective foresight practices within organizations (Carvajal, Sanchez & Amihan, 2023; Sanchez, 2023b; Sanchez, et al., 2024c).

Table 6
Test of Significant Relationship Between Level of Foresight Knowleedge and Practice

Variable	Variable	Pearson's *r*	sig. (p-value)	Decision (Ho)	Interpretation
Foresight Knowledge	Foresight Practice	0.779	<0.001	Reject	Significant

*Note. * p < .05, ** p < .01, *** p < .001*

The findings of the correlation analysis underscored the importance of theoretical foresight knowledge in enhancing foresight practices and strategies. This relationship is corroborated by Schwarz (2024) and Muñoz (2020), who both emphasize the critical role that a strong theoretical foundation plays in effective foresight practice. The strong positive correlation between foresight knowledge and foresight practice underscores the importance of comprehensive training and development programs that focus on both theoretical and practical aspects of strategic foresight. By enhancing foresight knowledge, educational planners and administrators can significantly improve their

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foresight practices, leading to better strategic planning and decision-making in the educational sector (Sanchez, et al., 2024d; Sanchez, et al., 2022). This relationship is supported by both international and local studies, emphasizing the universal applicability of the findings.

Conclusions

The study highlights the diverse and experienced nature of education development planning members in Region IV-A CALABARZON, showcasing a robust leadership structure that includes various key positions. The equitable gender distribution and significant experience levels among respondents ensure balanced decision-making and continuity in educational planning. The analysis of foresight knowledge indicates that while respondents demonstrate a moderate understanding of strategic foresight, there are areas that need further development, particularly in distinguishing between long-term trends and utilizing innovative foresight tools. The findings also reveal that significant differences in foresight knowledge exist among different positions, emphasizing the need for tailored professional development. Regarding foresight practice, respondents exhibit a moderate level of implementation of various methodologies, with some areas showing more robust practice than others. The underutilization of certain foresight techniques like war games simulations and the Delphi method indicates potential areas for improvement. The lack of significant differences in practice based on gender or position suggests equitable access to training and resources. The strong positive correlation between foresight knowledge and practice underscores the importance of comprehensive training programs that integrate both theoretical and practical aspects of strategic foresight. This relationship highlights the critical role of foresight knowledge in enhancing the effectiveness of foresight practices within educational planning. Overall, the study underscores the need for continuous professional development, enhanced collaboration, and targeted training to improve foresight capabilities among education planners. These measures will help foster a proactive approach to strategic planning, enabling educational institutions to better anticipate and navigate future challenges.

Recommendations

The recommendations of the study emphasized the importance of continuous professional development, interdivisional collaboration, and documentation of best practices to enhance strategic foresight planning among education development planning members. It is suggested to provide specialized training in areas with lower proficiency, integrate foresight methods into planning processes, and collaborate with foresight experts for tailored training. To address the significant differences in foresight knowledge, tailored professional development programs and cross-divisional knowledge-sharing initiatives are recommended. For foresight practices, enhancing training and awareness, promoting collaborative decision-making, and investing in data analytics are crucial. Additionally, context-specific interventions and qualitative investigations can help address differences in foresight practices among divisions. Finally, the correlation between foresight knowledge and practice underscores the need for integrated theoretical and practical training programs, continuous research, and a focus on collaboration and knowledge sharing to drive organizational change and improve strategic planning processes. Implementing these recommendations will strengthen the capacity of education development planning in Region IV-A CALABARZON to address evolving challenges and promote sustainable improvements in educational outcomes.

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