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# Outcome Evaluation of the Public Management Development Program

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**Abstract**

The Public Management Development Program (PMDP), the National Government Career Executive Service Development Program (NGCESDP), was revitalized in 2012 through Republic Act 10155 or the General Appropriations Act of 2012. The Program is the government's response to the government's aim of professionalizing the bureaucracy and the call for ethical, honest, and effective public governance. The Development Academy of the Philippines (DAP) acts as the implementing agency of the Program. Currently, the Program offers four courses: the Middle Managers Class (MMC), the Senior Executives Class (SEC), the Phronetic Leadership Class (PLC), and the Local Government Executives and Managers Course (LGEMC).

The results of the outcome evaluation of the PMDP, which used both qualitative (surveys and key informant interviews) and quantitative (quasi-experimental statistical matching and difference-in-difference) methods, show positive indications of improvement in the CES competencies of the PMDP graduates, as well as their individual and organizational impact and phronetic leadership traits. However, there is less convincing evidence regarding their networking and innovation skills. The quantitative and qualitative evaluations of the scholars' individual competences and organizational contributions lead to favorable outcomes due to the Program, despite areas for improvement in the PMDP's implementation being noted.

**Keywords:** Public Management Development Program, bureaucracy, outcome evaluation, CESB competencies, Phronetic leadership, average treatment effect, difference-in-difference

## Executive Summary

The Public Management Development Program (PMDP), the National Government Career Executive Service Development Program (NGCESDP), was revitalized in 2012 through Republic Act 10155 or the General Appropriations Act of 2012. Implemented by the Development Academy of the Philippines (DAP), the PMDP was conceptualized in response to the government's aim of professionalizing the bureaucracy and the call for ethical, honest and effective public governance. The Program seeks to foster careerism in government by producing a corps of development-oriented, competent, dedicated and honest government executives within the medium term. Specifically, it aims to: a) develop a keen appreciation among government executives of their vital role in the overall development process; b) produce competent government leaders committed to the welfare of their constituents and the country's progress; c) foster a spirit of kinship, mutual support and harmony among government leaders working for the common goal of a good life for all; d) deepen the bench of successors to the incumbent government office executives to ensure smooth transition in case of promotions or vacancies; and, e) enhance the image of the Philippine government as an institution imbued with professionalism, integrity and honesty (DAP n.d., par.9).

The PMDP offers four courses, namely, the Middle Managers Class (MMC), the Senior Executives Class (SEC), the Phronetic Leadership Class (PLC), and the Local Government Executives and Managers Course (LGEMC). This study conducted an outcome evaluation of the PMDP, particularly on how the MMC and SEC contributed to individual and organizational performance outcomes. It assessed how the PMDP graduates performed upon returning to their respective mother institutions, documenting the scholars' application of gained learnings and developed competencies and evaluating the attributable program impacts at the individual and institutional levels.

To provide doubly robust analyses and fully utilize the suboptimal size of the study sample collected, difference-in-differences and statistical matching/ inverse-propensity score reweighting were applied. A total of 201 PMDP scholars and 657 comparable peers were invited to participate in an online survey. From this number, 142 (70.6%) scholars and 291 (44.3%) peers were able to complete the survey, collectively yielding a response rate of 50.5%. Key informant interviews and Focus Group Discussions (FGDs) were also conducted among alumni, peers, faculty members, foster families, and DAP and PMDP officials.

The results of the outcome evaluation show a moderate to strong effect on the core competencies of scholars. The differences in core competencies between scholars and their comparable peers were found significant, which means that the PMDP had been indicatively successful in improving the core competencies among its graduates. The Program had the highest effect on the ability to drive performance for integrity and service, and the least effects on people-centric competencies such as empowering others for collective accountability and leading in a continuously changing environment. On phronetic leadership, all constructs were found to be significant except for the "ability to judge goodness", with all mean scores on phronetic leadership traits higher among PMDP scholars compared to their peers. In terms of linkaging and networking, a rising consciousness was seen for a whole of government approach among the scholars, motivating them to reach out to other agencies for holistic and sustainable approaches in delivering their organizations' respective mandates. Network centrality measures were also higher for middle managers compared to overall average effect that implies middle managers are more fluid and able to operate inter-organizationally within the bureaucracy.

All organizational outcome indicators were significant except for "income generation". Such is understandable given the general non-profit nature of public service. Limited impact was also seen on the scholars proposed innovations. The predominant changes/innovations introduced by the scholars pertained to systems and processes giving rise to improved citizen-centric services. Respondents also agreed that leadership/management support, facilitative systems and processes and availability of resources are factors that ensure the adoption of capstone projects/capstone papers as well as other proposed changes and innovations.

The effects of the PMDP on middle managers were generally higher compared to the overall average, highlighting the potential of middle managers to excel and move up the ranks. This is indicative of their readiness for higher levels of management and leadership. However, tendencies to move outside government service; and possibly challenge public management norms should be flagged. Mild responses were obtained on questions relating to "staying determined to continue working in government", and "having high regard for government executives and agencies." Promotion was also tempered with scholars seen to be higher on average by only one salary grade level compared to their counterparts. Some organizational displacements among partner agencies were also reported upon the return of scholars. These point to the need to mitigate potential discontent among returning scholars. Agencies need to reward competent service and address the lack of opportunities to move up the bureaucratic ladder.

Given the above attributable individual and organizational impacts of the PMDP, the following recommendations can be explored:

- Invest more in middle managers as they present the best pathway toward greater individual and organizational impacts. Such may include increasing the scholars' number, improving spatial representation, and sustaining high standards in recruitment and screening.
- Augment course offerings by building upon previous gains. Enhance screening of scholars, upgrade and standardize curriculum; and tap more senior practitioners and academics.
- Enhance the curriculum on Personal Efficacy and Leadership, and Evidence-based Policy Making and Public Policy Analysis. This is to address the mild impacts on people-centric skills and policy innovation.
- Offer Phronetic Leadership course to both SEC and MMC, staying true to the values of compassion, integrity, transparency, and excellence.
- Taper sensing journey to address bureaucratic appreciation. Pursue an emotional experience that embeds the value of "service for the common good."
- Create avenues for scholars to share learnings and insights with their peers. Institute mentoring arrangements within partner institutions.
- Cultivate institutional support among partner agencies upon scholars' re-entry, addressing potential displacement issues and pathways toward innovation and change.
- Capitalize on driving performance for integrity and service competency upon the scholars' return to their respective institutions. Agencies should also capture this metric in choosing candidates.
- Facilitate professional progression within the service, including opportunities to move up in rank and pursue CESB accreditation through the PMDP.

- Ensure the scholars' long-term commitment to government service. Mechanisms can be explored to keep scholars working within the bureaucracy, including possibly extending return service contracts; and career path/planning in the vetting and re-entry processes.

Overall, although avenues were seen to further strengthen the implementation of the PMDP, both the quantitative and qualitative assessments of the scholars' individual competencies and organizational contributions point to positive outcomes attributable to the Program. These manifested improvements are key in the scholars' journey toward higher levels of management and leadership in the service, contributing eventually to the bigger goal of optimal governance and professionalization in the bureaucracy.

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## 1. Background of the Study

### 1.1. Rationale

Leadership and managerial capacity are critical components of public governance. Governance anchors on both formal (rules of the game, polity, judiciary, bureaucracy) and informal (customs, traditions, norms, religion) institutional tenets (Williamson 2000), capturing the underlying values of a nation and its people. As such, public managers or executive servants in government must be imbued with qualities consistent with the requisites for excellence in public governance and bureaucratic service. The Public Management Development Program, as the National Government Career Executive Service Development Program, contributes by producing a group of peak-performing, development-oriented, ethical, and committed government executives and middle managers.

President Benigno Aquino revitalized the PMDP through Republic Act 10155 or the General Appropriations Act of 2012 in response to the government's aim of professionalizing the bureaucracy, and the call for ethical, honest, and effective public governance. The PMDP's specific goals include developing a keen appreciation among government executives of their vital role in the overall development process, producing competent government leaders committed to the welfare of their constituents and the country's progress, fostering a spirit of kinship, mutual support and harmony among government leaders working for the common goal of a good life for all, deepening the bench of successors to the incumbent government office executives to ensure smooth transition in case of promotions or vacancies, and enhancing the image of the Philippine government as an institution imbued with professionalism, integrity, and honesty.

Implemented by the Development Academy of the Philippines (DAP), the PMDP augments the roster of public managers by offering full scholarships to senior executives and middle managers, including other third level career servants and permanent second level eligible appointees who have yet to be conferred with career executive service eligibility.

In 2016, the Philippine Institute for Development Studies (PIDS) conducted a process evaluation of the PMDP. The study also looked at indicative intermediate program outcomes by developing a set of measurable indicators and tools to assess the achievement of scholars as individuals and members of their respective institutions. This time around, a full-blown impact assessment or outcome evaluation of the PMDP was conducted, looking at attributable changes among the scholars as individuals and their contributions to their respective agencies. The results from the study will help the program management team to better address areas for augmentation the implementation of the NGCESDP-PMDP.

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[1] Senior Research Fellow, Senior Research Fellow, Research Fellow, Organization Development Specialist, Research Associate, Research Analyst, respectively. The authors acknowledge the excellent contribution of People Dynamics Inc. for the conduct of the online survey.

### 1.2. Objectives

General Objective

The general objective was to conduct an outcome evaluation of the PMDP.

Specific Objectives

The outcome evaluation of PMDP specifically aimed to:

1. assess how PMDP graduates perform in their respective work assignments after graduating from the program;
2. document scholars' application of gained learnings and developed competencies from their PMDP experience, in and outside their workplace as well as in their professional life;
3. evaluate attributable indications of intermediate program outcomes at the individual and institutional levels, and to a certain extent, final program outcomes; and
4. determine other unintended outcomes, either positive or negative, that may have been achieved as a result of scholars' participation in the program.

## 2. Career Executive Service

### 2.1. Career Professionals

Civil service in the Philippines has been supporting the government for more than 100 years. Since its formal establishment in 1900 under Public Law No. 5 ("An Act for the Establishment and Maintenance of Our Efficient and Honest Civil Service in the Philippine Island"), Philippine civil service saw various transformations throughout the century (CSC, n.d.-a.).

As of August 2021, there are 1,755,424 career and non-career personnel working for the government (CSC, 2021). The data excludes those occupying third level positions in the government. These 1,755,424 personnel provide service to the public through the numerous National Government Agencies (NGAs), Government-Owned and Controlled Corporations (GOCCs), State Universities and Colleges (SUCs), Local Water Districts (LWDs), and Local Government Units (LGUs).

Based on Section 8 of the Revised Administrative Code of 1987 on the Civil Service Commission, the positions in the career service are grouped into three major levels (Figure 1), and these positions require examination. Examinations for the first and second level positions are subject to the Civil Service Commission (CSC). Meanwhile, examination for the third level positions is under the Career Executive Service Board (CESB) (CSC n.d.).

Aside from the career service, the non-career service provides support to the government. The Revised Administrative Code identifies those Non-Career Service as follows: (1) Elective officials and their personal or confidential staff; (2) Secretaries and other officials of Cabinet rank who hold their positions at the pleasure of the President and their personal or confidential staff(s); (3) Chairman and members of commissions and boards with fixed terms of office and their personal or confidential staff; (4) Contractual personnel or those whose employment in the government is under a particular contract to undertake a specific work or job, requiring

special or technical skills not available in the employing agency, to be accomplished within a specific period, which in no case shall exceed one year, and performs or accomplishes the specific work or job, under his responsibility with a minimum of direction and supervision form the hiring agency; and (5) Emergency and seasonal personnel (CSC n.d.).

**Figure 1. Three Major Levels in Classes of Positions in the Career Service**

| First Level | Second Level | Third Level |
|---|---|---|
| •Includes clerical, trades, crafts and custodial service positions which involve non-professonal or subprofessional work in a non-supervisory or supervisory capacity requiring less than four years of collegiate studies | •Includes professional, technical and scientific positions which involve professional, technical or scientific work in a non-supervisory or supervisory capacity requiring at least four years of college work up to Division Chief level | •Also known as Career Executive Service<br>•Cover the positions of Undersecretary, Assistant Secretary, Bureau Director, Assistant Bureau Director, Regional Director, Assistant Regional Director, Chief of Department Service and other officers of equivalent rank as may be identified by the Career Executive Service Board, all of whom are appointed by the President |

Source: Civil Service Commission (n.d.)

In addition to career and non-career services, the bureaucracy employs employees through the Contract of Service and Job Order. The former is defined as the engagement of the services of a person, private firm, non-governmental agency, or international organization to undertake a specific work or job requiring special or technical skills not available in the agency to be accomplished within a specific period not exceeding one year. This includes consultancy services. On the other hand, a Job Order is the hiring of a worker for a piece of work or intermittent job or a short duration not exceeding six months, and pay is on a daily or hourly basis (CSC n.d.).

Figure 2 shows the number of career personnel, non-career personnel, and job order/contract of service personnel in the Philippine bureaucracy from 2016 to 2021. In 2021, 68 percent of those in the Philippine bureaucracy are career personnel. These are followed by job order/contract of service personnel at 25 percent, then by non-career personnel at 6.7 percent.

Twenty-seven percent and 28 percent or more than a quarter of the career service personnel belong to the 36 to 45 age bracket in 2020 and 2021, respectively (Figure 3). They are followed by career service personnel in the 26 to 35 age bracket at 26 percent in 2020 and 2021. The age bracket occupying the least number in career service is in the 18 to 25 age bracket. The age group held 3 percent and 2.6 percent of career service positions in 2020 and 2021, respectively.

Figure 4 shows the breakdown of sex in the career service from 2016 to 2021. In 2021, 57 percent of career service professionals were female, while 43 percent were male. Based on the data from 2016 to 2021, there are more female career service professionals than male career service professionals.

**Figure 2. Number of government personnel per classification of positions, 2016-2021**
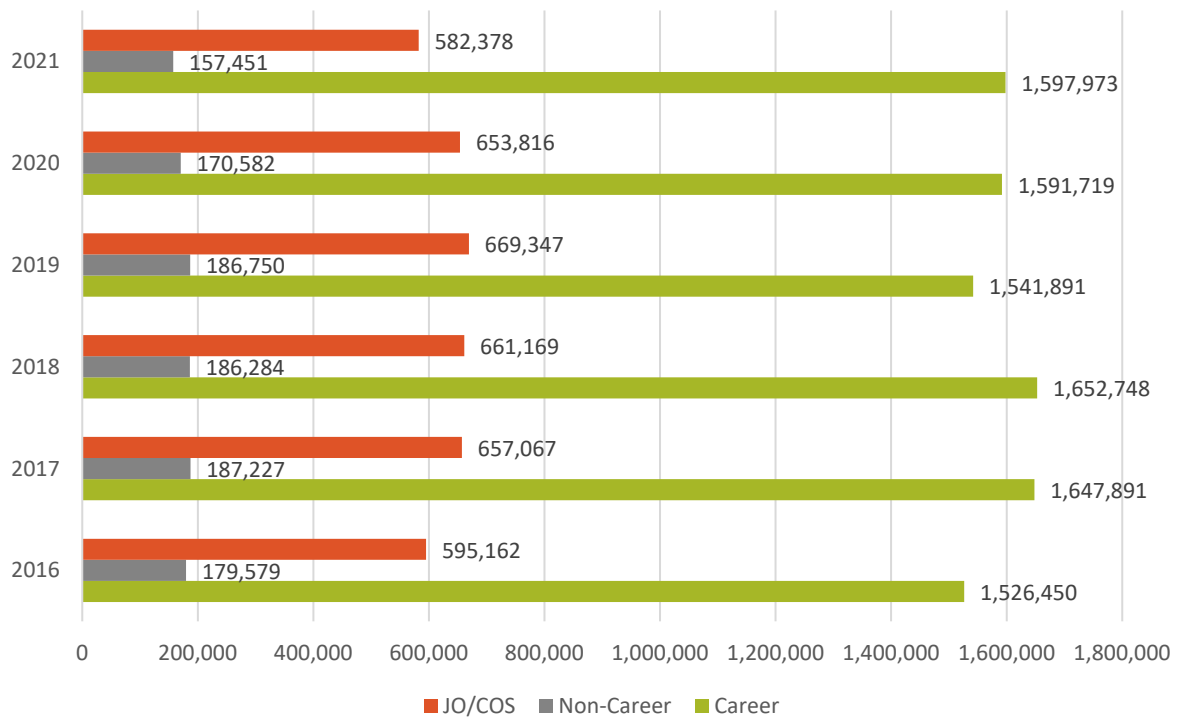


Source: Civil Service Commission (2016-2021)

**Figure 3. Career professionals by age group, 2020-2021**
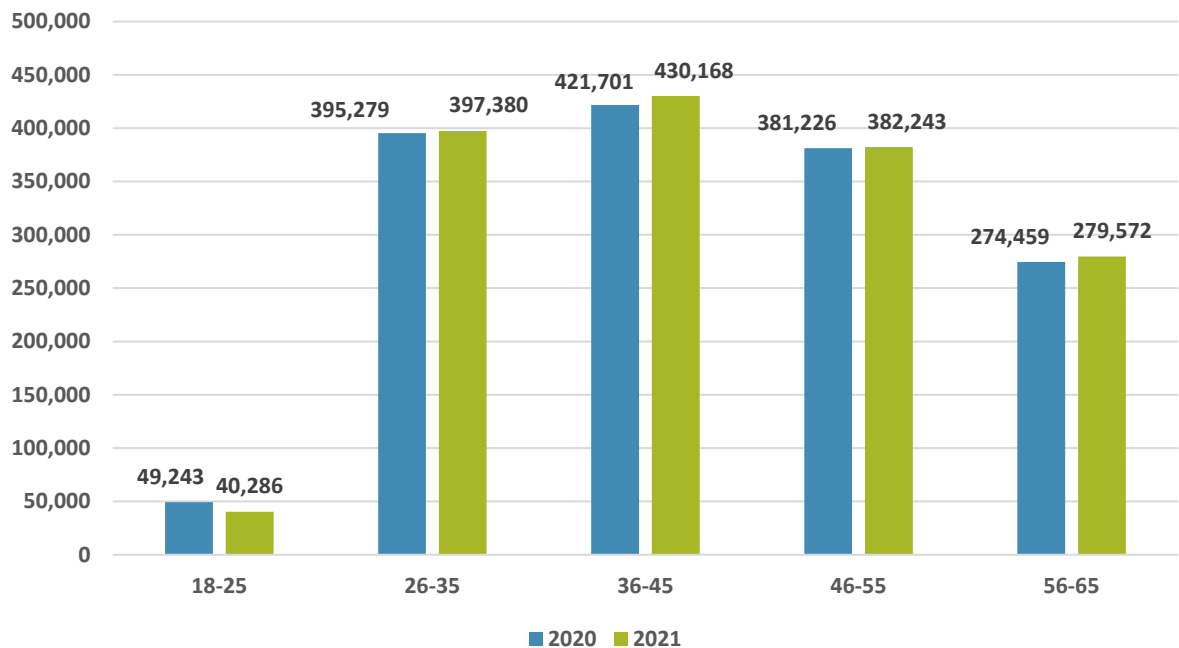


Source: Civil Service Commission (2020-2021)

**Figure 4. Career professionals by gender, 2016-2021**

In 2021, 21 percent (333, 974 out of 1, 597,973) of the career service was in the National Capital Region (Figure 5). They are followed by those in Region 4 or CALABARZON at 12.5 percent and Region 3 or Central Luzon at 8 percent. Bangsamoro Autonomous Region in Muslim Mindanao has the least number of career service professionals at 0.9 percent (14, 417 out of 1, 597, 973).

**Figure 5. Geographical location of career professionals, 2016-2021**



Note: NCR includes the Central or Main offices and NCR Regional Offices

## 2.2. Career Executives

As mentioned above, the third level career position in the government is also known as Career Executive Service (CES) or the managerial class. It was created by Presidential Decree No. 1 to "form a continuing pool of well-selected and development-oriented career administrators who shall provide competent and faithful service (CESB Resolution No. 726)."

The Civil Service Commission (CSC) supervises the first and second levels of career positions. Meanwhile, the Career Executive Service Board (CESB) is mandated with establishing rules, standards, and procedures for the selection, classification, salary, and advancement of CES members (CESB n.d.).

Among the positions included in the CES are Undersecretary, Assistant Secretary, Bureau Director, Assistant Bureau Director, Regional Director, Assistant Regional Director, Chief of Department Service, and other officers of equivalent rank identified by the CESB.

The CES uses a "rank concept." Career Executive Service Officials (CESOs) were conferred CES Eligibility by the CES Governing Board, assigned to a CES position, and appointed to a CES rank by the President upon recommendation by the CES Governing Board. CESOs have six ranks: CESO I, CESO II, CESO III, CESO IV, CESO V, CESO VI. CESO I is the highest rank and equivalent to salary grade 30, while CESO VI is the lowest rank equivalent to salary grade 25. Meanwhile, Career Executive Service Eligibles (CESEs) passed the four-stage CES Eligibility examination process and were conferred CES Eligibility by the CES Governing Board.

Entry to the CES is based on merit and fitness as decided by a competitive examination or highly technical qualifications. The CES Eligibility process consists of four stages: 1) Written Examination, 2) Assessment Center, 3) Performance Validation, and 4) Panel Interview. (CESB Resolution No. 1354).

On the other hand, Career Service Executive Eligibilities (CSEEs) completed two of the four stages of the CES Eligibility examination procedure, which included a written exam and a panel interview. The CSC awards the Career Service Executive Eligibility. It will be deemed equivalent to the written examination and the board interview, two of the four stages of the CES eligibility examination procedure (CESB n.d.).

As a result, to be granted CES eligibility and assigned to an appropriate rank in the CES, the applicant must complete the two remaining stages of the examination process, namely the Assessment Center and Performance Validation stages, and meet any other requirements imposed by the Board (CESB n.d.).

From 2016 to 2021, there are more than 2,600 CES positions available in the government. More than 700 have remained vacant for the past five years while at least 1,900 positions have been occupied by CES (Figure 6).

Non-CES Eligibles occupied an average of 47 percent of CES positions in the past five years. CESOs follows them with an average of 40.4 percent from 2016 to 2021. The CSEEs occupied the least number of CES positions in the past five years with an average of 2.4 percent. Table presents the number of occupied CES positions by rank (Figure 7).

**Figure 6. Career executive service occupancy figures, 2016-2021**



| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Vacant Positions | 795 | 766 | 792 | 778 | 759 | 710 |
| Occupied CES Positions | 1,983 | 1,916 | 1,896 | 1,943 | 1,912 | 1,972 |

**Figure 7. Occupied CES positions per rank, 2016-2021**



| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| CSEEs | 54 | 49 | 47 | 44 | 43 | 42 |
| CES Eligibles | 247 | 267 | 195 | 159 | 165 | 181 |
| Non-CES Eligibles | 877 | 845 | 888 | 955 | 924 | 938 |
| CESOs | 805 | 755 | 766 | 785 | 780 | 811 |

In terms of sex, an average of 57 percent are males occupying CES positions from 2016 to 2021 (Figure 8) and an average of 43 percent are their female counterparts.

**Figure 8. Occupied CES positions per sex, 2016-2021**

The National Capital Region has the greatest number of occupied CES positions (Figure 9). In 2021, there were 1028 CES situated in the region, giving it an average of 56 percent for the past five years. The capital region is followed by Region VII, Region III, and Region IV-A. The Bangsamoro Autonomous Region had the least number of occupied CES positions with an average of 1.48 percent from 2016 to 2021.

**Figure 9. Occupied CES positions by geographical location, 2016-2021**



Note: NCR includes the Central or Main offices and NCR Regional Offices

As reflected in Figure 10, those in the age bracket of 50-59 occupied the greatest number of positions from 2016 to 2021 (Figure 10). In 2021, the age group occupied 17 percent of the CES positions. They are followed by those in the 60-65 age bracket (15%). The age bracket of 30-39 occupied the least number of CES positions in 2021 with 0.44 percent. Thirty-two percent of occupied CES positions did not specify their age group.

**Figure 10. Occupied CES positions per age group, 2016-2021**
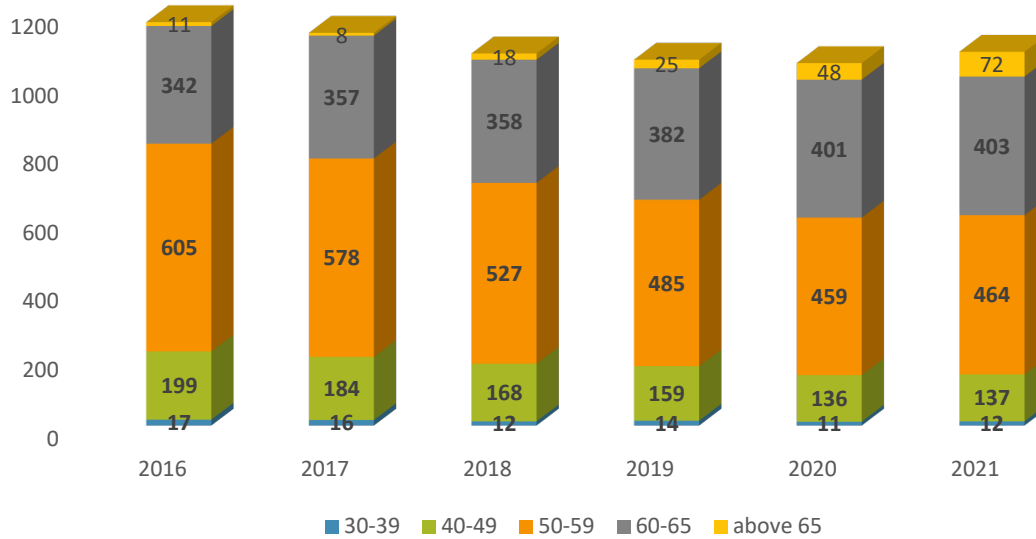


Source: Career Executive Service Board (2016-2021)

## 3. The Public Management Development Program

### 3.1. About the Program

With a common goal of building a critical mass of public managers, and knowledgeable and skillful administrators committed to development and embodying the values of competence, integrity, and commitment to public service, the original CESDP in 1974 was created to support the Career Executive Service. Producing top-caliber public officials that will assume the roles of experts, change agents, and leaders is the Program's aspiration. In 2012, Republic Act 10155, or the General Appropriations Act of 2012, the CESP was revived into the PMDP (DAP n.d.-a).

The Program is a purposive, program-based, and integrated professional development plan for career executives and personnel.

The DAP is the designated implementing agency of the Program[2]. The DAP has the institutional experience to implement and deliver the Program since they were the original creator of the CESDP in 1974. Moreover, it has the facilities to support the needs of the Program.

As the National Government's CESDP, the PMDP aims to produce a network of peak-performing, development-oriented, ethical, and committed government executives and middle

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[2] Presidential Decree No. 336 and Letter of Implementation (LOI) 146, s. 1973 stated that DAP is mandated to prepare, implement, and sustain the implementation of the training and career development program of the CES, in consultation with the CESB.

managers in the Philippine bureaucracy. As cited in DAP (n.d., par.9), the program more specifically aims to:

1. develop a keen appreciation of the vital role government executives play in the overall development process,
2. produce competent government leaders committed to the welfare of their constituents and the country's progress,
3. foster a spirit of kinship, mutual support, and harmony among government leaders working for the common goal of a good life for all,
4. deepen the bench of successors to the incumbent government executives to ensure a smooth transition in case of promotions or vacancies, and
5. enhance the image of the Philippine government as an institution imbued with professionalism, integrity, and honesty.

The country's overall goal under the new PDP for 2017-2022 is to lay the groundwork for inclusive growth, a high-trust and resilient society, and a globally competitive knowledge economy. The strategies have been organized into a strategic framework with three main pillars: *malasakit* (building a high-trust society), *pagbabago* (transforming towards equity and resiliency), and *patuloy na pag-unlad* (increasing growth potential) (NEDA n.d.). Based on the *malasakit* pillar, the program contributes to achieving sectoral outcomes such as promoting people-centered, clean, efficient governance through strengthened institutions.

The PMDP is an intensive training program that provides public managers with comprehensive and multi-modal learning opportunities. It offers four courses, namely, the Middle Managers Class (MMC), the Senior Executives Class (SEC), the Phronetic Leadership Class (PLC), and the Local Government Executives and Managers Course (LGEMC).

The MMC is for the second level (refer to the discussion in Figure 1) of career positions, the SEC is for third level (refer to the discussion in Figure 1) eligible appointees with managerial and executive functions, the PLC is targeted towards undersecretaries, assistant secretaries, and equivalent positions (PMDP n.d.-a), and the LGEMC is for local chief executives, municipal department heads and equivalent positions (PMDP n.d.-b).

The PMDP offers full scholarship to government executives occupying senior positions such as directors and officers-in-charge of permanent directorship, and middle management positions such as division chiefs or would-be executives. It includes tuition, accommodation, transportation, and training materials.

## 3.2. MMC and SEC Curriculum

The MMC is primarily designed for "high-performing, high-potential" division chiefs with an SG of 24, or would-be executives to prepare them to assume higher level responsibilities in third level position turnover. The PMDP accepts nominees below this level and equivalent positions (up to salary grade 18) as long as they are high performers and possess high potential as managers. They must be aged 50 years old or below and in good health. Nominees also must be from a national line or attached agency, constitutional and legislative office, government-owned and controlled corporation, or state university or college.

The current curriculum of the MMC has two phases that span 12 months. The first phase is a five-month residential training including working breaks to develop a capstone project, and a ten-day community immersion in a selected rural community (PMDP 2022a).

The second phase is the Capstone Project Phase. The capstone project serves as the integration of the Program where the scholars draw from significant experiences and learnings in the various modules and activities to address agency or citizen/client specific concerns and opportunities (PMDP 2022a). It is divided into one month writing the Project Plan after residential closing; one week Capstone Project Plan panel presentation; three-month implementation of the approved Capstone Project Plan; one month writing of the Capstone Project implementation results, one week Capstone report panel presentation; and three weeks packaging the final manuscript, collaterals and other requirements of the Program until submission to the PMDP.

On the other hand, the SEC is mainly designed for directors (third level executives) with a salary grade of 25 or higher. Officers-in-Charge of permanent directorship and nominees holding equivalent positions to directors and up may also be accepted to the SEC. Nominees must be 55 years old or younger and in good health. They also must be from a national line or attached agency, constitutional and legislative office, government-owned and controlled corporation, or state university/college.

The SEC is offered in a residential scheme for 51 days, spread over ten months, and where scholars stay one week a month for a face-to-face classroom session. SEC scholars undergo a sensing journey in a rural community within the residential period and undertake benchmarking on governance and policy innovations in a foreign country. A revalida of their Capstone Paper, which can be a policy paper, a management case, or an innovation project, caps the SEC. The capstone paper serves as an integrating activity and considered the "Final/Comprehensive Exam" where the scholars draw from their significant experiences and their learning in the various modules and activities of the PMDP to address agency- or customer-specific concerns and opportunities (PMDP 2022b).

However, due to the restrictions brought upon by the Corona Virus Disease - 2019 (COVID-19), the residential training has been migrated into a flexible learning modality. Virtual platforms such as Google Classroom and Google Meet have been primarily utilized to offer flexible learning and related activities (PMDP 2022a; PMDP 2022b). Moreover, the SEC training phase has been extended from ten months to 11 months and MMC training phase was extended from five to six months to allow the adjustment of the scholars to the flexible training modality and their new learning environment. Due to the pandemic, MMC batch 23 onwards and SEC batch 9 adopted the flexible learning set-up.

Figure 11 reflects the current curriculum used for the MMC. It is divided into three (3) learning areas: Governance and Development, Strategic Public Management, and Personal Efficacy and Leadership. In addition, the MMC has a Capstone Project. The Governance and Development learning area gives scholars a better grasp of various complementary issues and the many roles governments play in achieving them. The Strategic Public Management learning area gives scholars the knowledge and resources they need to lead and manage their agencies and offices to maximize their contribution to development and societal impact. The Personal Efficacy and Leadership learning area improves scholars' awareness of themselves and others, laying the groundwork for them to develop the leadership attitudes and skills to motivate themselves, their

colleagues, supervisors, and subordinates to higher levels of public service performance (PMDP 2022a).

Three modules are included in the first learning area (Governance and Development). These include Development Perspectives, Philippine Governance and Administrative System, and Dynamics of Social Development.

The Development Perspectives module helps scholars grasp many perspectives and concepts on development, such as its political, economic, cultural, sociological, and diplomatic elements, in the context of regional and global trends. The Philippine Governance and Administrative System aims to give scholars a better understanding of the structure and characteristics of the Philippine governance and administrative system and how and to what extent this system is effective or ineffective in carrying out government roles and functions. Lastly, the module on Dynamics of Social Development allows scholars to hone their sensitivity to people's needs, their awareness of and concern for the people's current circumstances, and their dedication to social responsibility and public accountability. The main activity of the module is a ten-day immersion or a "sensing journey" in a rural community to have a better and hands-on understanding of issues such as poverty in the Philippines (PMDP 2022a).

**Figure 11. PMDP curriculum for MMC (MMC 17 to present)**

**MMC's Curriculum**

**Learning Area 1: Governance and Development**

Development Perspectives (3 units)
Philippine Governance and Administrative System (3 units)
Dynamics of Social Development (6 units)

**Learning Area 2: Strategic Public Management**

Economic Applications in the Public Sector (3 units)
Public Finance and Budgeting (3 units)
Public Policy Analysis (3 units)
Managing High-Performing Public Sector Organizations (3units)
Project Development and Management (3 units)
Practicum on Operations Planning (3 units)

**Learning Area 3: Personal Efficacy and Leadership**

Peak Performers in the Public Sector (3 units)
Transformational Leadership (3 units)
Strategic Communication and Executive Negotiation (3 units)

**Capstone Project (6 units)**

Source: Public Management Development Program (2022a)

The second learning area (Strategic Public Management) comprises six modules: Economic Applications in the Public Sector, Public Finance and Budgeting, Public Policy Analysis, Managing High-Performing Public Sector Organizations, Project Development and Management, and Practicum on Operations Planning.

Economic Applications in the Public Sector teaches participants how to discern the underlying theories, concepts, and mechanisms that underpin macro and microeconomic phenomena and how to use "economic reasoning" to solve problems. The Public Finance and Budgeting module helps users grasp the fundamentals of fiscal policy, public fiscal administration, and the country's current situation. Participants will understand the public policy process and the tools and techniques used in policy analysis and evaluation in the public sector under the Public Policy Analysis module. Meanwhile, Managing High-Performing Public Sector Organizations allows scholars to hone their management skills to increase the performance of public sector organizations through the application of proper management science methodologies. The Project Development and Management module teaches scholars how to grasp the complexities of the development process and how to plan, implement, manage, and monitor development programs and projects. Finally, the Practicum on Operations Planning allows scholars to apply what they have learned in the Managing High-Performing Public Sector Organizations, Public Finance and Budgeting, Project Development and Management, and Public Policy Analysis modules to their own agencies' contexts and mandates (PMDP 2022a).

The Capstone Project provides an avenue to integrate the significant learnings and experiences of the scholars, gathered through the various modules and activities conducted in the Program. The scholar should address an agency or customer-specific concerns and opportunities through this re-entry project. The Capstone Project aims to demonstrate the extent to which (1) the concepts discussed in the program are internalized, (2) the skills developed are mastered, and (3) competences appropriate and useful in the context of the workplace are applied (PMDP 2022a).

Figure 12 lays out the current curriculum for the SEC. Like the MMC, SEC has three learning areas: Governance and Development, Strategic Public Management, and Personal Efficacy and Leadership. Moreover, instead of a Capstone Project, SEC has a Capstone Paper. Figure 12 provides an overview of the modules' respective learning areas and the corresponding units per module.

The classroom instruction and the sensing journey are part of the Perspectives in Governance and Development curriculum. The scholars will be able to construct a meaningful narrative and understanding of development due to the classroom instruction, which will include varied and sometimes competing perspectives on development, among other things. Meanwhile, the sensing journey, a ten-day immersion in a rural community, will provide an opportunity to review and criticize the achievement of targeted policy results in social development and obtain first-hand information on people's awareness levels (PMDP 2022b).

International Governance and Policy Innovations aims to increase scholars' respect and comprehension of foreign-country governance processes and expose them to public-sector policy innovations that address citizens' demands in the subject country's unique setting and context (PMDP 2022b).

The two sub-modules of Public Sector Economics and Finance are (1) Applied Public Sector Economics, and (2) Understanding Public Finance. The first sub-module prepares scholars to describe the concept, causes, and effects of a perfect competitive market, market equilibrium, and non-competitive markets, among other things. The second sub-module explains the importance and impact of fiscal administration on economic growth and national development, demonstrating a thorough understanding of the fundamental principles and logic of government fiscal activities, and approaches to resource allocation and decision evaluation (PMDP 2022b).

Evidence-Based Policy Making is concerned with putting together a core set of skills to assess a wide range of policies. Scholars are given an analytical framework for undertaking detailed policy studies using key theoretical models. Meanwhile, the module on Innovation and Strategic Management covers the use of strategic thinking and foresight in leading and managing organizations and other areas to achieve desired results, describes the use of tools for achieving operational excellence and service quality in the public sector, and explains organization development/change management, which includes teamwork, communication, coordination, and collaboration, as well as ethical leadership, social responsibility, and public accountability (PMDP 2022b).

**Figure 12. PMDP curriculum for SEC (SEC 7 to present)**



| SEC's Curriculum |
| --- |

**Learning Area 1: Governance and Development**
Perspectives in Governance and Development (3 units)
International Governance and Policy Innovations (3 units)

**Learning Area 2: Strategic Public Management**
Public Sector Economics and Finance (3 units)
Evidence-Based Policy Making (3 units)
Innovation and Strategic Management (3 units)

**Learning Area 3: Personal Efficacy and Leadership**
Personal Efficacy and Leadership (3 units)
Phronetic leadership (3 units)

**Capstone Paper (3 units)**

Source: Public Management Development Program (2022)

The three sub-modules of Personal Efficacy and Leadership are: (1) Peak Performance in the Public Sector, (2) Strategic Communication, and (3) Strategic Negotiation. Peak Performance in the Public Sector will transform the senior executive into a fully functional individual and professional capable of extraordinary results. Strategic Communication focuses on the concept and execution of oral presentations, their disciplined design, organization and structure, language use, and eventually the development of delivery skills toward confident and

trustworthy presentations. The Strategic Negotiation sub-module describes the various approaches that are effective in conflict management, explains the concepts behind principled negotiation toward a win-win solution, recognizes dirty tricks used in international negotiations, and shows scholars how to protect themselves and their agency from these and successfully engage in a simulation or role play negotiation (PMDP 2022b).

Finally, the Phronetic Leadership module allows scholars to reflect on their leadership capacity, gain and share tacit knowledge on development and delivery challenges, experiences, expertise, and perspectives on how to innovate the sector in which they work, and provide scholars with theories and concepts of Phronetic Leadership and Knowledge-Based Management (PMDP 2022b).

The Capstone Paper is considered as the "Final/Comprehensive Exam" and an integrating activity of the SEC. Like with the Capstone Project, the scholar must draw their significant learnings and experience through the various modules and activities to address an agency or customer-specific concerns and opportunities. It is focused on formulating strategies to attain pre-identified goals and objectives relevant to the public sector, especially to decision-makers and senior executives in the government. A policy paper, a management case, or an innovation project can be considered a Capstone Paper (PMDP 2022b).

While the PMDP is a training program, the DAP board granted academic equivalency of a graduate diploma program to SEC, which has a total of 24 units, and a professional non-thesis master's degree to MMC with an academic equivalency equal to 45 units under a ladderized scheme, based on its design, duration, and rigor for both programs.

### 3.3. PMDP Admission Process

Qualified incumbent public managers or government officers can join the program through the nomination from their respective head of agency. Based on the admission policy of the program, applications only of candidates nominated by the heads of agencies will be processed. Furthermore, the Admissions Committee and the Steering Committee of the PMDP acknowledges the heads of agencies' priority in identifying and recommending the senior government executives and middle managers who are the most competent in terms of the criteria and requirements.

The admission process has five major processes including (1) document screening, (2) interview, (3) competency and management skills written tests (applicable for MMC applicants only) and essay writing, (4) deliberation within DAP, and (5) confirmation by the NGCESDP Steering Committee.

### 3.4. Changes in PMDP Curriculum

**Table 1. Changes in the MMC (MMC 1 to MMC16) curriculum**

| Middle Managers Class (MMC) | | |
|---|---|---|
| | (MMC1 to MMC16) | MMC17 – Present |
| Modules | Unit | Unit |
| **Learning Area 1: Governance and Development** | **11** | **12** |
| Development Perspectives | 3 | 3 |
| Philippine Governance and Administrative System | 3 | 3 |
| Dynamics of Social Development | 5 | 6 |

| Middle Managers Class (MMC) | | |
|---|---|---|
| | (MMC1 to MMC16) | MMC17 – Present |
| **Learning Area 2: Strategic Public Management** | **20** | **18** |
| Economic Applications in the Public Sector | 4 | 3 |
| Public Finance and Budgeting | 5 | 3 |
| Public Policy Analysis | 3 | 3 |
| Project Development and Management | 3 | 3 |
| Managing High-Performing Public Sector Organizations | 4 | 3 |
| Practicum on Operations Planning | *(not taught in earlier batches)* | 3 |
| **Learning Area 3: Personal Efficacy and Leadership** | **10** | **9** |
| Peak Performers in the Public Sector | 4 | 3 |
| Transformational Leadership | 2 | 3 |
| Communication, Negotiation, and Media Relations (retitled to Strategic Communication and Executive Negotiations beginning MMC26) | 4 | 3 |
| Re-Entry Project (redesigned to Capstone Project beginning MMC17) | 6 | 6 |
| Total | 47 | 45 |

Source: Based on PMDP's revised curriculum (2018)

The original curriculum used for MMC batches 1 to 16 had 47 units. For learning area 1 (Governance and Development), the three modules had a total of 11 units: Development Perspectives (3 units), Philippine Governance and Administrative System (3 units), and Dynamics of Social Development (5 units).

Meanwhile, learning area 2 (Strategic Public Management) which is composed of six modules had a total of 20 units: Economic Applications in the Public Sector (4 units), Public Finance and Budgeting (5 units). Since MMC 17, Management Course 2 (Practicum on Operations Planning) (3 units) had been part of the curriculum. The module on Practicum on Operations Planning provides an avenue for scholars to apply the tools and techniques learned under the Strategic and Management learning area which resulted in strengthening the management course.

Learning Area 3 (Personal Efficacy and Leadership) had a total of 10 units composed of three modules: Peak Performers in the Public Sector (4 units), Transformational Leadership (2 units), and Communication, Negotiation, and Media Relations (CNMR) (4 units). CNMR has been changed to Strategic Communication and Executive Negotiation beginning MMC 26.

Lastly, the Re-Entry Project has been renamed Capstone Project during MMC 17. This is done to align with the Commission on Higher Education's (CHED) standards and to facilitate portability of the Program's module with courses from other local and foreign academic institutions. Due to the changes in the curriculum, the total number of units was reduced from 47 to 45.

Table 2 reflects the changes in the SEC curriculum since 2012. For the first two batches of SEC, the curriculum used was the same as the MMC. However, the curriculum was revised starting SEC 3 until SEC 6 to distinguish the MMC and SEC. Due to the modification, the total number of units was decreased from 47 to 21.

**Table 2. Changes in the SEC curriculum**

| | Senior Executives Class (SEC) | | | |
|---|---|---|---|---|
| | (SEC 1 and 2) | | (SEC3 to SEC6) | (SEC7 - present) |
| Modules | Unit | Modules | Unit | |
| **Learning Area 1: Governance and Development** | **11** | **Learning Area 1: Governance and Development** | **6** | **6** |
| Development Perspectives | 3 | Perspectives in Governance and Development | 4 | 3 |
| Philippine Governance and Administrative System | 3 | International Governance and Policy Innovations | 2 | 3 |
| Dynamics of Social Development | 5 | | | |
| **Learning Area 2: Strategic Public Management** | **20** | **Learning Area 2: Strategic Public Management** | **8** | **9** |
| Economic Applications in the Public Sector | 4 | Public Sector Economics and Finance | 4 | 3 |
| Public Finance and Budgeting | 5 | Evidence-Based Policy Making | 2 | 3 |
| Public Policy Analysis | 3 | Innovations and Strategic Management | 2 | 3 |
| Project Development and Management | 3 | | | |
| Managing High-Performing Public Sector Organizations | 4 | | | |
| Practicum on Operations Planning | - | | | |
| **Learning Area 3: Personal Efficacy and Leadership** | **10** | **Learning Area 3: Personal Efficacy and Leadership** | **4** | **6** |
| Peak Performers in the Public Sector | 4 | Personal Efficacy and Leadership | 4 | 3 |
| Transformational Leadership | 2 | Phronetic leadership (started in SEC8 and SEC Shuttle Course 1) | *(not taught in earlier batches)* | 3 |
| Communication, Negotiation, and Media Relations (retitled to Strategic Communication and Executive Negotiations) | 4 | Capstone Paper | 3 | 3 |
| Re-Entry Project (redesigned to Capstone Paper beginning SEC3) | 6 | | | |
| Total | 47 | | 21 | 24 |

Source: Based on PMDP's revised curriculum (2018a)

The redesigned SEC curriculum is highly integrated and geared to optimize connectivity across all modules, with the residential phase, sensing journey, and overseas study mission being divided into residential and action-learning experiences. Through shorter and more focused modules, the redesigned curriculum seeks to attain the highest level of productivity among senior executives by developing fundamental traits needed to drive success in this fast-changing environment. Moreover, as senior executives are integral to their respective agencies'

operation, the current curriculum will ensure that the senior executives will quickly return to their agencies with added knowledge and wisdom.

From SEC 3 to SEC 6 it has 21 units. However, revisions were done regarding the allocation of number of units per module. In Learning Area 1, Perspectives in Governance and Development decreased by one (1) unit, while International Governance and Policy Innovations increased by one (1) unit.

Meanwhile, Learning Area 2 increased by a total of one (1) unit, from eight (8) units to nine (9) units. Lastly, Learning Area 3 introduced the Phronetic leadership and decreased the number of units on Personal Efficacy and Leadership by one (1) unit. The introduction of the phronetic leadership module, started in SEC8 and the first class of SEC Shuttle Course (SSC), strengthened the leadership aspect in SEC. The total number of units for the SEC increased to 24 in 2019. The adjustments on time allocation and credit units of modules were done to align with CHED standards.

### 3.5. Tracer Study

A tracer study by the PMDP Monitoring and Evaluation Team was conducted in 2017 and 2018 to assess the perceived impacts of the PMDP and keep track of the program's career mobility, networks, and project sustainability. A total of 401 graduates responded to the tracer study, including 326 MMC graduates and 75 SEC graduates. Most of the respondents are from SEC 4 and MMC 9. Based on the collected data, 80 and 88 MMC graduates were promoted in 2017 and 2018, respectively. Meanwhile, 12 and 21 SEC graduates were promoted in 2017 and 2018, respectively. In terms of unit assignment, 74 and 84 MMC graduates were assigned to a different unit in 2017 and 2018, respectively, while 13 and 23 SEC graduates were designated to a different unit in 2017 and 2018. As for the skills and responsibilities, 194 graduates improved their policy-making skills, 161 graduates in technical skills, 141 graduates in financial skills, and 128 graduates in terms of their people management skills (PMDP 2018b).

As to networking, 99 respondents maintained regular communication with stakeholders, followed by 93 graduates with regular communication with co-scholars, 25 graduates with regular communication with other batches, and nine graduates with regular communication with SJ community (PMDP 2018b).

In terms of Capstone Papers, 47 SEC graduates (62 percent) were able to endorse their capstone papers to their respective managements, while 14 graduates (19 percent) were not able to endorse their capstone papers. The SEC data only includes SEC batches 3, 4, and 5. Two hundred fifty-six (79 percent) MMC graduates were able to sustain their capstone projects, while 70 MMC graduates (21 percent) were not able to sustain their capstone projects (PMDP 2018b).

The perceived level of impact of the SEC capstone papers was equally perceived to have high impact across their clients, unit, and agency. Meanwhile, 209 graduates were able to sustain their capstone projects at the agency level, after implementation, expanded to the provincial (116 graduates), regional (119 graduates), and national level (81 graduates), respectively (PMDP 2018b).

## 4. Research Design and Methodology

### 4.1. Conceptual Framework

The underlying causality and change theory are based on a multitude of assumptions from program establishment; attendance of participants to the classes; enhancement of knowledge, skills, attitudes, and credentials for better public managers; and sustenance of personal and institutional growth/development. The enabling assumptions cover technical, financial, material, and administrative support for effective candidate screening for both SEC and MMC implementation, and that graduates have the augmented capacity, motivation, and opportunity to introduce change (PIDS 2016).

Resulting intermediate and final outcomes eventually manifest through enhanced capacity application and benefit attribution to individual and organizational levels. These cover enhanced public management capacity at the individual (knowledge, skills, attitude, credentials), and aggregate (networks, public managers pool) levels, ultimately leading to improved organizational performance (PIDS 2016).

As contrasted with the earlier PIDS study, the current assessment looks at PMDP's indicative intermediate and final outcomes. The evaluation will cover an outcome review at the individual and organizational levels. Attention will be given to manifested impacts to see how PMDP graduates: (a) perform in their jobs, (b) use the learnings gained and competencies developed from their PMDP experience in their current workplace, and (c) make improvements in their home agencies given their PMDP experience (Figure 13).

**Figure 13. PMDP Change Theory and Evaluation Scope**
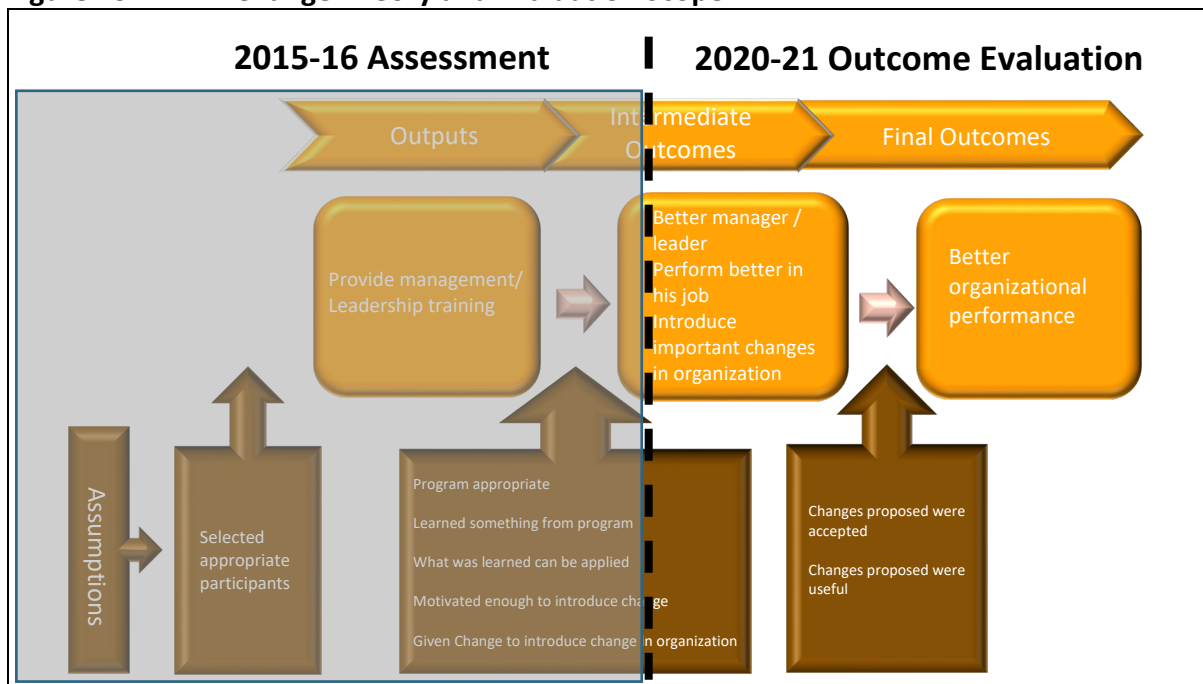


Source: Authors' illustration

The 2016 PIDS report indicated that the longer-term final outcome evaluation, defined as the attributable change in organizational performance (difference between outcomes of PMDP beneficiaries and non-beneficiaries), should be the next step after the initial assessment. The

current outcome evaluation will consider this recommendation by adopting a quasi-experimental design which will involve the use of a control group composed of government executives in other units/departments within the scholar's agency who exhibit similar profile and experience as the PMDP scholars to which the latter's performance will be compared.

### 4.2. Evaluation Design

Table 3 presents the original evaluation design proposed for this outcome assessment, namely, difference-in-differences and statistical matching, to provide doubly robust analyses whenever applicable. However, statistical matching was replaced by inverse-propensity score reweighting, which is based on the same identifying assumptions and under certain conditions are equivalent to statistical matching, to fully utilize the suboptimal size of the study sample collected for the evaluation.

**Table 3. Evaluation design**

| Evaluation methodology | Advantages | Disadvantages | Comment |
|---|---|---|---|
| **Difference-in-difference** The same set of treatment and comparison individuals are observed across different time periods. The change in outcomes in the comparison group are differenced from the change in outcomes in the treatment group to account for the effect of time-invariant (not affected or changed across time) unobserved factors. | Able to remove the potential confounding effect of time-invariant unobserved variables. | Requires treatment and comparison individuals to be observed in at least two time points – before and after treatment. It does not remove the potential effect of time variant unobserved characteristics. | Some historical outcomes may be reconstructed from available database, e.g. Personal Data Sheet. Other outcomes may require recall and self-assessment. |
| **Statistical matching** Treated individuals are matched to non-treated individuals based on observed characteristics. Impact estimates assumes that unobserved characteristics have no effect on selection into treatment (or there is an absence of bias in the program selection). | Easy to implement. It may be combined with difference-in-difference depending on the available data for doubly robust estimates. | Requires a strong assumption, i.e., treatment assignment is only based on observed characteristics (such as salary grade, competencies, skill sets, among others). | PMDP graduates will be matched to other staff of the same salary grade (to capture level of responsibility and skill) and other observable characteristics in the same government office at the time of the graduate's application to PMDP. Alternatively, the graduate may elect a set of individuals (s)he thinks (s)he is comparable to at the time of his (her) application. As a rule of thumb, the comparison group is |

suggested to be four times the number of individuals in the treated group, thereby inflating the cost of evaluation.

A random sample of SEC and MMC alumni were selected from the list of graduates provided by the DAP. The randomly selected PMDP graduates were then matched with non-PMDP graduates in the same government office based on salary grade and other observable characteristics around the time of the PMDP sample's application to the PMDP. The matched non-PMDP graduates were elected by the agency's human resource personnel or by the sampled PMDP alumni. In both cases, the assistance of DAP and the graduate's organization Human Resource Department were critical in identifying the control group and assuring that they participate in the assessment.

The randomly selected PMDP graduates and their matched comparison individuals were subjected to psychometric assessment. Post-survey balancing of sample characteristics were implemented using inverse-propensity score reweighting (IPW). Inverse-propensity score-weighted difference-in-differences was applied on characteristics with pre- and post-treatment observations, including salary grade (as observed) and CESB competencies (based on recall for pre-treatment). For other outcomes that are available only for the current period, only IPW is employed to balance sample characteristics between PMDP graduates (treatment) and non-PMDP graduates (control).

### 4.3. Methodology

#### 4.3.1. Qualitative Method

For the FGDs, respondents from the key officials of the DAP such as the President and Chief Executive Officer (CEO), the Senior Vice President for Programs and the Managing Director were interviewed to gather insights about the program from DAP's perspectives. Insights shared during the interview provided information on the management's experience in the implementation of the program and their aspirations and hopes for the Program.

Furthermore, class directors and faculty members were interviewed as they are the ones directly interacting with the scholars. Their perspectives are important since they have firsthand experience on the development of the scholar from their entry up until graduation.

As part of the requirements of the PMDP, the Sensing Journey's purpose is to expose the scholars to the realities of the country and the hope that these senior executives and middle managers will be able to transpire action upon returning to their offices to help those in the outskirts of the society who cannot readily access the programs and services of the government. Another set of respondents came from the rest of the PMDP graduates from both MMC and SEC classes. The respondents were a subset of the PMDP graduate respondents identified for the quantitative survey.

**Table 4. FGDs Respondents**

| | Respondents |
|---|---|
| Focus Group Discussion (FGD) | DAP Key Officials<br>- President and CEO<br>- Senior Vice President for Programs<br>- Managing Director |
| | PMDP Class Directors |
| | PMDP Faculty Members |
| | Sensing Journey Sites (Foster Families and Local Chief Executives/Barangay Chairpersons) |
| | MMC and SEC Graduates |
| | MMC and SEC Graduates' Peers |
| | MMC and SEC Graduates' Supervisors |

The qualitative study also included three case studies (Table 5): a representative group from the SEC, a line agency, and a constitutional body. For the line agency, the Department of the Interior and Local Government (DILG) was chosen. Meanwhile, the Commission on Audit (COA) was selected for the constitutional commission.

The selection of respondents primarily considered an appropriate representation among scholars' organizations, whether policy making or implementing agencies. Other factors include the two levels of classes, and the distribution across the different batches of both MMC and SEC.

**Table 5. Case Studies' Respondents**

| Case Studies | Respondents |
|---|---|
| Case Study #1 (SEC) | SEC Graduates |
| | SEC Graduates' Peers |
| | SEC Graduates' Supervisors |
| Case Study #2 | DILG Graduates |
| | DILG Graduates' Peers |
| | DILG Graduates' Supervisors |
| Case Study #3 | COA Graduates |
| | COA Graduates' Peers |
| | COA Graduates' Supervisors |

### 4.3.2. Quantitative Method

The sample size was calculated based on a normal approximation of the distribution of a sample proportion $\hat{p}$ with mean $p$ and variance $p(1-p)/n$, where $n$ is the sample size. Let $\alpha$ be the significance level, $\pi$ be the statistical power of the test, $\Phi(.)$ be the cumulative distribution function of the normal distribution, and $p_0$ and $p_a$ be the proportions under the null and alternative hypotheses, respectively. Setting $\delta = p_a - p_0 = 0.05$, $\pi = 0.80$, and $\alpha = 0.05$, the proposed sample size is calculated based on the following power equation of a two-sided score $z$ test (Equation 1):

**Equation 1. Power equation of a two-sided score z-test**

$$\pi = \Phi\left(\frac{\sqrt{n}\cdot(p_a-p_0)}{\sqrt{p_a\cdot(1-p_a)}} - z_{1-\frac{\alpha}{2}}\cdot\sqrt{\frac{p_0(1-p_0)}{p_a(1-p_a)}}\right) + \Phi\left(\frac{-\sqrt{n}\cdot(p_a-p_0)}{\sqrt{p_a\cdot(1-p_a)}} - z_{1-\alpha/2}\cdot\sqrt{\frac{p_0(1-p_0)}{p_a(1-p_a)}}\right)$$

Reflected in Table 6 is the sample size computation based on pre-program CES-WE prevalence among the PMDP scholars[3]. Given the effect size ($\delta$ = 5 percentage points), statistical power (80%) and significance level (5%), the study requires 291 PMDP scholars in the treatment group and 1,164 non-PMDP scholars in the comparison group for a maximal efficiency loss of 12.5 percent[4]. The sample were allocated to different government agencies and PMDP program proportional to size.

**Table 6. Sample Size**

|  | Base rate | Sample size ($\delta$ = 0.05) | | |
|---|---|---|---|---|
|  |  | Treatment Group | Control Group | Total no. of respondents |
| Passed CES-WE among test takers | 0.88 | 291 | 1,164 | 1,455 |

Source: Authors' computation

### 4.4. Scope and Limitations

This outcome evaluation only includes scholars from the SEC and MMC classes of the Program. This study did not include the Phronetic Leadership Class (PLC) and the Local Government Executives and Managers Class. It should be noted that the Phronetic Leadership module included in SEC is different from PLC for undersecretaries and assistant secretaries.

## 5. Data Collection

### 5.1. Online Survey

#### 5.1.1. Pre-survey Activities and Survey Proper

Prior to the conduct of the survey, the instrument was developed through repeated validations by consultants and experts in the field. The details of the instrument are in the subsequent section on instrumentation. Pre-testing was also conducted for the newly developed phronetic leadership assessment. The pre-test was participated by 69 male and female graduate students who are senior managers across Pasig City's local government's departments and offices. Results of the pre-test yielded a Cronbach alpha[5] of 0.987. The form was uploaded to Lime, an online survey platform. Subsequent quality checking of the survey links was also conducted.

During the survey, a guide survey was employed wherein an "enumerator" was assigned to guide multiple PMDP graduates, their peers/colleagues, and individuals comparable to PMDP graduates from a national line agency or a government-owned and controlled corporation in the whole duration of the survey. The enumerator presented an endorsement letter from DAP and PIDS authorization letter and discussed the consent form. Then, each of them gave similar

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[3] Based on the previous study which included the number of scholars who already passes the CES-Written Examination before entering the Program.

[4] See Abadie and Imbens (2002) for a discussion.

[5] Cronbach alpha is a measure of a test's reliability. It is often used as an indicator of the instrument quality (Taber 2018). A Cronbach alpha of at least 0.90 suggests an excellent reliability of the instrument (Taber 2018; Mat Nawi et. al 2020).

directions on answering the questionnaires to ensure that there is reliability and validity during the data collection.

## 5.2. Instrumentation

The online survey tools consist of two sets of survey questionnaire – one set for PMDP graduates and one set for the PMDP graduates' comparable peers.

The survey questionnaire for the PMDP graduates composed of the following sections:
- Respondent's and agency's information – it included the demographic information such as name, age (at the time of PMDP application and as of last birthday), sex, highest educational attainment (current and at the time of PMDP application), name and address of agency, region (current and at the time of PMDP application), office/division/unit (current and at the time of PMDP application), cumulative number of years in public service (current and at the time of PMDP application).
- PMDP-related information – it included questions on who initiated the scholar's participation in the program, how significant the support is of their agency, co-scholars, colleagues, and family.
- Post-PMDP experience – questions such as whether they recommend the programs to their colleagues or not along with their reasons. It also included other data like considerations on alternative institutional offerings aside from PMDP, adoption of re-entry plan/ capstone project/ capstone paper, change of work assignments assigned after PMDP, contact with fellow PMDP graduates at a professional level, and proposed and adopted innovations.
- Competency Assessment – this section is based on the CESB competencies and respective behavioral indicators capturing the essence per competency theme. In this section, respondents made a self-rating on their individual competency changes using five-point Likert scale (1 – poor; 2 – less than adequate but can be improved; 3 – adequate; 4 – more than adequate but fall short of being exceptional; 5 – exceptional) in the following aspects: (a) Strategic and Critical Thinking, (b) Leading in a Continuously Changing Environment, (c) Developing or Empowering Others for Collective Accountability, (d) Linkaging and Networking for Productive Partnerships, (e) Planning and Organizing for Greater Impact, (f) Driving Performance, and (g) Individual and Organizational Impacts.
- Phronetic Leadership - A 43-item assessment on phronetic leadership which used a five-point Likert scale (1 – not at all like me; 3- sometimes; 5 – very much like me). This was given to both the PMDP graduates and PMDP Comparable Individuals. The Phronetic leadership assessment consisted of six (6) dimensions, which were culled from the article by Nonaka and Takeuchi (2011) titled The Big Idea: The Wise Leader. These dimensions and their descriptions are discussed in Table *7*.

Peers' survey questionnaire, on the other hand, essentially had the same set of questions (respondent's and agency's information, competency assessment, phronetic leadership). However, a section was included on their information and knowledge about the PMDP. Questions if they heard the Program and where have they heard it, if the respondents obtained a master's degree, and program or training taken to further improve their skill set were included in this section.

**Table 7. Phronetic leadership Assessment**

| Ability | Description | Behavioral Indicators |
|---------|-------------|----------------------|
| Wise leaders can judge goodness | Ability to make judgment on 'goodness' in a particular situation<br><br>"Not only does a company have to live in harmony with society, but to be accepted, it must contribute to society" | Having a higher point of view to be able to see what is good for the whole<br><br>Make decisions based on what is good for the organization and for society<br><br>Practice moral discernment about what's good and act on it in every situation<br><br>Leaders believe that their actions should have a moral purpose<br><br>Judgment is guided by values and ethics Managers make judgments for the common good, not for profits or competitive advantage |
| Wise leaders create shared contexts | Ability to share contexts with others to create *ba* (place, space, or field), where individual views are shared and contrasted in order to transcend one's own limited perspective and create new knowledge | Leader should foster and manage interactions that supposes sharing emotion, care, love, trust, and a sense of security<br><br>Provide contexts in which executives and employees can interact to create new meaning<br><br>Leaders constantly create opportunities for senior executives and employees to learn from one another |
| Wise leaders can grasp the essence | Ability to grasp the essence of particular situations in order to contemplate the universal 'truth' or essential meaning of a particular experience | Attention to detail<br><br>Identify changes and their implications for the common good<br><br>Quickly grasp the essence of a situation Fathoms the nature and meaning of people, things, and events<br><br>Quickly sense what lies behind a situation, project a vision of the future or the consequences, and decide on the action needed to realize that vision<br><br>Leaders grasp universal truths from the particulars and the details. |
| Wise leaders communicate the essence | Ability to express and communicate the essence of things | Articulate and conceptualize subjective, intuitive ideas in clear language |

| Ability | Description | Behavioral Indicators |
|---|---|---|
| | | Employ metaphors and stories to convert their experience into tacit knowledge that others can use |
| | | Able to communicate in a way that everyone can understand |
| | | Uses stories, metaphors, and other figurative language to communicate the essence of a situation |
| | | Leaders engage in conversation with as many people as possible and display a high degree of commitment to communication |
| Wise leaders exercise political power | Ability to use necessary political means well to obtain the common good. Political power refers to the ability to understand the contradictions in human nature and to harmonize them | Exert political power to bring people together and spur them to act |
| | | Combines and synthesizes everyone's knowledge and efforts in the single-minded pursuit of their goals |
| | | Utilizes all means suited to the situation for mobilization of people |
| | | Exercise political judgment by understanding the viewpoints and emotions of others, gleaned through everyday verbal and nonverbal communication |
| | | Strive to understand all the contradictions in human nature and synthesize them as situations arise |
| Wise leaders foster practical wisdom in others | Ability to foster phronesis in others on the assumption that, as knowledge, individual phronetic capabilities can be transferred among people in the organization | Responds flexibly and creatively to any situation |
| | | Use apprenticeship and mentoring to cultivate practical wisdom in others |
| | | Fosters distributed leadership |

Source: Nonaka and Takeuchi (2011)

There were 78 initial item pools during the phronetic leadership assessment development. There were two rounds of validation by six experts who rated each item on their representativeness of the construct, fairness, clarity, item relevance, and social desirability. The last validation phase consisted of a workshop to address specific suggestions to each of the retained 43 items. The reliability of the current form of the phronetic leadership assessment was also analyzed, which resulted in the following reliability coefficients (Cronbach alpha) presented in Table 8:

**Table 8. Phronetic leadership theme**

| Dimension | Number of items | Scholars | Peers |
|---|---|---|---|
| Ability to judge goodness | 7 | 0.827 | 0.879 |
| Ability to create shared context | 7 | 0.846 | 0.890 |
| Ability to grasp the essence | 7 | 0.866 | 0.833 |
| Ability to communicate the essence | 8 | 0.881 | 0.898 |
| Ability to exercise political power | 7 | 0.883 | 0.893 |
| Ability to foster practical wisdom in others | 7 | 0.866 | 0.907 |
| Overall Phronetic leadership Scale | 43 | 0.965 | 0.972 |

Source: Authors' computation

### 5.2.1. *Online Survey*

A total of 142 PMDP scholars and 291 comparable peers participated in the online survey. Looking at the scholars' class, 127 of which were from MMC and 15 were from SEC. The online survey yielded a response rate of 50.5%. Table 9 shows the present agencies of the survey respondents. Various national line agencies, government-owned and controlled corporations, state universities and colleges, and constitutional commissions have participated in the online survey.

**Table 9. Survey respondents' agencies**

| Government-Owned and Controlled Corporations | Office of the President |
|---|---|
| 1. Bangko Sentral ng Pilipinas | 1. Commission on Higher Education |
| 2. Bases Conversion and Development Authority | 2. National Commission on Indigenous Peoples |
| 3. Cagayan Economic Zone Authority | 3. National Intelligence Coordinating Agency |
| 4. Clark Development Corporation | 4. National Library of the Philippines |
| 5. National Food Authority | 5. National Security Council |
| 6. National Irrigation Administration | 6. Philippine Drug Enforcement Agency |
| 7. Philippine Health Insurance Corporation | 7. Presidential Communications Operations Office |
| 7. Philippine Reclamation Authority | |
| 7. Philippine Rice Research Institute | |
| 8. Power Sector Assets and Liabilities Management Corporation | |
| 9. Social Security System | |
| 10. Sugar Regulatory System | |
| **Department of Trade and Industry** | **Department of the Interior and Local Government** |
| 1. Bureau of Philippine Standards | |
| 2. Bureau of Small and Medium Enterprise Development | 1. Bureau of Jail Management and Penology |
| 3. Cooperative Development Authority | 2. National Police Commission |
| 4. Technical Education and Skills Development Authority | 3. Philippine Commission on Women |
| | 4. Philippine National Police |

| National Economic and Development Authority | Constitutional Commissions |
|---|---|
| 1. Philippine Institute for Development Studies<br>2. Philippine Statistical Research and Training Institute<br>3. Philippine Statistics Authority<br>4. Public-Private Partnership Center | 1. Civil Service Commission<br>2. Commission on Audit<br>3. Commission on Elections<br>4. Commission on Human Rights |
| Department of National Defense | Department of Environment and Natural Resources |
| 1. Philippine Air Force<br>2. Philippine Army<br>3. Philippine Navy<br>4. Philippine Veterans Affairs Office | 1. Environmental Management Bureau<br>2. Mines and Geosciences Bureau<br>3. National Mapping and Resource Information Authority |
| Department of Finance | Department of Health |
| 1.Bureau of Internal Revenue<br>2. Bureau of Treasury<br>3. Philippine Deposit Insurance Corporation | 1. Bicol Medical Center<br>2. Commission on Population and Development<br>3. National Nutrition Council |
| Department of Finance | State Universities and Colleges |
| 1.Bureau of Internal Revenue<br>2. Bureau of Treasury<br>3. Philippine Deposit Insurance Corporation | 1. Kalinga State University<br>2. Tarlac Agricultural University<br>3. West Visayas State University |
| Department of Agriculture | Department of Justice |
| 1. Bureau of Agriculture and Fisheries Standards<br>2. National Meat Inspection Service | 1. National Prosecution Service<br>2. Parole and Probation Administration |
| Legislative Branch | Department of Labor and Employment |
| 1. Senate of the Philippines<br>2. House of Representatives | 1. Regional Tripartite Wages and Productivity Board |
| Department of Science and Technology | Department of Social Welfare and Development |
| 1. Philippine Textile Research Institute | 1. Council for the Welfare of Children |
| Other Departments: | |
| 1. Department of Agrarian Reform<br>2. Department of Budget and Management<br>3. Department of Education<br>4. Department of Human Settlements and Urban Development<br>5. Department of Public Works and Highways | |

Source: PMDP Online Survey (2021)

*5.3. Baseline Characteristics*

Table 10 presents the demographic information of samples in the treatment and control groups. Based on the survey results, the PMDP graduates has a mean age of 48.38 years, while their peers has a mean age of 46.14. There were more females (56.6% of graduates and 66.1% of peers) than there were males (43.4% of graduates and 56.6% of peers) for both groups of respondents.

Among PMDP scholars, the highest educational attainment at baseline (Table 10) (i.e., time of PMDP application) for most respondents was a college degree (46, 32.2%), master's degree (42, 29.4%) or a master's undergraduate (30, 21%). It can be observed that the peer group had a greater proportion of master's degree graduates (117, 40.07%) at around the same time frame as the PMDP scholar's application. The proportion of bachelor's degree graduates among peers (88, 30.14%) was comparable to the scholars.

The current highest educational attainment (Table 10) for the majority of both scholars (103, 72%) and peers (127, 43.49%) was completion of a master's degree. Notably, the proportion of graduates with completed master's degrees is larger in the PMDP scholar group compared to the contemporary peer group due to the conferment of a master's degree for MMC graduates.

At the time of PMDP application, there were 65.7% of scholars and 63.7% peers who were working in regional offices, while 34.3% scholars and 37.3% peers were assigned at their agencies' central office (Table 10). Respondents' current distribution by region is comparable to baseline.

At the time of their application, about half of the scholar respondents belonged to either salary grade 20 (48, 33.6%) or SG 22 (24, 16.8%). Based on this, half of the respondents belong to the would-be executives to help them prepare assume higher level responsibilities given the event of third level position turnover. Meanwhile, among respondents in the peer group, the most common salary grades during the same timeframe were SG 22 (66, 22.6%), SG 18 (52, 18.2%) and SG 19 (45, 15.4%). Currently, the most common salary grades of the PMDP graduates are SG 24 (45, 31.5%) and SG 22 (39, 27.3%) suggesting that the some of the scholars were promoted after their PMDP journey. There is a similar observation among respondents in the peer group, where the common salary grades are SG 22 (79, 27.05%), SG 24 (52, 17.81%), SG 18 (45, 15.4%) and SG 19 (37, 12.7%) (Table 10).

At the time of PMDP application, the mean cumulative number of years (Table 10) in public service of respondents in the scholars' group was 16.7 years while the peer group was numerically lower at 15.9 years. Currently, the mean number of years is 22.2 among scholars and 20.0 among peers.

**Table 10. Respondent's characteristics (At the time of PMDP application and Present)**

| Characteristics | PMDP graduates N=142 Mean (Standard Deviation) | Peers N=291 Mean (Standard Deviation) |
|---|---|---|
| Mean age, no. of years | 48.41 | 46.15 |
| Sex, no. of cases (%) | | |
| Male | 61 (43.0) | 98 (33.7) |
| Female | 81 (57.0) | 193 (66.3) |

| Characteristics | PMDP graduates N=142 Mean (Standard Deviation) | Peers N=291 Mean (Standard Deviation) |
|---|---|---|
| Highest educational attainment (at the time of PMDP application) | | |
| College degree | 46(32.4) | 88 (30.2) |
| Doctorate degree | 17(12) | 29 (10) |
| Doctorate degree undergraduate | 7(4.9) | 10 (3.4) |
| Master's degree | 42(29.6) | 116 (39.9) |
| Master's degree undergraduate | 30(21.1) | 48 (16.5) |
| Highest educational attainment (current) | | |
| College degree | 4 (2.8) | 57 (19.6) |
| Doctorate degree | 20 (14.1) | 39 (13.4) |
| Doctorate degree undergraduate | 10 (7) | 13 (4.5) |
| Master's degree | 103 (72.5) | 126 (43.3) |
| Master's degree undergraduate | 5 (3.5) | 56 (19.2) |
| Region at the time of PMDP application | | |
| Central Office | 49 (34.5) | 185 (63.6) |
| Regional office | 93 (65.5) | 106 (36.4) |
| Current region | | |
| Central Office | 51 (35.9) | 111 (38.1) |
| Regional office | 91 (64.1) | 180 (61.9) |
| Standardized salary grade at the time of PMDP application | | |
| 12 | | 1 (0.3) |
| 13 | | 1 (0.3) |
| 14 | | 4 (1.4) |
| 15 | | 4 (1.4) |
| 16 | | 8 (2.7) |
| 18 | 1 (0.7) | 59 (20.3) |
| 19 | 30 (21.1) | 50 (17.2) |
| 20 | 12 (8.5) | 7 (2.4) |
| 21 | 6 (4.2) | 8 (2.7) |
| 22 | 4 (2.8) | 73 (25.1) |
| 23 | 48 (33.8) | 11 (3.8) |
| 24 | 2 (1.4) | 36 (12.4) |
| 25 | 24 (16.9) | 10 (3.4) |
| 26 | 5 (3.5) | 14 (4.8) |
| 27 | 7 (4.9) | 2 (0.7) |
| 28 | 1 (0.7) | 1 (0.3) |
| 29 | 2 (1.4) | 1 (0.3) |
| No Answer | | 1 (0.3) |
| Standardized current salary grade | | |
| 12 | | 1 (0.3) |
| 16 | | 4 (1.4) |
| 18 | 1 (0.7) | 46 (15.8) |
| 19 | 13 (9.2) | 36 (12.4) |
| 20 | 3 (2.1) | 5 (1.7) |

| Characteristics | PMDP graduates N=142 Mean (Standard Deviation) | Peers N=291 Mean (Standard Deviation) |
|---|---|---|
| 21 | 1 (0.7) | 6 (2.1) |
| 22 | 39 (27.5) | 81 (27.8) |
| 23 | 2 (1.4) | 17 (5.8) |
| 24 | 45 (31.7) | 53 (18.2) |
| 25 | 10 (7) | 12 (4.1) |
| 26 | 13 (9.2) | 18 (6.2) |
| 27 | 9 (6.3) | 5 (1.7) |
| 28 | 3 (2.1) | 4 (1.4) |
| 29 | 3 (2.1) | 1 (0.3) |
| 30 | | 1 (0.3) |
| No Answer | | 1 (0.3) |
| Cumulative number of years in public service at the time of PMDP application, mean | 16.67 | 15.87 |
| Current cumulative number of years in public service, mean | 22.33 | 20.02 |

Source: PMDP Online Survey (2021)

### 5.3.1. Case Studies

As mentioned earlier, three case studies were included: SEC, DILG, and COA. In addition to the three required case studies, representatives from the MMC were also invited as respondents to provide their perspective vis-à-vis the evaluation questions. Below discussions provide overview on the selected national line agency and constitutional commission.

### 5.3.1.1. Department of Interior and Local Government

The DILG (n.d.) envisions to be "a strongly determined and highly trusted department committed to capacitate and nurture local government units, public order and safety institutions to sustain peaceful, progressive, and resilient communities where people live happily (par.1)." Moreover, the department's mission is to "promote peace and order, ensure public safety, strengthen capability of local government units through active people participation and a professionalized corps of civil servants (par.2)."

The department has nine attached agencies, namely: Bureau of Fire Protection (BFP), Bureau of Jail Management and Penology (BJMP), Local Government Academy (LGA), National Police Commission (NAPOLCOM), National Commission on Muslim Filipinos (NCMF), National Youth Commission (NYC), Philippine Commission on Women (PCW), Philippine National Police (PNP), and Philippine Public Safety College (PPSC) (RA 6975; EO No. 67).

### 5.3.1.2. Commission on Audit

As a constitutional commission, the COA has a mandate that emanates from the 1987 Philippine Constitution. In Article IX Section D of the 1987 Philippine Constitution, the COA has the "power, authority, and duty to examine, audit, and settle all accounts to the revenue and receipts of, and expenditures or uses of funds and property, owned or held in trust by, or pertaining to, the Government" (COA n.d.-a).

The vision of the commission is to be "a trustworthy, respected, and independent audit institution that is an enabling partner of government in ensuring a better life for every Filipino." Meanwhile, its mission is "to ensure accountability for public resources, promote transparency, and help improve government operations, in partnership with stakeholders, for the benefits of the Filipino people" (COA n.d.-b).

As of September 2020, the commission has jurisdiction to a total of 66,045 audit agencies scattered to across state universities and colleges, water districts, national government agencies, government owned and controlled corporations, and local government. Moreover, as of the same period, the commission has a total of 8,989 active employees, of which are 6,153 career service employees, 5,405 certified public accountants, and 294 lawyers (COA n.d.-b).

Table 11 presents the respondents for the case studies. Aside from the PMDP graduates, their peers and supervisors were also invited to triangulate the collected stories from them. A total of 25 graduates, 16 peers, and nine supervisors were interviewed from various agencies. Prior to the conduct of the FGDs, an interview guide was provided to facilitate a quicker discussion. The respondents were highly encouraged to provide a copy of their interview guide as to gather their notes during the interviews.

**Table 11. Case Studies' Respondents**

| Level | Agencies Represented | Place of Assignment | Respondents | | | |
|---|---|---|---|---|---|---|
| | | | No. of Invited | Attended FGD | Submitted Interview Guide | Total |
| **Senior Executives Class** | | | | | | |
| Graduates | • Ilocos Training and Regional Medical Center (ITRMC)<br>• Cooperative Development Authority (CDA)<br>• Philippine Statistics Authority (PSA)<br>• Commission on Election (COMELEC) | Regional - 4 | 11 | 4 | - | 4 |
| Peers | | Regional - 1 | 6 | 1 | - | 1 |
| Supervisors | | Regional - 1 | 7 | 1 | - | 1 |
| **Department of the Interior and Local Government** | | | | | | |
| Graduates | • Department of the Interior and Local Government (DILG)<br>• National Police Commission (NAPOLCOM)<br>• Philippine National Police (PNP)<br>• Philippine Council for Women (PCW) | Central – 2<br>Regional - 7 | 10 | 9 | - | 9 |
| Peers | | Regional - 4 | 9 | 4 | - | 4 |
| Supervisors | | Regional - 1 | 9 | 1 | 1 | 2 |
| **Commission on Audit** | | | | | | |
| Graduates | Commission on Audit | | 7 | 3 | 1 | 4 |
| Peers | | | 5 | 3 | - | 3 |
| Supervisors | | | 5 | 1 | - | 1 |

| Level | Agencies Represented | Place of Assignment | Respondents | | | |
|---|---|---|---|---|---|---|
| | | | No. of Invited | Attended FGD | Submitted Interview Guide | Total |
| **Middle Management Class** | | | | | | |
| Graduates | • National Economic and Development Authority (NEDA) | | 11 | 6 | 2 | 8 |
| Peers | • Power Sector Assets and Liabilities Management Corporation (PSALM) | | 10 | 8 | - | 8 |
| Supervisors | • Department of Social Welfare and Development (DSWD) <br> • Department of Environment and Natural Resources (DENR) <br> • National Meat Inspection Service (NMIS) <br> • Philippine Health Insurance Corporation (PhilHealth) <br> • National Nutrition Council (NNC) <br> • Department of Education (DepEd) <br> • Social Security System (SSS) <br> • Department of Trade and Industry (DTI) | | 11 | 4 | 1 | 5 |

Information from the KIIs and FGDs as well as secondary data was used to supplement the data generated from the survey and psychometric exam. Validation of responses from different individuals, i.e., PMDP graduates with their peers, colleagues, and supervisors were performed, to provide explanations, clarify contexts, discover relationships and trends, and augment the data generated from the quasi-experimental portion of the study.

## 6. Results and Discussion

### 6.1. Survey Results

The survey sought to determine the self-assessed behavioral changes in the scholars and their peers along the six competencies by comparing the pre- and post-PMDP competency levels in terms of consistency of demonstrating the behaviors. Table 12 presents the CESB competencies and their definitions:

**Table 12. CESB competencies and their definitions**

| CESB Competencies | Definition |
|---|---|
| Strategic and Critical Thinking | The ability to obtain information and identify key issues and relationships relevant to achieving a long-range goal or vision; to commit a course of action to accomplish a long-range goal or vision after developing alternatives based on logical assumptions, facts, available resources, constraints, and organizational values. |
| Leading in a Continuously Changing Environment | The ability to encourage others to seek opportunities for different and innovative approaches in addressing problems and opportunities, and to facilitate the implementation and acceptance of change within the organization. |
| Empowering/Developing Others to Establish Collective Accountability for Results | The ability to develop and promote effective relationships with colleagues and team members and to deal constructively with conflicts. The ability to develop subordinates' skills and competencies by planning effective development activities related to current and future jobs. |
| Linkaging and Networking for Productive Partnerships | The ability to develop and strengthen partnerships that can provide information, assistance and support to the organization; to identify and use synergies across the organization with external partners. |
| Planning/Organizing for Greater Impact | The ability to establish a course of action for self and/or others to accomplish a specific goal; to plan proper assignments of personnel and appropriate allocation of time and other resources. |
| Driving Performance for Integrity and Service | The ability to produce and deliver quality results, to be action-oriented and committed to the achievement of the outcomes. |

Source: Lifted in full from Career Executive Service Board (2014)

Moreover, using the Phronetic Leadership framework, the following abilities and behaviors (Table 13) were used to evaluate the practice of phronetic leadership among the respondents:

**Table 13. Phronetic leadership abilities and behaviors**

| Abilities[6] | Behaviors |
|---|---|
| Judge goodness; judgment based on ethics | Makes judgments based on his/her values and ethics |
| Judge goodness: judgement based on organizational social responsibility | Makes judgments above all for the good of society |

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[6] Ding, W., Choi E, Aoyama A (2019). Relational study of wise (phronetic) leadership, knowledge management capability, and innovation performance, 2019(24):310-317

| Abilities[6] | Behaviors |
|---|---|
| Grasp the essence: discernment | Puts the details within the big picture to capture the essence of a situation. |
| Grasp the essence: accurate prediction ability | Employs both subjective intuition and objective knowledge to design successful strategies |
| Create shared context: (willing to share knowledge/create sharing opportunities | Creates venues/opportunities for sharing knowledge and learning from one another |
| Create shared context: perspective taking | Makes space for conversations to gather perspectives and collectively create new meaning |
| Create shared context: good interaction with knowledge sharer | Promotes good relationships as basis for effective interaction |
| Communicate the essence: vivid language | Uses storytelling, metaphors and language that fosters understanding and engages hearts and minds |
| Exercise political power: encouragement/ make policy by daily communication | Integrates and synthesizes people's knowledge and emotions to move them to wards concerted action |
| Exercise political power: efficient integration) | Handles contradictions with ease; adopts "both-and" rather than "either-or" perspectives |
| Foster phronesis: training | Sponsors training programs on phronetic leadership |

Source: Ding et. al (2019)

### 6.1.1. Significant difference between scholars and peers on CESB competencies and phronetic leadership, post-PMDP timeline

This study utilized the non-parametric test such as Mann-Whitney U and Wilcoxon W test to determine the significant difference between scholars and peers on the CESB competencies and phronetic leadership. Table 14 refers to the summary table of Mann Whitney U test which used in determining the significant difference between the response on the CESB competency under strategic and critical thinking. The computed p-values of all items under this segment are below 0.05 (alpha) which means that there is a significant difference on the mean response of the respondents on the CESB competency assessment under strategic and critical thinking when they grouped according to their type of respondents.

**Table 14. Strategic and critical thinking competency of scholars and peers, post-PMDP timeline**

| Scholars vs. Peers | Mann-Whitney U | Wilcoxon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| 1. I demonstrate commitment to a shared vision to ensure achievement of results. | 16589.0 | 57917 | -3.0027 | 0.0027 | Reject Ho | Significant |
| 2. I gather & analyze factors and trends to formulate policy and strategy. | 15342.5 | 56670.5 | -4.1059 | 0.0000 | Reject Ho | Significant |

| Scholars vs. Peers | Mann-Whitney U | Wilcoxon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| 3. I identify the critical success factors for the organization's sustainability & competitiveness. | 14873.5 | 56201.5 | -4.5258 | 0.0000 | Reject Ho | Significant |
| 4. I capitalize on opportunities and manage risks. | 15617.0 | 56945 | -3.8231 | 0.0001 | Reject Ho | Significant |
| 5. I design & implement strategic plans consistent with the organization's vision and mission. | 14287.0 | 55615 | -4.9821 | 0.0000 | Reject Ho | Significant |

Source: PMDP Online Survey (2021)

Table 15 refers to the summary table of Mann Whitney U test which used in determining the significant difference between the response on the CESB competency under leading in a continuously changing environment. The computed p-values of all items under this segment are below 0.05 (alpha) which means that there is a significant difference on the mean response of the respondents on the CESB competency assessment under leading in a continuously changing environment when they grouped according to their type of respondents.

**Table 15. Leading in a continuously changing environment competency of scholars and peers, post-PMDP timeline**

| Scholars vs. Peers | Mann-Whitney U | Wilcon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| 6. I lead initiatives to change the structure, system, or talent mix of the organization to support organizational strategy | 14461.0000 | 55502.0000 | -4.8334 | 0.0000 | Reject Ho | Significant |
| 7. I work to achieve "buy-in" in support of change. | 14865.5000 | 55906.5000 | -4.4095 | 0.0000 | Reject Ho | Significant |
| 8. I facilitate the implementation & acceptance of change in the workplace. | 15120.0000 | 56161.0000 | -4.2409 | 0.0000 | Reject Ho | Significant |

| Scholars vs. Peers | Mann-Whitney U | Wilcon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| 9. I provide resources to enable implementation of change initiatives. | 16004.0000 | 57045.0000 | -3.3920 | 0.0007 | Reject Ho | Significant |

Source: PMDP Online Survey (2021)

Table 16 presents to the summary table of Mann Whitney U test which used in determining the significant difference between the response on the CESB competency under developing/empowering others for collective accountability. The computed p-values of all items under this segment are below 0.05 (alpha) which means that there is a significant difference on the mean response of the respondents on the CESB competency assessment under developing/empowering others for collective accountability when they grouped according to their type of respondents.

**Table 16. Developing/empowering others for collective accountability competency of scholars and peers, post-PMDP timeline**

| Scholars vs. Peers | Mann-Whitney U | Wilcon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| 16. I foster an inclusive workplace where diversity and individual differences are valued. | 16173.5000 | 57214.5000 | -3.3199 | 0.0009 | Reject Ho | Significant |
| 17. I encourage & support personal development and career advancement. | 16769.5000 | 57810.5000 | -2.8087 | 0.0050 | Reject Ho | Significant |
| 18. I inspire and foster team commitment, spirit, pride, and trust. | 16085.5000 | 57126.5000 | -3.4251 | 0.0006 | Reject Ho | Significant |
| 19. I give people latitude to make decisions based on their level and scope of responsibility | 16064.5000 | 57105.5000 | -3.4379 | 0.0006 | Reject Ho | Significant |
| 20. I provide effective coaching by sharing information, advice, and suggestions. | 15359.0000 | 56400.0000 | -4.0843 | 0.0000 | Reject Ho | Significant |

Source: PMDP Online Survey (2021)

Table 17 refers to the summary table of Mann Whitney U test which used in determining the significant difference between the response on the CESB competency under linkaging & networking for productive partnerships. The computed p-values of all items under this segment are below 0.05 (alpha) which means that there is a significant difference on the mean response of the respondents on the CESB competency assessment under linkaging and networking for productive partnerships when they grouped according to their type of respondents.

**Table 17. Linkaging and networking for productive partnerships competency of scholars and peers, post-PMDP timeline**

| Scholars vs. Peers | Mann-Whitney U | Wilcon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| 21. I develop networks and builds alliances to achieve common goal | 15325.0000 | 56366.0000 | -4.0447 | 0.0001 | Reject Ho | Significant |
| 22. I collaborate with others to build strategic relationships and achieve common goals | 16035.0000 | 57076.0000 | -3.4105 | 0.0006 | Reject Ho | Significant |
| 23. I participate in cross-functional activities to achieve organizational objectives | 15196.0000 | 56237.0000 | -4.1842 | 0.0000 | Reject Ho | Significant |
| 24. I anticipate the requirements of strategic partners. | 14400.0000 | 55441.0000 | -4.9164 | 0.0000 | Reject Ho | Significant |
| 25. I mobilize resources to respond to partner needs and organizational objectives. | 14549.5000 | 55590.5000 | -4.7626 | 0.0000 | Reject Ho | Significant |

Source: PMDP Online Survey (2021)

Table 18 presents the summary table of Mann Whitney U test which used in determining the significant difference between the response on the CESB competency under planning & organizing for greater impact. The computed p-values of all items under this segment are below 0.05 (alpha) which means that there is a significant difference on the mean response of the respondents on the CESB competency assessment under planning and organizing for greater impact when they grouped according to their type of respondents.

**Table 18. Planning and organizing for greater impact competency of scholars and peers, post-PMDP timeline**

| Scholars vs. Peers | Mann-Whitney U | Wilcon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| 26. I translate objectives into workable activities by developing clear goals & strategies. | 16198.5000 | 57239.5000 | -3.2708 | 0.0011 | Reject Ho | Significant |
| 27. I anticipate obstacles when planning and develop alternative courses of action. | 14419.5000 | 55460.5000 | -4.9088 | 0.0000 | Reject Ho | Significant |
| 28. I develop systems to organize workflow to ensure quality, precision and timeliness of outputs and outcomes. | 14957.0000 | 55998.0000 | -4.4052 | 0.0000 | Reject Ho | Significant |

Source: PMDP Online Survey (2021)

Table 19 refers to the summary table of Mann Whitney U test which used in determining the significant difference between the response on the CESB competency under driving performance for integrity & service. The computed p-values of all items under this segment are below 0.05 (alpha) which means that there is a significant difference on the mean response of the respondents on the CESB competency assessment under driving performance for integrity and service when they grouped according to their type of respondents.

**Table 19. Driving performance for integrity and service competency of scholars and peers, post-PMDP timeline**

| Scholars vs. Peers | Mann-Whitney U | Wilcon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| 29. I establish criteria and/or work procedures that produce high-quality results to meet client's needs. | 15027.0000 | 56068.0000 | -4.3731 | 0.0000 | Reject Ho | Significant |
| 30. I show a sustained level of effort, persistence, and commitment to achieve goals. | 15511.5000 | 56552.5000 | -3.9010 | 0.0001 | Reject Ho | Significant |

Source: PMDP Online Survey (2021)

Table 20 shows the summary table of Mann Whitney U test which used in determining the significant difference between the response on the CESB competency under individual impact. The computed p-values of all items under this segment are below 0.05 (alpha) which means that there are significant difference on the mean response of the respondents on the CESB competency assessment under individual impact when they grouped according to their type of respondents except for the item 35 (I am determined to continue working in government) and item 39 (I have high regard for government executives and agencies, who work together to address poverty and other issues plaguing our nation).

**Table 20. Individual impact of scholars and peers, post-PMDP timeline**

| Scholars vs. Peers | Mann-Whitney U | Wilcon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| 31. I have a high level of responsibility in the organization | 16486.5000 | 57527.5000 | -3.1417 | 0.0017 | Reject Ho | Significant |
| 32. I apply my knowledge and skills in the workplace. | 17102.0000 | 58143.0000 | -2.6977 | 0.0070 | Reject Ho | Significant |
| 33. I make sure to significantly contribute to the unit/ organization | 16760.0000 | 57801.0000 | -3.0590 | 0.0022 | Reject Ho | Significant |
| 34. I believe that I create a significant Impact on my co-workers and peers | 17069.0000 | 58110.0000 | -2.5976 | 0.0094 | Reject Ho | Significant |
| 35. I am determined to continue working in government | 18020.0000 | 59061.0000 | -1.7761 | 0.0757 | Fail to Reject Ho | Not Significant |
| 36. I take pride in performing my functions and responsibilities, and achieving agency milestones | 17617.0000 | 58658.0000 | -2.2433 | 0.0249 | Reject Ho | Significant |
| 37. I reflect on how my actions as a public executive/manager have affected the lives of the people in the communities I serve | 17693.0000 | 58734.0000 | -1.9991 | 0.0456 | Reject Ho | Significant |
| 38. I appreciate the need for competent, strategic, and transformative leaders who can influence, commit to, and manage change | 17151.0000 | 58192.0000 | -2.6715 | 0.0076 | Reject Ho | Significant |

| Scholars vs. Peers | Mann-Whitney U | Wilcon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| 39. I have high regard for government executives and agencies, who work together to address poverty and other issues plaguing our nation | 18344.0000 | 59385.0000 | -1.4689 | 0.1419 | Fail to Reject Ho | Not Significant |

Source: PMDP Online Survey (2021)

Table 21 refers to the summary table of Mann Whitney U test which used in determining the significant difference between the response on the CESB competency under individual impact. The computed p-values of all items under this segment are below 0.05 (alpha) which means that there is a significant difference on the mean response of the respondents on the CESB competency assessment under organizational impact when they grouped according to their type of respondents except for the item 45 (income generation).

**Table 21. Organizational impact of scholars and peers, post-PMDP timeline**

| Scholars vs. Peers | Mann-Whitney U | Wilcon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| 40. Intra-agency relationship | 16657.0000 | 57698.0000 | -2.8401 | 0.0045 | Reject Ho | Significant |
| 41. Networking and linkages | 15634.0000 | 56675.0000 | -3.7707 | 0.0002 | Reject Ho | Significant |
| 42. Product quality | 16583.5000 | 57624.5000 | -2.9414 | 0.0033 | Reject Ho | Significant |
| 43. Service delivery | 17690.5000 | 58731.5000 | -1.9751 | 0.0483 | Reject Ho | Significant |
| 44. Client benefits/satisfaction | 16759.0000 | 57800.0000 | -2.8813 | 0.0040 | Reject Ho | Significant |
| 45. Income generation | 18286.0000 | 59327.0000 | -1.2779 | 0.2013 | Fail to Reject Ho | Not Significant |
| 46. Savings generation | 16599.0000 | 57640.0000 | -2.8279 | 0.0047 | Reject Ho | Significant |
| 47. Positive agency image | 17378.5000 | 58419.5000 | -2.3015 | 0.0214 | Reject Ho | Significant |

Source: PMDP Online Survey (2021)

Table 22 presents the summary table of Mann Whitney U test which used in determining the significant difference between the response on the phronetic leadership assessment. The computed p-values of the items 1, 2, 3, 7, 8, 10, 11, 14, and 21 are above 0.05 (alpha) which means that there are no significant difference on the mean response of the respondents on the phronetic leadership assessment when they grouped according to their type of respondents.

**Table 22. Phronetic leadership of scholars and peers, post-PMDP timeline**

| Scholars vs. Peers | Mann-Whitney U | Wilcon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| 1. I carefully consider all perspectives before arriving at a certain decision. | 18712.0000 | 60328.0000 | -1.6514 | 0.0987 | Fail to Reject Ho | Not Significant |
| 2. I reflect on how my decisions will affect others. | 19935.5000 | 61551.5000 | -0.5048 | 0.6137 | Fail to Reject Ho | Not Significant |
| 3. I do my best to do no harm in all my actions. | 19327.5000 | 60943.5000 | -1.1139 | 0.2653 | Fail to Reject Ho | Not Significant |
| 4. I make judgments based on what is just. | 17977.5000 | 59593.5000 | -2.4482 | 0.0144 | Reject Ho | Significant |
| 5. I believe that the decisions I make are for the benefit of the public. | 17724.0000 | 59340.0000 | -2.8252 | 0.0047 | Reject Ho | Significant |
| 6. I prefer to anchor my decisions on what is advantageous to the organization. | 17882.5000 | 59498.5000 | -2.4458 | 0.0145 | Reject Ho | Significant |
| 7. I behave in ways that are aligned with good moral principles. | 19320.5000 | 60936.5000 | -1.3078 | 0.1909 | Fail to Reject Ho | Not Significant |
| 8. I make sure to organize activities that foster close, professional relationships among leaders and employees. | 18898.0000 | 60514.0000 | -1.4655 | 0.1428 | Fail to Reject Ho | Not Significant |
| 9. I encourage interaction between employees and leaders for the creation of new knowledge. | 17766.0000 | 59382.0000 | -2.5286 | 0.0115 | Reject Ho | Significant |
| 10. I feel comfortable consulting with my colleagues before coming up with decisions. | 18658.0000 | 60274.0000 | -1.7827 | 0.0746 | Fail to Reject Ho | Not Significant |
| 11. I collaborate with colleagues and supervisors in | 18601.0000 | 60217.0000 | -1.9062 | 0.0566 | Fail to Reject Ho | Not Significant |

| Scholars vs. Peers | Mann-Whitney U | Wilcon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| implementing action plans. | | | | | | |
| 12. I initiate activities which encourage sharing of insights within my team. | 15283.0000 | 56899.0000 | -4.9613 | 0.0000 | Reject Ho | Significant |
| 13. I ask questions in order to elicit the ideas of my staff. | 16584.0000 | 58200.0000 | -3.7982 | 0.0001 | Reject Ho | Significant |
| 14. I give my team members the freedom to creatively solve problems. | 19574.5000 | 61190.5000 | -0.8604 | 0.3896 | Fail to Reject Ho | Not Significant |
| 15. I think of the bigger picture whenever I am presented with details of the task at hand. | 17548.5000 | 59164.5000 | -2.7620 | 0.0057 | Reject Ho | Significant |
| 16. I am able to analyze the root cause of challenges that I face in my work. | 16999.0000 | 58615.0000 | -3.1718 | 0.0015 | Reject Ho | Significant |
| 17. I find it challenging to connect the relevance of individual bits of information and how it will affect the bigger picture. | 17727.5000 | 59343.5000 | -2.3922 | 0.0167 | Reject Ho | Significant |
| 18. I try to notice trends from organizational data. | 17988.0000 | 59604.0000 | -2.2308 | 0.0257 | Reject Ho | Significant |
| 19. I try to identify underlying themes from feedback received. | 17050.0000 | 58666.0000 | -3.0877 | 0.0020 | Reject Ho | Significant |
| 20. I reflect on my observations in order to sense the deeper meaning of a situation. | 17874.5000 | 59490.5000 | -2.4058 | 0.0161 | Reject Ho | Significant |
| 21. I look at the deeper meaning of situations to | 18471.5000 | 60087.5000 | -1.8364 | 0.0663 | Fail to Reject Ho | Not Significant |

| Scholars vs. Peers | Mann-Whitney U | Wilcon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| understand the complete picture. | | | | | | |
| 22. I am able to communicate the essence of information in a way that everyone understands. | 16739.5000 | 58355.5000 | -3.4284 | 0.0006 | Reject Ho | Significant |
| 23. I use the language that people in the organization can easily relate to. | 18156.0000 | 59772.0000 | -2.2066 | 0.0273 | Reject Ho | Significant |
| 24. I can easily put my personal experiences into words that are understandable by everyone. | 17671.0000 | 59287.0000 | -2.5473 | 0.0109 | Reject Ho | Significant |
| 25. I use stories, metaphors, and other figurative language to communicate the essence of a situation. | 17656.0000 | 59272.0000 | -2.4390 | 0.0147 | Reject Ho | Significant |
| 26. I take the time to explain to each team member how important their role in the organization is. | 17687.5000 | 59303.5000 | -2.5188 | 0.0118 | Reject Ho | Significant |
| 27. I emphasize the relevance of complying with the policy when cascading it. | 16632.0000 | 58248.0000 | -3.6350 | 0.0003 | Reject Ho | Significant |
| 28. I first ensure mutual understanding of what we wish to achieve when briefing team members about a project. | 16450.0000 | 58066.0000 | -3.7564 | 0.0002 | Reject Ho | Significant |

| Scholars vs. Peers | Mann-Whitney U | Wilcon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| 29. I use different means of communication for team members coming from different backgrounds. | 17406.5000 | 59022.5000 | -2.7393 | 0.0062 | Reject Ho | Significant |
| 30. I exert influence over people to bring them together and encourage them to act | 17660.5000 | 59276.5000 | -2.5024 | 0.0123 | Reject Ho | Significant |
| 31. I make sure to understand points-of-view of people as inferred from their verbal and nonverbal language | 17432.0000 | 59048.0000 | -2.7730 | 0.0056 | Reject Ho | Significant |
| 32. I gather the ideas and wisdom from team members into action plans for the achievement of organizational goals | 17171.5000 | 58787.5000 | -3.1673 | 0.0015 | Reject Ho | Significant |
| 33. I actively seek out other people's ideas and combine them to be able to create action plans | 18021.5000 | 59637.5000 | -2.3318 | 0.0197 | Reject Ho | Significant |
| 34. I use accessible means within and outside my organization to achieve objectives for the common good. | 16754.5000 | 58370.5000 | -3.3775 | 0.0007 | Reject Ho | Significant |
| 35. I am able to network across bureaucratic units to address issues. | 16169.5000 | 57785.5000 | -3.8175 | 0.0001 | Reject Ho | Significant |
| 36. I make an effort to understand opposing perspectives objectively. | 17836.5000 | 59452.5000 | -2.3990 | 0.0164 | Reject Ho | Significant |
| 37. I lead by example. | 16990.5000 | 58606.5000 | -3.4058 | 0.0007 | Reject Ho | Significant |
| 38. I make time to mentor others who need it. | 16819.0000 | 58435.0000 | -3.4182 | 0.0006 | Reject Ho | Significant |

| Scholars vs. Peers | Mann-Whitney U | Wilcon X | Computed Z | Computed p-value | Decision | Remarks |
|---|---|---|---|---|---|---|
| 39. I believe that it is important to cultivate leadership traits among everyone in the organization. | 17998.0000 | 59614.0000 | -2.4924 | 0.0127 | Reject Ho | Significant |
| 40. I empower my team to make decisions on their own. | 17782.5000 | 59398.5000 | -2.5443 | 0.0109 | Reject Ho | Significant |
| 41. I model openness to learning so as to encourage others to invest in their professional growth. | 17900.5000 | 59516.5000 | -2.4809 | 0.0131 | Reject Ho | Significant |
| 42. I look into each team members' need to develop wisdom in order for me to identify how I can help them grow. | 18746.0000 | 60362.0000 | -1.5806 | 0.1140 | Fail to Reject Ho | Not Significant |
| 43. I believe that every person in the organization must be given the opportunity to lead. | 17346.5000 | 58962.5000 | -3.2092 | 0.0013 | Reject Ho | Significant |
| Overall Phronetic Leader | 15993.0000 | 57609.0000 | -3.6777 | 0.0002 | Reject Ho | Significant |

Source: PMDP Online Survey (2021)

Table 23 juxtaposes scholars' and peers' self-evaluations of CESB Competency assessment based on two timepoints, i.e., at the time of PMDP application and present-day Career Executive Service Board (CESB) Competency assessment by the scholar and their peers. For both groups, the observed increase in the ranking at the current time is statistically significant compared to the ranking at the time of the scholar's entry to the PMDP.

**Table 23. Analysis of CESB competency according to theme, pre- and post-PMDP**

| Item | PMDP graduate | | | Peer | | |
|---|---|---|---|---|---|---|
| | At PMDP application, mean (SD) | Present time, mean(SD) | p-value | At PMDP application, mean (SD) | Present time, mean (SD) | p-value |
| Strategic and Critical Thinking | 3.65 (0.67) | 4.43 (0.54) | <0.0001 | 3.75 (0.67) | 3.99 (0.68) | <0.0001 |
| Leading in a Continuously Changing Environment | 3.61 (0.68) | 4.31 (0.57) | <0.0001 | 3.65 (0.71) | 3.93 (0.66) | <0.0001 |
| Developing/Empowering Others for Collective Accountability | 3.95 (0.72) | 4.25 (0.57) | <0.0001 | 4.07 (0.71) | 4.26 (0.63) | <0.0001 |

| Item | PMDP graduate | | | Peer | | |
|---|---|---|---|---|---|---|
| | At PMDP application, mean (SD) | Present time, mean(SD) | p-value | At PMDP application, mean (SD) | Present time, mean (SD) | p-value |
| Item | PMDP graduate | | | Peer | | |
| | At PMDP application, mean (SD) | Present time, mean (SD) | p-value | At PMDP application, mean (SD) | Present time, mean (SD) | p-value |
| Linkaging and Networking for Productive Partnerships | 3.73 (0.69) | 4.5 (0.54) | <0.0001 | 3.76 (0.74) | 3.98 (0.7) | <0.0001 |
| Planning and Organizing for Greater Impact | 3.7 (0.74) | 4.3 (0.62) | <0.0001 | 3.72 (0.78) | 3.99 (0.71) | <0.0001 |
| Driving Performance for Integrity and Service | 3.79 (0.73) | 4.32 (0.6) | <0.0001 | 3.88 (0.74) | 4.07 (0.69) | <0.0001 |
| Individual impact | 4.29 (0.64) | 4.38 (0.61) | <0.0001 | 4.44 (0.62) | 4.54 (0.54) | <0.0001 |
| Organizational impact | 3.86 (0.65) | 4.69 (0.46) | <0.0001 | 3.94 (0.67) | 4.14 (0.62) | <0.0001 |

Source: PMDP Online Survey (2021)
Note: Standard deviation (SD) is a measurement of dispersion relative to the mean.
P-value is significant p<0.05; results from analysis conducted using non-parametric measures (Mann-Whitney U test)

This study utilized non-parametric tests, specifically the Wilcoxon Signed Rank statistic and the Mann-Whitney U tests to determine significant differences between ratings at baseline and at present. It can be observed that there is a significant improvement in rating of performances now compared to baseline across all Career Executive Service Board (CESB) competencies: strategic and critical thinking, leading in a continuously changing environment, developing/empowering others for collective accountability, linkaging and networking for productive partnerships, planning and organizing for greater impact, and driving performance for integrity and service.

Comparing phronetic leadership scores (Table 24), between groups, PMDP scholars are comparable to their peers with regards ability to judge goodness, as the computed p-value is above the assigned alpha (p=0.05). However, PMDP scholars rate themselves higher than their contemporaries in the other areas of phronetic judgement, namely creating shared context (p=0.004), grasping essence (p=0.005), communicating the essence (p<0.001), exercise of political power (p<0.001), and fostering practical wisdom (p<0.001). Overall, PMDP scholars rate themselves significantly higher in phronetic leadership compared to their peers (scholars mean 4.45 (SD 0.35) vs peers mean 4.31 (SD 0.41), p<0.001).

**Table 24. Comparative Analysis of Phronetic leadership scores between scholars and peers**

| Item | PMDP Scholar, mean (SD) | Peer, mean (SD) | p-value |
|---|---|---|---|
| Ability to judge goodness | 4.21 (0.31) | 4.16 (0.35) | 0.273 |
| Create Shared Context | 4.67 (0.41) | 4.54 (0.46) | 0.004 |
| Grasp Essence | 4.11 (0.38) | 4.00 (0.42) | 0.005 |
| Ability to communicate the Essence | 4.51 (0.47) | 4.31 (0.55) | <0.001 |
| Exercise Political Power | 4.51 (0.49) | 4.32 (0.53) | <0.001 |
| Foster Practical Wisdom | 4.68 (0.41) | 4.52 (0.48) | 0.001 |
| Overall Phronetic Leader | 4.45 (0.35) | 4.31 (0.41) | <0.001 |

Source: PMDP Online Survey (2021)

Note: Standard deviation (SD) is a measurement of dispersion relative to the mean.

P-value is significant p<0.05; results from analysis conducted using non-parametric measures (Mann-Whitney U test)

**Figure 14. Adapted re-entry project/capstone project/capstone paper**



■ MMC  ■ SEC

Source: PMDP Online Survey (2021)
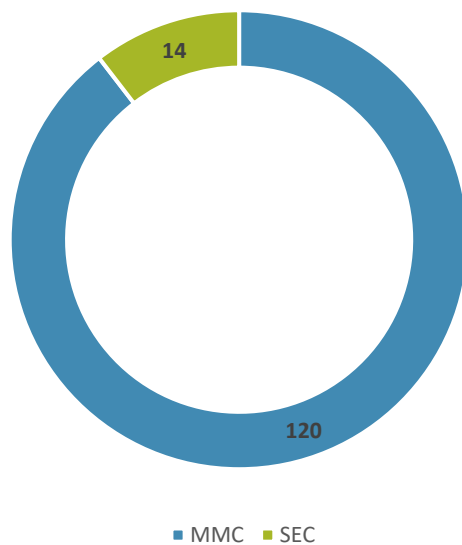
In terms of re-entry project/capstone projects/capstone papers, 120 MMC scholars disclosed that their respective agencies were able to adapt their project while 14 SEC scholars had the same experiences as shown in Figure 14. Scholars with re-entry project/capstone project/ capstone paper that were not adopted cited the following major reasons: their agency has other commitments or priorities; the scholar was transferred to another agency; a change in their agency's policy or mandate affecting the re-entry project/ capstone project/capstone paper; pandemic-related; time constraint; change in their agency's administration; agency's internal-related concerns; not adopted as written, among others.

Aside from the re-entry project/capstone project/capstone paper, 89 MMC scholars and 12 SEC scholars (a total of 101 scholars) were able to propose changes or innovations in their respective agencies (Figure 15).

**Figure 15. Other proposed changes or innovations**
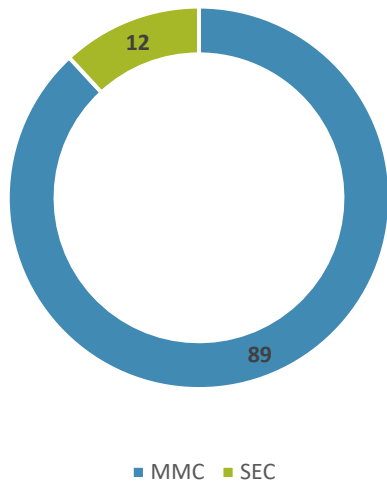


The most common types of innovations, as shown in Figure 16, that the graduates have proposed in their agencies were commonly systems or process related (59.9%), projects related to service quality improvement (50%), policy-related (41.5%), or citizen-centered services (32.4%). Following the same trend, innovations that were adapted by agencies were observed to be commonly related to systems or process-related projects (55.6%), service quality improvement (47.2%), policy-related (35.4%), and citizen-centered services (29.6%).

Source: PMDP Online Survey (2021)

**Figure 16. Proposed and adapted innovations by scholars**
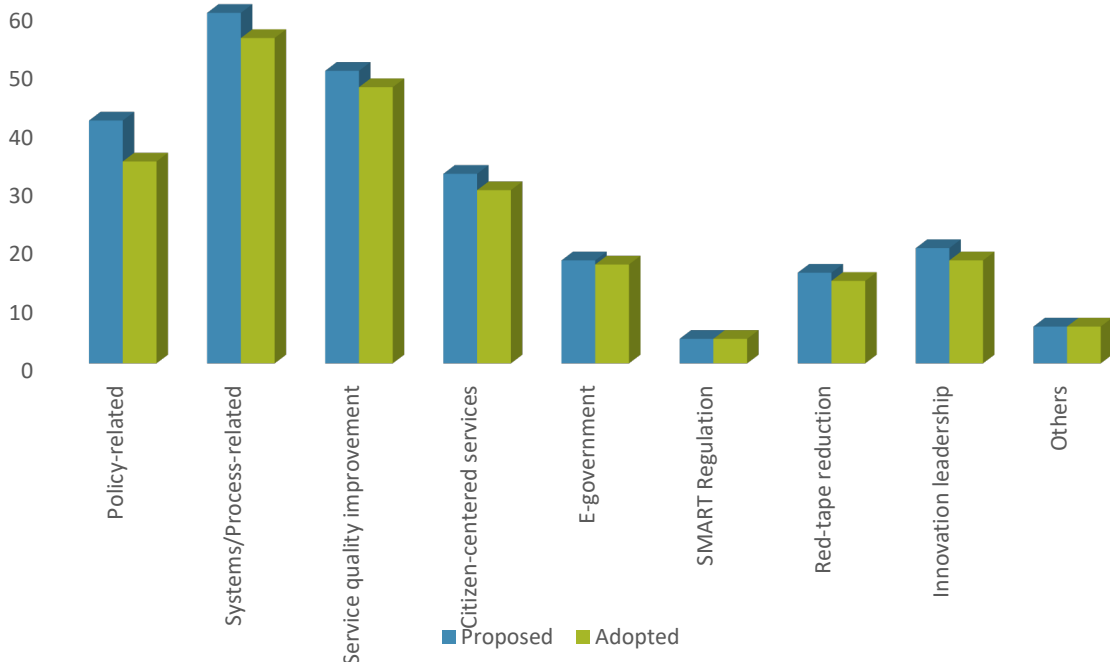


Source: PMDP Online Survey (2021)

The SEC scholars share a similar nature with their projects, as they were also commonly systems or process-related (80%), on service quality improvement (66.67%), policy-related (46.67%), and citizen-centered services (40%) as shown in Figure 16. For MMC scholars (Figure 52), the most common types of proposed innovations were commonly systems or process-related (57.48%), projects related to service quality improvement (48.03%), policy-related (40.94%), and citizen-centered services (31.5%).

**Figure 17. Proposed and adapted innovations by SEC scholars**

**Figure 18. Proposed and adapted innovations by MMC scholars**
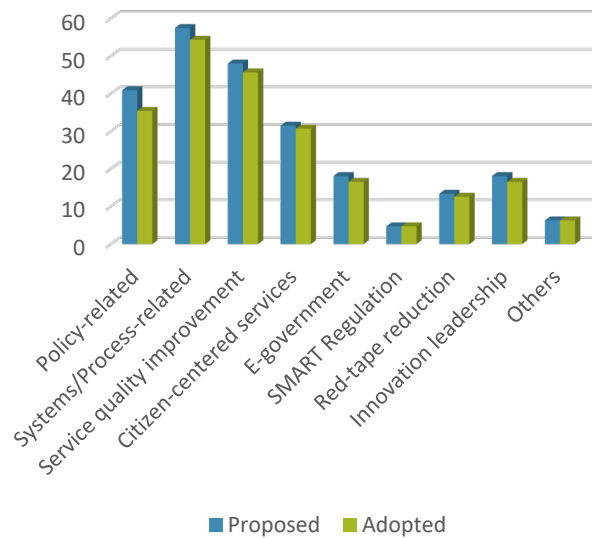
Adopted innovations were similar, prioritizing systems or process-related (66.67% for SEC; 54.33% for MMC), service quality improvement (45.67% for MMC; 60% for SEC), policy-related (26.67% for SEC; 35.43% for MMC) and citizen-centered services (20% for SEC; 30.71% for MMC) as reflected in Figures 17 and 18, respectively.

The scholars were asked to list five agencies that they have transacted (e.g., meetings, coordination) over the past six months.

The agencies the scholars transacted with are as follows: their respective Local Government Units (LGUs), Department of Health (DOH), Department of the Interior and Local Government (DILG), Department of Social Welfare and Development (DSWD), National Economic and Development Authority (NEDA), Department of Public Works and Highways (DPWH), Technical Education and Skills Development Authority (TESDA), Department of Agriculture (DA), Department of Budget and Management (DBM), Philippine National Police (PNP), Commission on Audit (COA), *Bangko Sentral ng Pilipinas* (BSP), Department of Education (DepEd), Judiciary Offices (such as Regional Trial Courts),  Armed Forces of the Philippines (AFP), National Book Development Board (NBDB), Agricultural Training Institute (ATI), Department of Labor and Employment (DOLE), Philippine Commission on Women (PCW), Philippine Health Insurance Corporation (PhilHealth),  Bases Conversion and Development Authority (BCDA),  Bureau of Fisheries and Aquatic Resources (BFAR), Department of Science and Technology (DOST), various State Universities and Colleges (SUCs), Department of Information and Communication Technology (DICT), Commission on Higher Education (CHED), National Commission for Culture and the Arts (NCCA), among others. The word cloud (Figure 19) shows the most common transacted agencies of the scholars in the last six months.

**Figure 19. Transacted agencies of PMDP scholars in the last six months**



Source: PMDP Online Survey (2021)

## 6.2. Case Study Highlights

The findings from the FGDs are structured in line with the evaluation questions reflected in Table 25:

**Table 25. Case Study Highlights Presentation**

| Evaluation Question 1: To what extent has the PMDP contributed to changes in leadership and management practices among the selected PMDP graduates? | Evaluation Question 2: To what extent have the returning PMDP scholars contributed to improved organizational performance? |
|---|---|
| Development of competencies<br>• Competency Development vis-à-vis the CESB Competency Framework<br>• Development along Leadership Roles<br>• Scholars' Phronetic Leadership Behaviors<br>• Change in Leadership and Management Practices<br>• The Significance of Modules in Competency Development<br>• Contribution to the Leadership Pipeline | Contributions to and Impacts on Organizational Performance<br>• Capstone papers/projects and Innovations<br>• Nature of change/innovation introduced<br>• Organizational change readiness: Facilitating and Hindering factors<br>• Benefits to agencies and stakeholders<br>• The role of linkaging and networking in delivering agency outputs<br>• The role of Sensing Journey in expanding the reach of government services |

### 6.2.1. Evaluating the Development of Competencies

The framework for evaluating improvement in competencies is the CESB framework for executives in government and the Phronetic Leadership framework of Nonaka and Takeuchi. The CESB competency framework and Phronetic Leadership framework in Table 12 and Table 13, respectively.

### 6.2.2. Development along Leadership Roles

The PMDP also looks at seven roles that PMDP graduates should be able to perform better upon return to work. Table 26 shows the correspondence between the roles and the competencies:

**Table 26. Leadership roles and predominant competencies**

| Role | Predominant Competencies |
|---|---|
| Strategic Thinker | Strategic and critical thinking |
| Innovator | Leading in a continuously changing environment |
| Change Agent | Leading in a continuously changing environment |
| People Developer | Leading/empowering others for collective accountability |
| Strategic Partner | Linkaging and networking for productive partnerships |
| Results-driven performer | Planning ang organizing for greater impact, driving performance for integrity and service |
| Wise/Phronetic Leader | All 7 competencies practiced in a manner that engages both heart and mind |

### 6.2.3. Radar-Spider Charts for evaluating convergence

Radar-spider graphs were employed to compare and determine and convergence of perceptions among the three levels of respondents: scholar, peer, and supervisor. Frequencies expressed as percentages were used for comparing the responses at each level. Each level was assigned one vote and the variation in responses (agree/disagree) was evaluated in terms of the ratio of number of respondents who agreed versus the total number of respondents in that group.

### 6.2.4. Development of Competencies

All respondents agreed that the scholars improved in all the targeted competencies as shown in Figure 20. Twenty-one out of 25 (or 84%, highest frequency) scholar-respondents indicated that they improved at planning and organizing for greater impact. This was followed by developing/empowering others for collective accountability, linkaging and networking for productive partnerships and leading in a continuously changing environment at 20 out of 25 or 80%.

It will be noted that these competencies are essential in successfully navigating the VUCA (volatile, uncertain, complex, and ambiguous) environment. These competencies were called upon as scholars tried to create stability and urgently respond to the challenging pandemic conditions, which conditions figured prominently in their narratives.

**Figure 20. Competency assessment based on the self-evaluation of graduates and perception of their peers and supervisors**
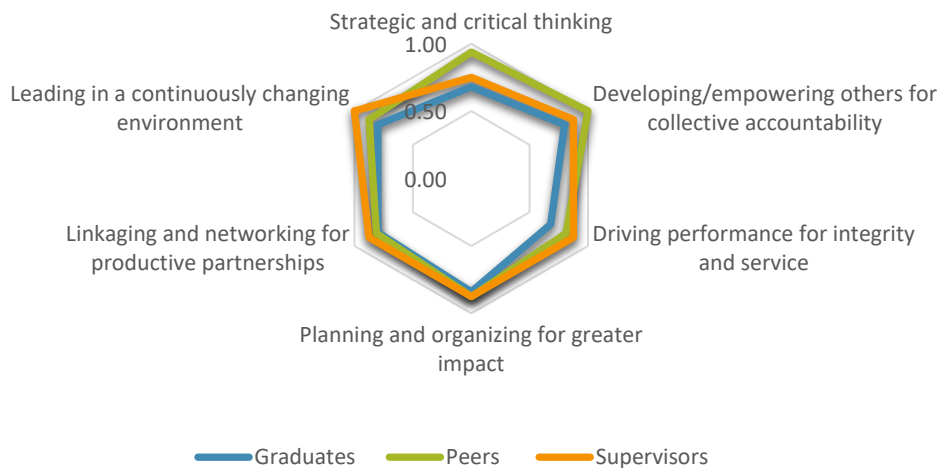


Source: FGD findings (2021)

### 6.2.5.  Competency development vis-à-vis CESB Competency Framework

#### 6.2.5.1.  Leading in a continuously changing environment

Stories about leading in a continuously changing environment featured a lot of technology adaptations.  Because of work-from-home arrangements and the demand for business continuity, nobody in the bureaucracy can refuse to adapt to technology. The pandemic sped up its adaptation, but some scholars had already incorporated technology in their processes pre-pandemic to speed up the delivery of services while ensuring quality and accuracy. This competency challenged the scholars to alternative service delivery, e.g., packaged training modules, creation of health protocol guidelines as a way of sharing best practices. Leading in a continuously changing environment also recorded the highest degree of development pre- versus post-PMDP in the survey on scholars' self-evaluation.

#### 6.2.5.2.  Linkaging and networking

Scholars would call upon their PMDP classmates/alumni and other networks for resource augmentation, for expert advice and consultation and for a "whole of government" approach that enabled the crafting of sustainable solutions.  Linkaging and networking for example brought about the establishment of a satellite PNP unit fully funded by the host LGU, the crafting of a policy proposal on reducing road crashes that required resource persons from the PNP, the LGU, LTO Regional Office and DOH regional office and the sharing of expertise, e.g., DOST providing technology assistance to cottage industries, just to name a few.

#### 6.2.5.3.  Developing/Empowering others for collective accountability

Developing/empowering others for collective accountability did not only involve developing subordinates but practically all stakeholders involved in the delivery of government services. This is exemplified by the COA where scholars would go beyond auditing and into mentoring and coaching their partner agencies in the adoption of technology or providing expert advice to improve compliance with COA rules and regulations.  Running through the narratives, a

major theme that emerges is the "empowering" factor, where the scholar who used to be directive has started engaging subordinates and peers in conceptualizing, planning, and implementing projects. This is impactful for peers who gain confidence in undertaking these activities on their own.

The survey results on Phronetic leadership behaviors also concurs with this finding as survey respondents ranked "collaborate with colleagues and supervisors in implementing action plans" among the top 3 behaviors manifested by scholars.

### 6.2.5.4. *Planning and organizing for greater impact*

The successful implementation of innovations hinges a lot on the ability to plan and organize for greater impact. The faculty member teaching Project Management said that the course provides scholars with the tools in project development and management; apply critical thinking; package competitive project proposals and assess the feasibility and viability of a project.

This competency featured in the narratives in association with a) organizing directives from different agencies to guide the citizens at the onset of the pandemic, b) the use of project management principles to make audit work more systematic and effective, and c) improving process times, and organizing stakeholders, processes, and systems for an integrated COVID response. A peer described this competency as "ensuring that the activity is well managed ...and that each participant has a lot of learnings as takeaways and enjoyed the activity at the same time". This competency showed the second highest degree of improvement in the survey particularly on the behavior "I translate objectives into workable activities by developing clear goals & strategies."

### 6.2.5.5. *Strategic and critical thinking*

Scholars manifest Strategic and Critical Thinking through the alignment of efforts and strategies towards realizing the agency's goals, applying critical thinking in analyzing factors that determine or undermine success towards a sustainable and competitive agency. More behaviors were associated with analysis of data/information and alignment with mission/vision than with introducing strategic plans that will create strategic change. A few scholars mentioned that all decisions are made at the highest level of the organization and the potential for getting strategic proposals approved diminishes as it moves up the bureaucratic levels of review and approval. Scholars believe they are strategic thinkers in the sense that in crafting plans and programs they are guided by the overarching objective of providing a good life for all, aligned with their agency's mandate. The narratives, however, show a predominance of critical thinking over strategic thinking (See Figure 21).

### 6.2.5.6. *Driving performance for integrity and service*

Scholars' efforts at Driving Performance for integrity and service are seen in the persistent effort, usually against odds, to implement improvements and adapt to the use of technology not just among co-workers, but also among partner agencies, as in the case of a COA PMDP scholar who took time out to create tutorial videos and mentored his counterparts in the agencies he audited (or even outside) to help improve compliance with audit rules and regulations.

Against all odds is exemplified by a COMELEC PMDP scholar who gathered all political party representatives to help in setting up the town for election a few days before election day, bringing her own equipment and materials (laptop, gadgets, etc.) to the office because there was none, trained election officers on the operation of the electronic vote-counting machines and succeeded in proclaiming the winners on the day after the election. Her drive to demonstrate integrity of the election was lauded by a losing candidate who invited her for coffee just to let her know that he accepted his defeat graciously because he believed they had a fair and honest election.

Pres. Caronan of DAP will consider these as examples of how PMDP graduates can change the bureaucracy – to exercise their ability to "deliver their agency's mandates beyond the bureaucratic constraints of government".

### 6.2.6. Leadership Roles

Scholars see themselves first as strategic thinkers and people developers. The roles of Innovator and change agent follow. The section on capstone papers/projects will affirm that this role is indeed prevalent among the scholars. The drive and passion to provide the best solution give rise to innovations. Results-driven performer and strategic partner belong to the third cluster of roles. The relative position of Results-driven performer echoes the relative rank of the competency driving performance for integrity and service. Strategic partner is associated with the competency of linkaging and networking. But as may be seen in the narratives on linkaging and networking, it will be noted that agencies resort to this competency on a need basis and there are few cases where strategic partnerships were formed.

**Figure 21. Roles vs. Frequency**
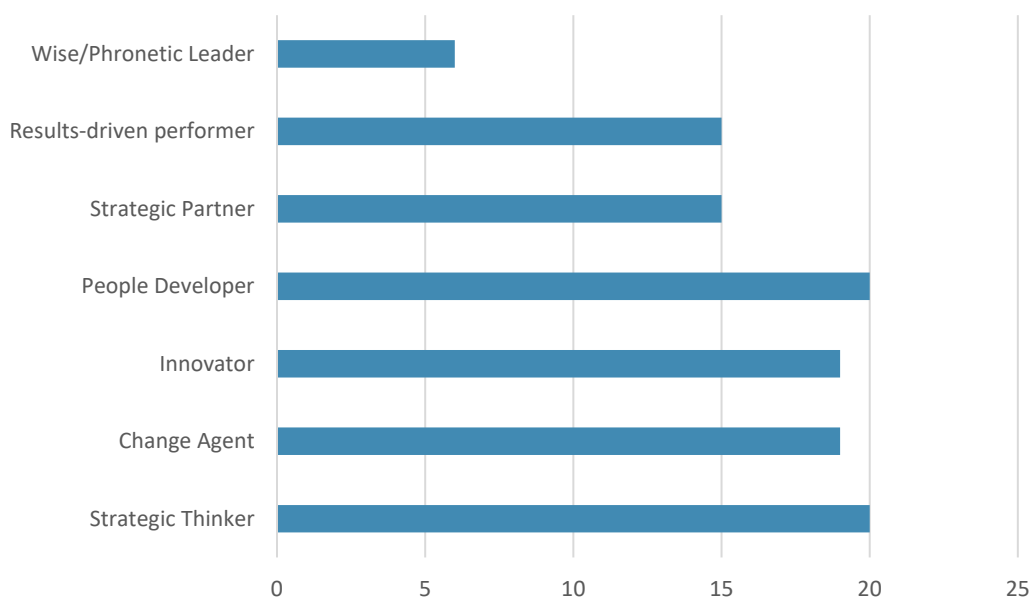


Source: FGD findings (2021)

### 6.2.7. Phronetic Leadership

From the FGD discussions, it is evident that phronetic leadership principles are already embedded in the PMDP curriculum. While only two scholars have actually attended the course, the behaviors were manifested across all scholar-respondents.

The principles of phronetic leadership are underscored in the personal efficacy modules. As one professor is quoted as saying - the scholars' best take-away from the modules is peak performance in the public sector – performing with excellence, greatness, holiness, and love. These leadership qualities also thread through the technical modules. The project management and development module according to its professor is 'very mechanical but a public manager's actions must be imbued with integrity.'

Going over the stories using the phronetic leadership lens, the behaviors characteristic of phronetic leadership were surfaced: people-centeredness in crafting solutions that is good for the whole (judging goodness); making an effort to understand the client's context in terms of their culture, their needs and motivations and (grasping the essence) to provide the most appropriate service especially to the disadvantaged in society, engaging stakeholders in insightful conversations in a safe space (create shared context), sharing personal stories and experiences so co-workers and teammates appreciate concepts from a different lens (communicate the essence), engaging stakeholders to support of a common cause while engendering their commitment (exercise political power) and modeling phronetic leadership behaviors and bringing in a resource person to speak about it (fostering phronesis).

The sensing journey creates the emotional experience that embeds the value of "service for the common good".

It could account for all the passion that engenders perseverance against all odds in a hopeful way. A notable example is the scholar who taught and motivated all hospital staff to serve with compassion, expecting them to not just deliver the medicine and treatment but to approach each case from a wholistic view – help the patient to have the best hospital experience even if the prognosis is discouraging, consider the circumstances of the patient's family and ease their minds by providing updates on their family member in the hospital and allowing e-visits, and adapting strategies that protected hospital staff not just from the disease but also from physical and mental fatigue.

Scholars feel the odds are in their favor because of the tools, perspectives and insights gained during the course. These competencies when practiced in the context of phronetic leadership realize the PMDP objective of "Produce(ing) competent government leaders committed to the welfare of their constituents and the country's progress." Table 27 provides a summary of the various manifestations of phronetic leadership among the scholars from each case study group.

**Table 27. Phronetic leadership manifestations by case study group**

| SEC | DILG | COA |
|---|---|---|
| Judge Goodness | | |
| Providing people centered health care staying true to the values of compassion, integrity, transparency, and excellence.<br><br>Ensured that people-centeredness is incorporated in policies and practices. | Taking initiatives to make government service more accessible to the people at no cost to the agency by using his networks to generate resources; evaluating one's actions vis-à-vis one's values.<br><br>Organizing circulars, directives and issuances on the pandemic from different institutions and simplifying these to meet what he discerned as people's priority needs. | Providing assistance beyond the call of duty for the good of all. |

| | SEC | DILG | COA |
|---|---|---|---|
| **Grasp the essence** | | | |
| | Integrating healthcare policies (Universal Health Law), a systems view of government and the local health care community to mobilize a healthcare provider network that successfully responded to needs of COVID patients and their families. | Organizing circulars, directives and issuances on the pandemic from different institutions and simplifying these to meet what he discerned as people's priority needs. | Augmenting technical knowledge with people concerns to develop a wholistic solution |
| **Create shared context** | | | |
| | Attending meetings with organizations of similar advocacies to share knowledge and learn from each other. | Listening to contexts and motivations considering personal and cultural differences. | Making time and space for conversations to solicit different perspectives from superiors and peers. |
| **Communicate the essence** | | | |
| | | Sharing PMDP experiences and lessons learned with peers. | Engaging in friendly conversations (including sharing of personal stories) to foster better understanding and good relationships. |
| **Exercise political power** | | | |
| | Unifying and mobilizing hospital staff and resources to respond as one and providing continuing health care service in a pandemic situation. | Inspiring peers to own and implement projects. | Influencing peers and superiors towards concerted action to improve services. |
| **Foster Phronesis** | | | |
| | Inviting a speaker on phronetic leadership for the agency's management team and supervisors; Practicing phronetic leadership. | Teaching phronetic leadership by example. | Modeling phronetic leadership behaviors, e.g., working with the highest standards for the common good of all, to inspire co-workers to emulate these. |

Source: FGD findings (2021)

On the whole, the evaluation of Competency development vis-à-vis the CESB competency model and phronetic leadership has come up with very optimistic results. A relevant question would be – are these models still attuned to the fast pace of change that the world is currently experiencing? One that is volatile, uncertain, complex, and ambiguous (VUCA). It is standard practice to review competency models every 3 years. The same CESB competency model was used as the standard for evaluating the PMDP six years ago. The competency model has endured all these years and it may be safe to say that it has not lost its relevance. However, the competency review is essential to test whether the same can bring about the rapid rate of change

the bureaucracy has to undergo to keep up with the times. Leading in a continuously changing environment could be framed in terms of leadership agility. The corresponding behaviors will also have to be tweaked to reflect the ability to continuously learn from the organizations context and apply these lessons to urgent challenges facing the agency (the ability to think on your feet).

On the other hand, the introduction of Phronetic Leadership abilities to augment the CESB model can be considered as an update to the competency standards. Many resources, including McKinsey[7] and Harvard Business Review[8] point to character-related competencies as the differentiators of leadership excellence. We can thus conclude that Phronetic Leadership is an excellent addition to the curriculum and the competency model.

### 6.2.8. Change in Leadership and Management Practices

In terms of change in leadership and management practices, PMDP gradates' behaviors visibly changed as their peers, supervisors, class directors and faculty attest, which is presented in Table 28.

**Table 28. PMDP graduates' change in leadership and management practices**

| From | To |
| --- | --- |
| Being directive; imposing upon subordinates, "I have the best ideas" mindset | Engaging staff and peers to obtain different viewpoints and finding solutions together by understanding context, sharing information and insights followed by analysis and critical review to discover better ways of doing things |
| Working in silos; generating outputs on their own, policy making from the ivory tower | Seeking other perspectives to generate alternative solutions; promoting good relationships and partnerships for productive collaboration; generating policy through consultation and stakeholder feedback |
| Focus on technical solutions; honing technical expertise | Honing leadership skills: building relationships, motivating, and empowering, collaborating. Technical solutions imbued with values particularly prioritizing the well-being of clients being served |
| Narrow focus: minimum output and career advancement | Focus on outcome and impact on the agency and its ultimate stakeholders. Big picture view and a whole of government approach |
| Low confidence level; resistance towards accepting challenging assignments | Greater confidence in accepting challenging projects, proposing, and implementing innovations and representing the agency in public and private forums |

Source: FGD findings (2021)

Moreover, Table 29 presents the changes in the leadership and management practices among the case study groups.

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[7] Dewar, Keller & Malhotra, "CEO Excellence" March 2022
[8] Gardner & Mortensen, "Leaders Don't Have to Choose Between Compassion & Performance", Harvard Business Review, February 16, 2022

**Table 29. Change in Leadership and Management Practices by case study group**

| From | To | | |
|---|---|---|---|
| | SEC | DILG | COA |
| Being directive; Imposing upon subordinates; "I have the best ideas" mindset | Engaging peers during meetings to share information and insights, providing suggestions and deliberating on solutions. | Listening, understanding context, sharing and learning from each other, creating shared meaning.<br><br>Sharing learnings from PMDP to contribute to the leadership pipeline. | Engaging peers in the study, analysis and critical review of existing practices to discover better ways of doing things. |
| Honing technical expertise; Orientation towards technical solutions | Honing leadership skills: building relationships, motivating and empowering, collaborating.<br><br>Factoring the people side of solutions to ensure customer-centricity. | | Balance financial/compliance audit vis-à-vis performance audit to ensure that projects benefit the people they are intended to reach. |
| Accomplish what is required; Focus on work, output, career advancement | Balance financial/compliance audit vis-à-vis performance audit to ensure that projects benefit the people they are intended to reach. | Focus on outcome and impact to the constituents and the agency. Providing the best service to stakeholders with a sense of urgency.<br><br>Taking initiative for actions within your sphere of influence, and not waiting for orders from above- you are the one who knows the context best- "your bosses are already busy with the more strategic issues." | Established a balance between work conversations and interest on the personal circumstances and challenges of peers which created a positive working environment.<br><br>Going the extra mile to be an enabler in government. |
| Low confidence level | Expressing her opinions driven by the commitment to serve. | Increased confidence in public speaking and representing their boss/agency in various fora. | |
| Working in a silo; generating outputs on his/her own; Policy making from the ivory tower | Exploring resources and engaging connections with relevant agencies to arrive at a well-considered plan and smooth execution. | Collaborating for synergy and greater impact; gathering inputs from other agencies.<br><br>Promoting good relationships as basis for effective interaction. | Mentor and coach subordinates on technical aspects of the job as well as modeling phronetic leadership behaviors.<br><br>Delegating challenging tasks to subordinates which |

| From | To | | |
|---|---|---|---|
| | SEC | DILG | COA |
| | | Exploring the opportunity to work with other agencies of government for a more harmonized approach to serving the people (whole of government approach).  Policy grounded on feedback from, and addressing real needs of, constituents. | develops their confidence.  Reaching out and encouraging partner agencies to adopt technology/automate. |
| Resistance/hesitation in taking up new/additional assignments | Taking up challenging assignments. | Readiness to take on challenges and "do my best."  Trying to solve the challenge first before complaining- after you try, then you are in better position to be critical and make adjustments /corrections. | |

Source: FGD findings (2021)

Faculty members have observed that scholars improved the most in the area of development orientation which allows them to examine political, economic, cultural, sociological and diplomatic dimensions of solutions they wish to develop. Another faculty member observed that scholars undergo a change in perspective from narrow (job-based) to the government-wide perspective. A class director on the other hand observed the scholars' development as "undergo(ing) a transformation: Scholars are prepared academically and gain more confidence because they know more in terms of leadership, project implementation and how to approach their constituents. They acquire a wider perspective in public sector management and service." The scholars' stories were rich with wisdom gained during the PMDP journey and further strengthened by their experiences back at work. Table   These were among the most prevalent new beliefs:

1) I thought I knew everything about my job – I need to learn more and continuously. This is echoed by a professor who said that scholars have learned a lot but, in the process, realize that there is still a lot for them to learn.
2) It is not enough to submit an accomplishment report, the output should impact the ultimate stakeholder (uplift the lives of the poor and underprivileged)
3) There is always another way to look at the problem (which leads to the gathering of different perspectives by engaging stakeholders in conversations)
4) Always evaluate decisions against your values and the mission/vision of your agency. This is consistent with a faculty members' insight that among the scholars' best take-aways/insights from the PMDP experience are that they evaluate themselves as being good in terms of their morality and spirituality.

The results respond very well to the expectations of key officials when asked how they would characterize a successful graduate:

> MD Caparros - Peak-performing; enlightened; passionate
> SVP Mendoza - Catalyst of change, citizen-centric; ability to work horizontally (breaking silos in government)
> Pres. Caronan - Critical thinking; systems thinking; balance between technical expertise and empathy

### 6.2.9. The Significance of Modules in Competency Development

In both the MMC and SEC, leadership development modules rank among the top two of scholars' most influential modules. These Peak Performers in the Public Sector among the MMC (Figure 22) are Personal Efficacy among the SEC (Figure 23). Most of the insightful realizations start from these modules, among the most powerful of which according to scholars is to know yourself first. Strategic Communication and Executive Negotiation tops the list among the MMC scholars (Figure 22), another module that covers the relational aspect of leadership – that of connecting with people successfully. According to them they find communication skills they learned there most useful not only during interactions but even before the interactions happen, like being prepared with alternative solutions and knowing who you are engaging with.

The modules that scholars used in the preparation of their capstone paper were also rated high in influencing the development of their management skills. Among these are Project Development and Management, Managing High Performing Public Sector Organizations, Philippine Governance and Administrative System, and Public Policy Analysis. Among the SEC (Figure 23), Evidence Based Policy Making was referred to a lot, as did Innovation and Strategic Management and Perspectives in Governance and Development.

Many scholars share their Sensing Journey stories with much emotion; others say that they are not so shocked, they were in similar conditions growing up. But in both cases, everyone leaves with a significant "*aha*" moment which impacts the way they serve and discharge their roles as government officials in a powerful way. If the modules taught about providing the best service, the sensing journey adds its own flavor – that of providing the best service inclusive of the poor and marginalized, making sure that their pen-pushing at the office impacts the lives of everyone and that development is inclusive.

**Figure 22. MMC most influential module**
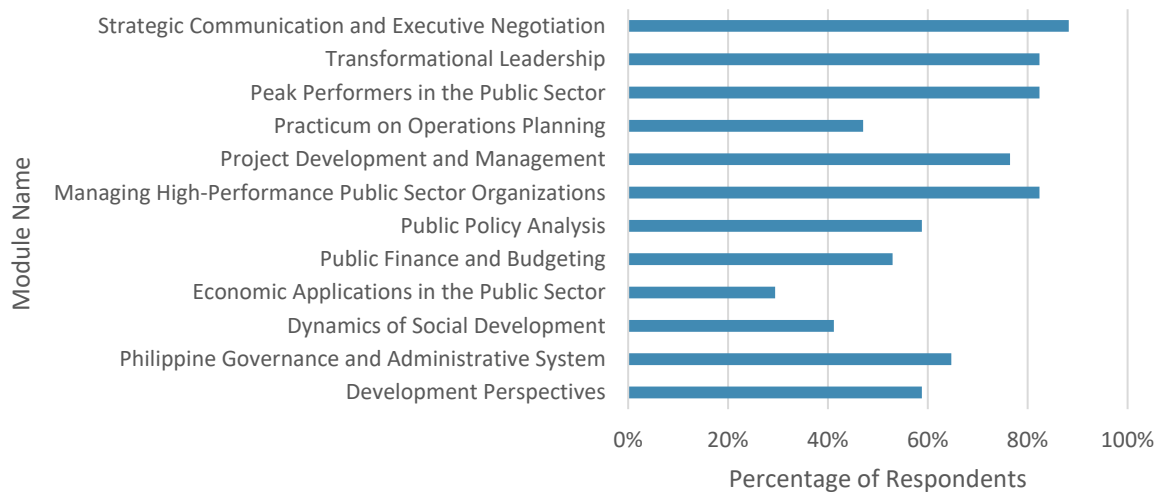


Source: FGD findings (2021)

**Figure 23. SEC most influential module**
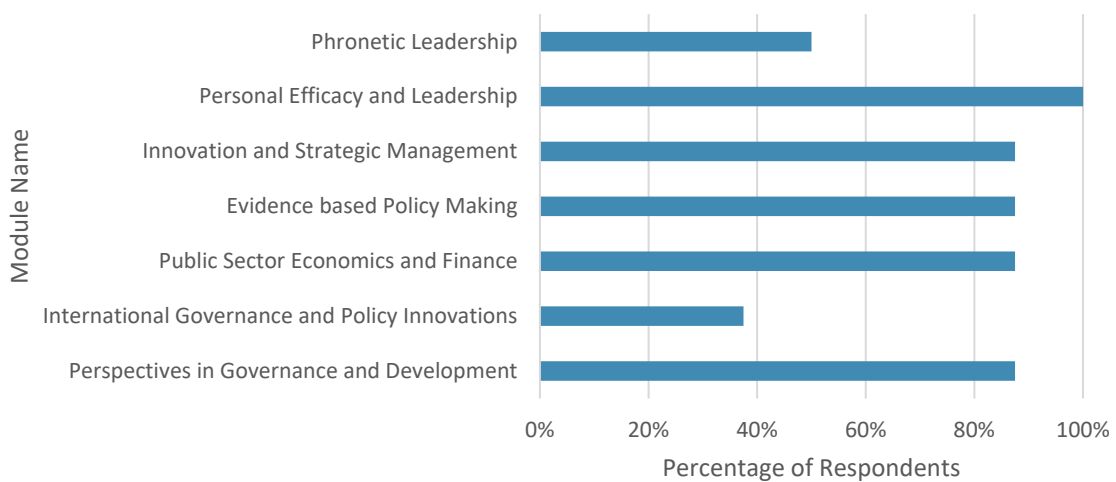


Source: FGD findings (2021)

### 6.2.10. Contribution to the Leadership Pipeline

Scholars are mostly reluctant to talk about their own prospects for promotion (ask my boss, they would say) but peers and supervisors unanimously agreed that they are ready for the next higher level. Some even said that they are already performing well the roles of the next higher position. Their readiness for higher levels of management and leadership may be gleaned from the following observations based on the narratives:

1) They perform in acting capacity when their boss is away and are confidently assigned to represent the boss/agency at inter-agency meetings
2) They are assigned and readily accept the more challenging tasks, sometimes outside of their area of expertise and they rise to the occasion
3) Their leadership reputation gets them invited to lead other units desiring to see their own performance improved.

4) They are consulted on significant issues that are the purview of leaders beyond their positions
5) They have mentored subordinates who will be ready when they move up

Mentoring staff in the mold of a PMDP graduate is another way the scholars contribute to the leadership pipeline. Staff imbibe their superiors' ways of thinking and analyzing and more importantly their values – aspiring for excellence in all outputs, putting the clients' interest first, and consistently delivering the best service. The collaborative approach of scholars becomes a natural ground for mentoring and coaching.

A faculty member articulated the advantage of having PMDP scholars fill the leadership pipeline thus: "Given the different development perspectives taught (economic, sociological, environmental, etc.), scholars become sensitive to the different development perspectives, know how to integrate them and select the most appropriate to apply to their respective agencies; to be able to identify what is doable given the insights and recommendations derived from these perspectives; the ability to share and interact with each other for a useful sharing of experiences". These may have been the factors that peers and superiors perceive such that the scholars were found to be desirable candidates to assume higher responsibilities in their organizations.

These are indicators that the PMDP indeed contribute(d) to "Deepen(ing) the bench of successors to the incumbent government office executives to ensure smooth transition in case of promotions or vacancies." Table 30 manifests that scholars interviewed contribute to the leadership pipeline through the attributes they possessed after their PMDP journey.

**Table 30. Contribution to the leadership pipeline by case study group**

| Attribute | SEC | DILG | COA |
|---|---|---|---|
| Possess leadership and management competencies | ✓ | ✓ | ✓ |
| Tackle challenging assignments | ✓ | ✓ | ✓ |
| Tackle assignments beyond position | ✓ | ✓ | ✓ |
| Prepare next level of leaders | ✓ | ✓ | ✓ |

Source: FGD findings (2021)

### 6.2.11. Contributions to and Impacts on Organizational Performance

Scholars comply with graduation requirements by working on a capstone paper or project. This requirement will demonstrate how scholars applied their learnings from PMDP. They also acquire a mentor who adds another perspective to the scholars' learnings. DOST Sec. De la Peña for example, noted that scholars he mentored tended to stay with one solution alone and to overlook the value of a cost-benefit analysis. Because of his engineering background, he would encourage his scholar-mentee to quantify the value of the benefits of the projects, be creative in considering various alternatives before zeroing in on the most feasible solution, try using process-flow diagrams and be organized and concise in their language.

Such considerations went into the preparation of capstone papers and projects. Table 31 shows the capstone papers and projects generated by scholars interviewed and the status of implementation.

**Table 31. FGD respondents' capstone papers' and projects' status of implementation by case study group**

| Status of Implementation | Fully Implemented | Partially Implemented | Not implemented |
|---|---|---|---|
| DILG | 56% | 33% | 11% |
| SEC | 50% | 25% | 25% |
| COA | 75% | - | 25% |

Source: FGD findings (2021)

### 6.2.12. Capstone papers/projects and Innovations

Capstone papers that get implemented addressed "sticky" issues, prevalent and pervasive but no one has attended to them. Examples are reducing the level of cash advances (COA and dormant accounts (COA), reducing the incidence of vehicular crashes (ITRMC/DOH), engaging citizens in fighting crime in NCR (DILG) and streamlining government processes, e.g., obtaining licenses, certificates of registration, and business permits (DILG).

Some of the capstone papers and projects have strategic implications, e.g., the "Package of Statistics in Support of the Tourism Industry of Albay will impact the whole tourism of Albay and beyond. It is a one-stop-shop resource that could guide 1) The LGUs on strategic plans to support its tourism industry like infrastructures, incentives, competency development, etc. 2) the local tour companies in planning strategies to grow their company based on reliable and updated data, and 3) local and foreign tourist in appreciating the tourism offerings and deciding to visit.

Others help to improve the country's reputation in the international scene, for example, events-based surveillance system for ensuring meat safety which places the country in good standing among the international organizations protecting human health.

Scholars also helped drive digital transformation in their agencies, at various degrees, at the very least to facilitate processes. Some used online apps that enabled collaboration, e.g., Metro-PODS, crowd-sourcing data for GAD policymaking. Still others utilized social media for information sharing and updating stakeholders on new programs or policies and YouTube for instructional videos. It will take collaboration across agencies for PMDP scholars to really mine the possibilities of data science and analytics to support the whole of government approach.

Partial implementation happens when the targeted stakeholders do not uniformly implement a proposed policy or project. Some of the reasons are differences in the contexts of stakeholder, e.g., lack of resources, not our priority, the champion was given an assignment at another location, change in leadership where the priorities of the incoming leader do not include the policy/project at hand. It is important to note that one of the capstone papers on the "Free Vote" did not get implemented because of the large-scale intergovernmental collaboration required to operationalize it. However, the policy paper was able to underscore the importance and urgency of the proposed policy such that the top management of COMELEC responded by creating an office to address the needs of vulnerable sectors such as Indigenous Peoples and those in insurgency affected areas during election time.

*6.2.13. Nature of change/innovation introduced*

A lot of the innovations involved digitization but only one capstone project dealt with data science/data analytics, which seems to indicate that the power of digitization has not been optimized. The Center for Strategic Futures under the DAP should address this gap.

Capstone projects and other innovations gain recognition in various ways. Table 32 lists the nature of awards and the number of interviewed scholars who received the award.

**Table 32. Nature of award received by FGD respondents' and the frequency**

| Nature of Award | Frequency |
| --- | --- |
| Most Innovative REP | 1 |
| Best REP/Outstanding Capstone | 2 |
| Most Collaborative REP | 2 |
| Most Citizen-Centric REP/Capstone | 3 |
| Most SMART Regulation REP | 1 |
| Best Organizational Productivity REP | 1 |
| Most Visible REP | 1 |

Source: FGD findings (2021)

As may be seen from Figure 24, all three levels of respondents agreed with respect to the prevalence of each innovation type. The predominant changes/innovations were those that improved systems and processes giving rise to improved citizen-centric services. There appears to have been a conscious effort to improve the lives of the underprivileged and underserved sectors of society, e.g., mobile registration introduced by a PSA PMDP scholar specifically targeting the Indigenous Peoples, private hospital quality of service from a government hospital that served mostly the C&D sectors and installation of solar panels in Geographically Isolated and Disadvantaged Areas (GIDA).

The sampling of innovations from 25 scholars that focused on improving services through better systems and processes prioritized the needs of stakeholders leading to the conclusion that the PMDP objective of "Produce(ing) competent government leaders committed to the welfare of their constituents and the country's progress" is being realized.

**Figure 24. Nature of change/innovation introduced**
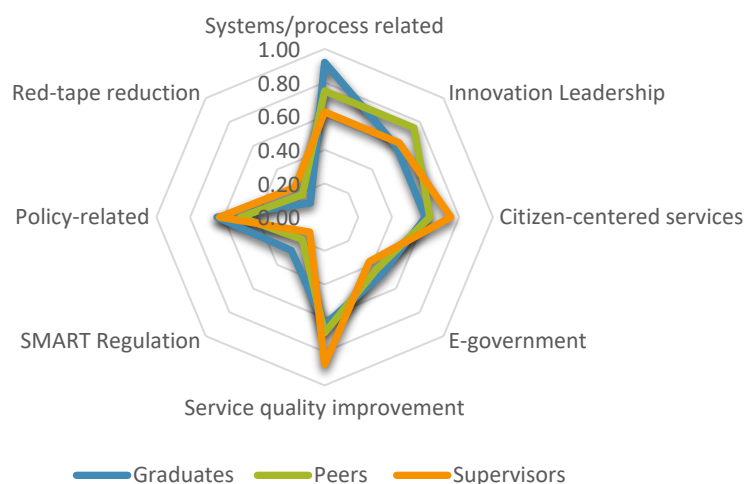


Source: FGD findings (2021)

*6.2.14. Organizational Change Readiness: Facilitating and Hindering Factors*

Respondents agree that leadership/management support, facilitative systems and processes and availability of resources are facilitative factors that if present in the organization, can ensure that capstone projects/capstone papers as well as other changes and innovations find their way into implementation as seen in Figure 25. One of the factors mentioned under "Others" is the relative importance of the project/innovation vis-à-vis the priorities of the organization. Allocation of resources to implement the project/innovation comes more readily when these are a high priority in the organization. This could be a factor to consider when evaluating proposals for capstone projects/papers.

**Figure 25. Organizational Change Readiness: Facilitating Factors**
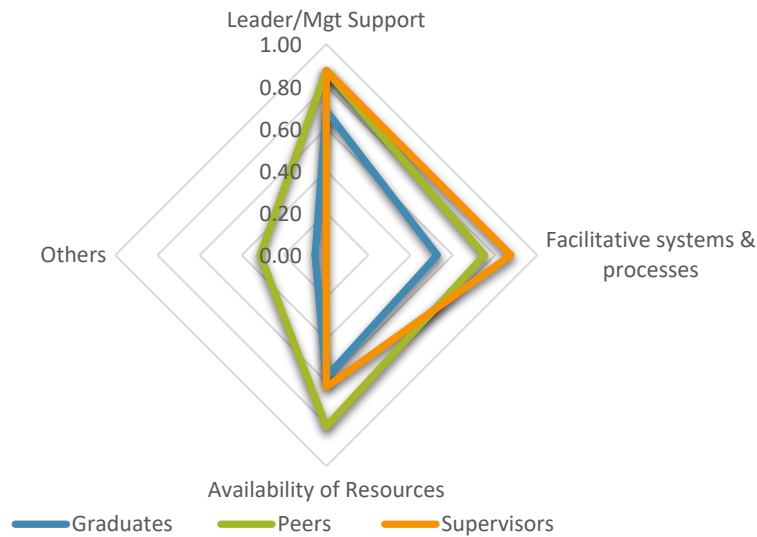


Source: FGD findings (2021)

Only the scholars reported observing hindering factors (Figure 26) at work when they implemented their capstone projects or innovations. Bureaucratic processes were found to be a bigger factor compared with Poor leadership or management support. Several scholars noted that reassignment, job rotation or promotion of either the superior or the scholar themselves tended to hinder the implementation of a project/innovation or affect its sustainability.

**Figure 26. Organizational Change Readiness: Hindering Factors**
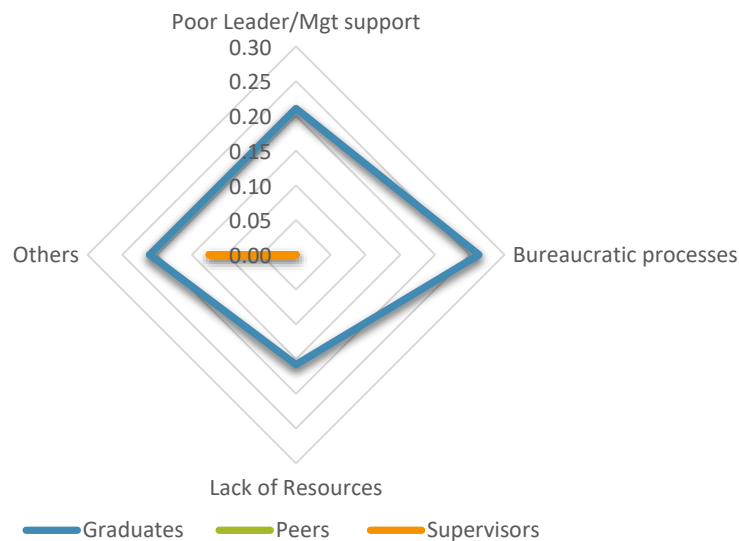
The organizational context itself influences the ease or difficulty that accompanies a project's implementation. COA, by its mandate, has the authority to introduce change in agencies through their audit findings and recommendations. However, scholars note that there is a need to communicate/advocate the change not only among the partner agencies but even among the audit teams themselves to engender support for widespread implementation especially if the change is not crafted as a policy.

In the absence of a change management policy or framework within the organization scholars are left to advocate for the adoption and implementation of their projects. Change is managed intuitively and mostly from the scholars' own initiatives. Agencies with a change management function would have taken over communicating the benefits of the change, engaging management and employees, preparing concerned staff with the competencies to undertake the change and monitor and evaluate its implementation, and affirm/reward those who adopt the change to ensure sustainability. In the absence of a working change management function, leadership/management support takes on a much bigger role. Nevertheless, even in the presence of leadership and management support the relative position of the leader in the hierarchy as well as the extent of his influence are also factors that contribute to the success of the project.

Some scholars advocate earmarking budget for capstone projects'/papers' implementation upon sending a scholar to PMDP since budget is still a consideration. Many scholars use their networks and linkages to overcome this obstacle.

### 6.2.15. Benefits to Agencies and Stakeholders

Key officers have expressed their expectations with respect to the impact PMDP graduates could create in the bureaucracy.

> MD Caparros - Collaborative and citizen-centric; improve systems and processes for better customer service; network with other agencies

SVP Mendoza - Initiate the building of a culture of innovation; innovations aligned with the national agenda; improve internal processes

Pres. Caronan - Introduce innovations that deliver their agency's mandates notwithstanding the bureaucratic constraints of government

The faculty expect that by acquiring new perspectives, scholars can broaden their understanding such as to see their agencies with new eyes, identify low-hanging fruits and realize service efficiencies and improve organizational competencies.

Figure 27 shows that "improved process times and/or service quality" is the most prevalent benefit arising from the innovations. This outcome generally contributes to a positive image for the agency. The second set of interrelated benefits are the improved organizational competencies in change management and the creation an innovation/change infrastructure. It follows that an agency that is frequently introducing change to improve its operations will also hone their skills at managing change and are more inclined to set up or improve their change infrastructures. Improvement in the agency's transparency has almost similar prevalence as the previous two. Far behind are savings generation and income generation. Red tape reduction also earned a low frequency. One capstone project, SPARK Business Messenger, addressed red-tape reduction by streamlining the process of transacting with local governments which made life a lot easier for businesspeople.

**Figure 27. Benefits to the organization of FGD respondents' innovations**
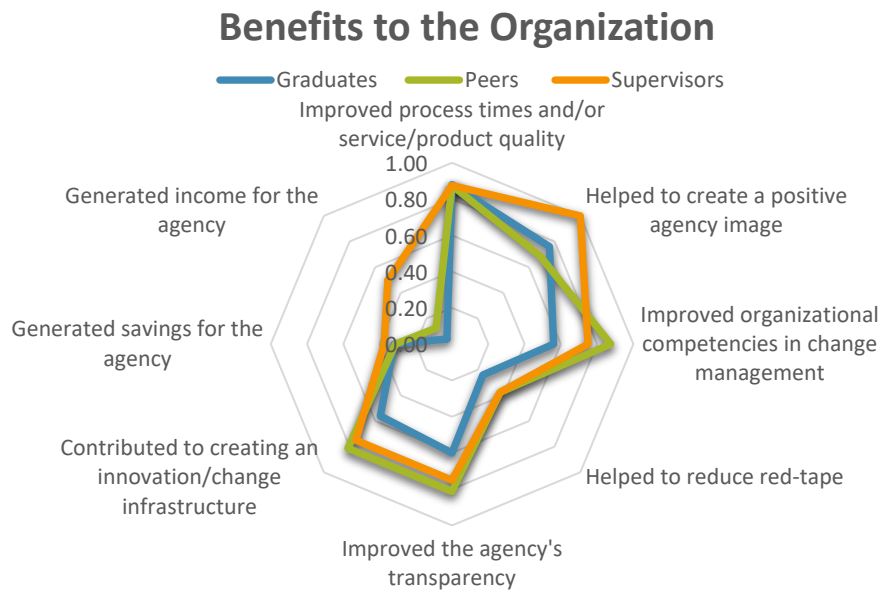


Source: FGD findings (2021)

There is a high level of agreement that the innovations/improvements introduced helped to create a positive agency image. This proves that the PMDP objective of "Enhance(ing) the image of the Philippine government as an institution imbued with professionalism, integrity, and honesty" has been realized.

*6.2.16. The role of linkaging and networking in delivering agency outputs*

The importance of linkaging and networking among government agencies can be seen in many significant capstone projects and innovations introduced by the scholars. Linkaging and networking among scholars generate these benefits –

- Speedy access to information/cutting red-tape – data, information is readily accessed without having to prepare a memo that will go through the formal channels.
- Partners in project implementation - preferential attention is obtained because of the relationships among the scholars; there is collaboration and resource sharing on areas of mutual interest — an example is the use of DOST S&T tools and facilities to elevate the quality of cottage industries.
- Access to/Providing subject matter expertise – scholars reach out to PMDP alumni who they can tap as resource persons in data gathering for policy formulation, in consultation meetings (formal or informal) to obtain the perspectives of other agencies and to harmonize policies. In some cases, scholars also serve as subject matter experts.
- Gaining other perspectives – Agencies can sometimes be so focused on their own concerns that they fail to connect to the bigger picture. An example would be the PMDP scholar who, in an informal conversation with PMDP classmates learned that a certain policy was being proposed in another agency. She quickly discussed the adverse consequences of that policy for certain stakeholders that her agency is serving. It led to the scrapping of that policy proposal.
- Access to resources – collaboration with PMDP alumni and other networks open up the resources of each party to sharing with each other, whether these be financial, material of manpower resources.
- Benchmarking – scholars benchmark each other's practices and experiences; this cuts the learning curve significantly.

A group of PMDP graduates of a certain batch institutionalized collaboration by organizing the Philippine Futures Thinking Society to promote strategic and innovations knowledge thinking. Among the collaborators are DAP officials.

There is a rising consciousness for a whole of government approach among the scholars. This motivates them to reach out to other agencies for wholistic and sustainable approaches in delivering their respective mandates. In fact, several capstone projects would not be successful without linkaging with other government agencies.

These observations respond to the PMDP objective of "Foster(ing) a spirit of kinship, mutual support and harmony among government leaders working for the common goal of a good life for all."

## 6.3. Impact Evaluation

### 6.3.1. Inverse Propensity Score Weighting

Propensity scores were used to determine the Program's impact on the scholars. Rosenbaum and Rubin (as cited in Chesnaye et al. 2022, p.15) define it as "the conditional probability of assignment to a particular treatment given a vector of observed covariates." The likelihood (from 0 to 1) of an individual being admitted to the Program based on their baseline

characteristics. It seeks to control measured confounders by achieving balance in treatment and control group characteristics.

The authors used inverse propensity score weight to measure the Program's impact on the scholars based on the number of online survey respondents. The inverse probability of receiving their actual treatment determines the balance of baseline characteristics in the treatment and control groups. Individual weights are calculated as 1/propensity score for the treatment group and 1/ (1-propensity score) for the control group. As a result, exposed individuals with a lower probability of admission (and the control group with a higher probability of admission) are given higher weights, and their relative influence on the comparison is increased.

Table 33 presents the survey respondents' likelihood of participating in the Program. The propensity score model reveals that the probability to participate in the Program is quadratic in age. Younger and older government employees are less likely to enroll in the Program. This is in line with the age requirement of the Program which is 55 years old and below for SEC and 50 years old and below for MMC.

Moreover, the respondents are more likely to participate as their salary grade increases. On the other hand, they are less likely to participate if they have been in the government for a long time and already have a postgraduate degree (a master's degree or a doctorate degree). Sex does not affect the chance of being admitted to the program, based on the result of the Propensity Score Model (PSM) among the survey respondents.

In terms of competencies, respondents who demonstrate a high level of strategic and critical thinking, and individual impact are less likely to participate in the program. In contrast, those demonstrating the leading in a continuously changing environment score are more likely to participate in the program.

**Table 33. Propensity score model: PMDP receipt**

| Pre-treatment Variables | Treatment | Treatment | Treatment | Treatment |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Salary Grade | 0.114*** | 0.160*** | 1.059** | 0.688 |
| | (0.034) | (0.039) | (0.472) | (0.55) |
| Tenure | 0.017 | 0.012 | -0.154 | -0.1 |
| | (0.02) | (0.022) | (0.273) | (0.302) |
| Age | -0.014 | -0.014 | 0.776** | 0.751** |
| | (0.021) | (0.023) | (0.347) | (0.372) |
| Education: Master's | -0.596** | -0.735*** | -0.967*** | 0.078 |
| | (0.263) | (0.284) | (0.312) | (3.214) |
| Education: Doctorate | -0.555 | -0.805** | -0.748* | 3.686 |
| | (0.36) | (0.385) | (0.395) | (4.457) |
| Regional Office | 0.189 | 0.242 | 0.324 | -1.128 |
| | (0.175) | (0.198) | (0.227) | (2.524) |
| Female | -0.298 | -0.25 | -0.16 | -0.088 |
| | (0.234) | (0.254) | (0.261) | (2.906) |
| Strategic and critical thinking | | -0.846*** | -0.911*** | -0.923*** |
| | | (0.288) | (0.306) | (0.311) |

| Pre-treatment Variables | Treatment | Treatment | Treatment | Treatment |
|---|---|---|---|---|
| Leading in continuously changing environment | | 0.691** | 0.795** | 0.812** |
| | | (0.342) | (0.371) | (0.38) |
| Empowering others for collective accountability | | -0.048 | -0.124 | -0.162 |
| | | (0.273) | (0.298) | (0.309) |
| Linkaging and networking for productive partnerships | | 0.171 | 0.175 | 0.267 |
| | | (0.249) | (0.299) | (0.311) |
| Planning and organizing for greater impact | | 0.318 | 0.342 | 0.24 |
| | | (0.317) | (0.348) | (0.364) |
| Driving performance for integrity and service | | -0.057 | 0.015 | 0.015 |
| | | (0.25) | (0.258) | (0.27) |
| Individual impact | | -0.363** | -0.426** | -0.404* |
| | | -0.185 | -0.203 | -0.206 |
| Organizational impact | | -0.228 | -0.291 | -0.296 |
| | | -0.176 | -0.18 | -0.183 |
| Pseudo R-sq/ | 460.898 | 485.677 | 493.384 | 555.34 |
| BIC | 0.035 | 0.081 | 0.145 | 0.163 |
| N | 335 | 334 | 334 | 334 |

Source: Authors' computation

Given the discussed propensity score model, assumptions are necessary to meet to interpret the results with unbiased causal effect. There are two assumptions applied, the first one is the strong ignorability. Meanwhile, the second one is the propensity score positivity.

The first assumption looks at the potential outcomes and treatment assignment and how they are independent once conditioned on available controls. It is not testable, but the covariate balance provides some indication. Figure 28 presents the standardized mean difference for all the respondents. The standardized mean difference is to determine the balance of covariate distribution. The white circle reflects the unweighted standardized mean difference of the variables, while the black circle reflects the standardized mean difference after conducting the inverse-probability (IPS) weighting. The standardized mean difference should be closer to zero. As reflected in Figure 28, the standardized mean difference of salary grade, master's education, empowering others for collective accountability, individual impact, and organizational impact are closer to one after IPS-weighting. However, after IPS-weighting the standardized mean of tenure, age, regional office, leading in continuously changing environment, linkaging and networking for productive partnerships, and planning and organizing for greater impact were a bit farther from zero. Overall, the standardized mean difference is generally closer to zero for both all the respondents which is necessary to measure the impact of the Program on the scholars.

**Figure 28. Overall Standardized Mean Difference**
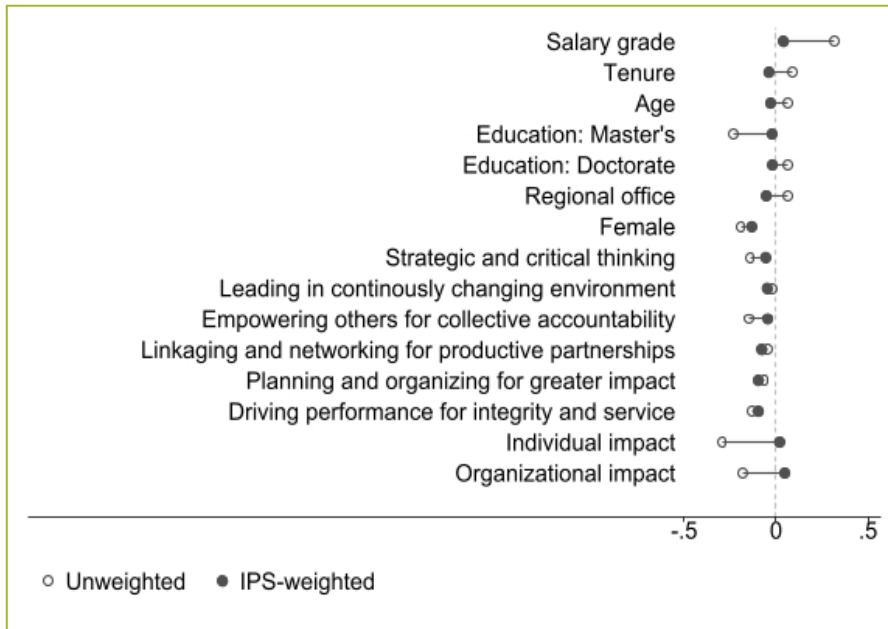


Source: Authors' computation

In terms of the variance ratio, as shown in Figure 29, the result must be closer to one. The salary grade, tenure, age, doctorate education, driving performance for integrity and service, individual impact, and organizational impact are closer to one after the IPS-weighting.

**Figure 29. Overall variance ratio**
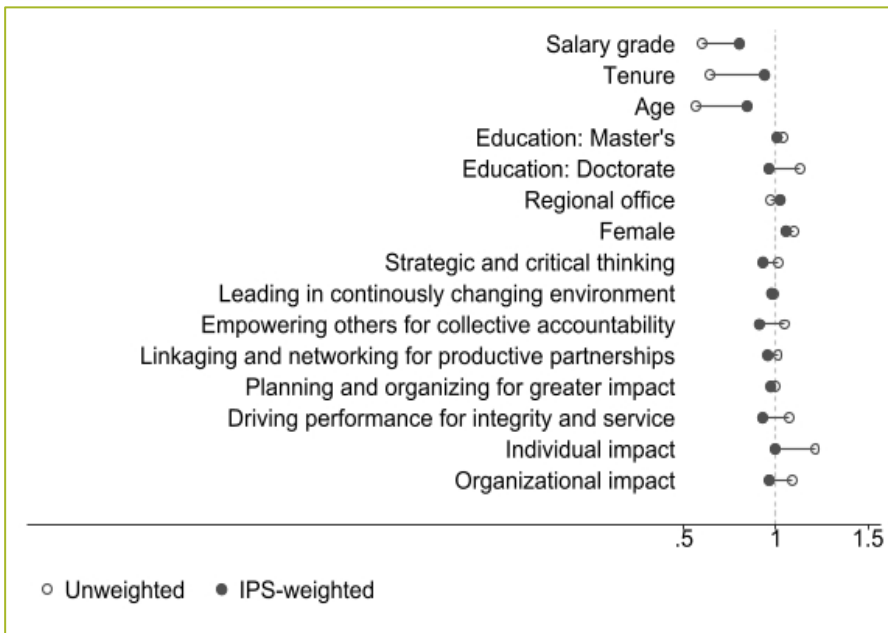


Source: Authors' computation

The second assumption focuses on the propensity score positivity. The propensity scores are bounded away from zero and one, and the results are no sure event that the treatment group and the control group will participate in the program. Conceptually, it is needed to allow the treatment and control to have an overlap to be matched. Moreover, it practically ensures that no observation receive a very large weight.

Figures 30 and 31 presents the unweighted and IPS-weighted propensity score overlap for all the respondents. The staggered black line represents the treatment group, while the red line represents the treatment group. Based on Figure 30, the treatment group are more likely to participate in the program compared to their control group. However, upon doing the inverse-probability weighting, both groups have an overlap probability to participate in the program.

Overall, the first and second assumptions are generally met, and the results can be interpreted having a causal relationship.

Some measures are standardized relative to control group to facilitate the interpretation such as CES competencies, individual and organization impact, and phronetic leadership. The first column shows the outcome variables, for the CESB competencies, questions are grouped per construct, same with the phronetic leadership.

The potential outcome mean is the result for the control group or the non-PMDP participant. While the average treatment effect shows the impact of PMDP participation among the respondents. For the interpretation, 0.2 shows a mild impact, 0.5 shows a moderate impact, while 0.8 shows a strong impact.

**Figure 30. Overall unweighted propensity score overlap**
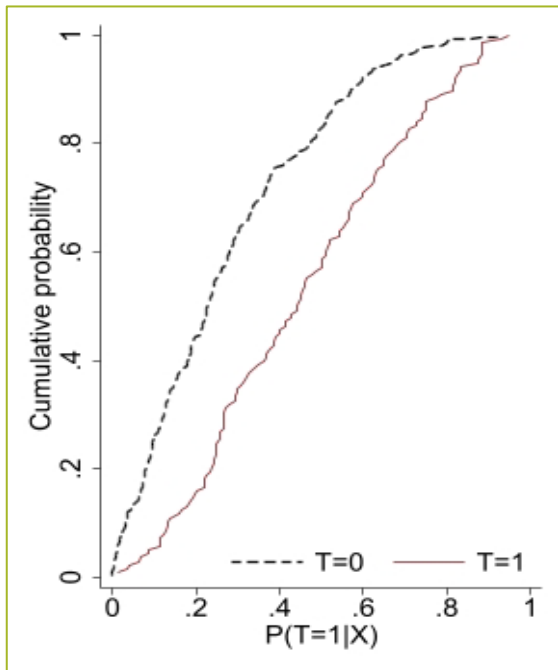


Source: Authors' computation

**Figure 31. Overall IPS-weighted propensity score overlap**
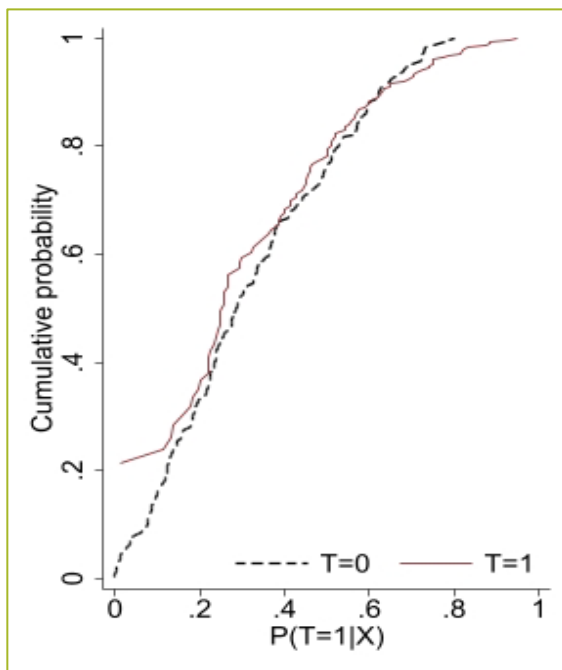


Source: Authors' computation

*6.3.2. Average Treatment Effect (ATE)*

In terms of CESB competencies (Table 34), the driving performance for integrity and service competency has received the strongest impact among the scholars with an estimate effect of 0.68. This is followed by linkaging and networking for productive partnerships (0.66) and strategic and critical thinking (0.66). Among the competencies, empowering others for collective accountability has a moderate impact with 0.57 estimated effect. Moreover, the

individual and organizational impact shows a moderate impact with a 0.49 and 0.55 estimated effect, respectively.

The program has a mild impact among the phronetic leadership of the respondents (Table 34). The "can exercise political power" (0.56) of all respondents have the highest impact among the phronetic leadership constructs followed by "can communicate essence" (0.55) and "fosters practical wisdom in others" (0.50).

As for their promotion, the program has a mild impact with about one salary grade higher relative to SG 22 control average.

The network centrality (Table 34) of the respondents measures the "importance" of node in the network. This is looked through degree centrality, katz centrality, and eigenvalue centrality. Degree centrality is a count of first-degree neighbors, katz centrality is the count of all neighbors with weight declining in degree, and eigenvalue centrality accounts for score of connected neighbor and not just count. Overall, the network centrality of the respondents is affected mildly to moderately by the program.

Lastly, the results (Table 34) show a limited indication of impact on proposing or adoption of proposed innovation.

**Table 34. Overall average treatment effect estimates: Inverse-propensity score reweighting**

|  | Potential Outcome Mean (T=0) | | | Average Treatment Effect (ATE) | | |
|---|---|---|---|---|---|---|
|  | Est.[9] | SE[10] | p-value | Est. | SE | p-value |
| **A. CES Competencies** |  |  |  |  |  |  |
| Strategic and critical thinking | -0.07 | 0.06 | 0.26 | 0.66 | 0.09 | 0.00 |
| Leading in continuously changing environment | -0.05 | 0.06 | 0.43 | 0.60 | 0.08 | 0.00 |
| Empowering others for collective accountability | -0.05 | 0.06 | 0.34 | 0.57 | 0.10 | 0.00 |
| Linkaging and networking for productive partnerships | -0.04 | 0.06 | 0.47 | 0.66 | 0.10 | 0.00 |
| Planning and organizing for greater impact | -0.04 | 0.06 | 0.49 | 0.64 | 0.09 | 0.00 |
| Driving performance for integrity and service | -0.06 | 0.06 | 0.34 | 0.68 | 0.09 | 0.00 |
| **B. Individual and Organizational Impact** |  |  |  |  |  |  |
| Individual impact | -0.09 | 0.06 | 0.10 | 0.49 | 0.08 | 0.00 |
| Organizational impact | -0.04 | 0.06 | 0.55 | 0.55 | 0.10 | 0.00 |

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[9] Est. stands for Estimates or Estimated Coefficient which assess whether there is any change in the expected outcomes among the PMDP graduates after the Program. Under the ATE, the Est. indicates the effect of the Program among the graduates.

[10] SE stands for Standard Error which describes the distribution of the means. A small value of SE indicates that the means are closely clustered (Andrade 2020).

| | Potential Outcome Mean (T=0) | | | Average Treatment Effect (ATE) | | |
|---|---|---|---|---|---|---|
| | Est.[9] | SE[10] | p-value | Est. | SE | p-value |
| **C. Phronetic leadership** | | | | | | |
| Can judge goodness | -0.07 | 0.07 | 0.29 | 0.44 | 0.11 | - |
| Can create shared contexts | -0.10 | 0.07 | 0.15 | 0.40 | 0.11 | - |
| Can grasp essence | -0.07 | 0.07 | 0.29 | 0.44 | 0.10 | - |
| Can communicate essence | -0.03 | 0.07 | 0.66 | 0.55 | 0.10 | - |
| Can exercise political power | -0.06 | 0.07 | 0.37 | 0.56 | 0.10 | - |
| Fosters practical wisdom in others | -0.02 | 0.07 | 0.76 | 0.50 | 0.08 | - |
| | | | | | | |
| **D. Promotion** | | | | | | |
| Salary Grade | 21.94 | 0.22 | - | 0.91 | 0.26 | - |
| | | | | | | |
| **E. Government Network** | | | | | | |
| Degree centrality | -0.01 | 0.08 | 0.95 | 0.31 | 0.18 | 0.08 |
| Eigenvector centrality | 0.01 | 0.08 | 0.95 | 0.28 | 0.17 | 0.10 |
| Katz Centrality | -0.02 | 0.08 | 0.84 | 0.33 | 0.17 | 0.05 |
| | | | | | | |
| **F. Innovation** | | | | | | |
| Proposed any change or innovation | 0.74 | 0.03 | - | - | 0.05 | 0.96 |
| Proposed innovation: Policy | 0.37 | 0.04 | - | 0.02 | 0.06 | 0.72 |
| Proposed innovation: Systems/Process | 0.60 | 0.04 | - | 0.07 | 0.06 | 0.22 |
| Proposed innovation: Service quality improvement | 0.49 | 0.03 | - | 0.05 | 0.06 | 0.37 |
| Proposed innovation: Citizen-centered services | 0.29 | 0.03 | - | 0.11 | 0.07 | 0.08 |
| Proposed innovation: E-government | 0.15 | 0.02 | - | 0.11 | 0.06 | 0.08 |
| Proposed innovation: SMART regulation | 0.03 | 0.01 | 0.02 | 0.03 | 0.03 | 0.30 |
| Proposed innovation: Red-tape reduction | 0.16 | 0.02 | - | 0.03 | 0.05 | 0.54 |
| Proposed innovation: Innovation leadership | 0.18 | 0.03 | - | 0.07 | 0.06 | 0.25 |
| Proposed innovation: Other | 0.06 | 0.01 | - | -0.02 | 0.02 | 0.50 |
| Innovation adopted: Policy | 0.33 | 0.03 | - | 0.00 | 0.06 | 0.96 |
| Innovation adopted: Systems/Process | 0.57 | 0.04 | - | 0.05 | 0.06 | 0.38 |
| Innovation adopted: Service quality improvement | 0.48 | 0.03 | - | 0.05 | 0.06 | 0.39 |
| Innovation adopted: Citizen-centered services | 0.28 | 0.03 | - | 0.06 | 0.07 | 0.34 |
| Innovation adopted: E-government | 0.11 | 0.02 | - | 0.15 | 0.06 | 0.02 |

| | Potential Outcome Mean (T=0) | | | Average Treatment Effect (ATE) | | |
|---|---|---|---|---|---|---|
| | Est.[9] | SE[10] | p-value | Est. | SE | p-value |
| Innovation adopted: SMART regulation | 0.02 | 0.01 | 0.04 | 0.03 | 0.03 | 0.22 |
| Innovation adopted: Red-tape reduction | 0.12 | 0.02 | - | 0.05 | 0.05 | 0.29 |
| Innovation adopted: Innovation leadership | 0.17 | 0.03 | - | 0.09 | 0.06 | 0.14 |
| Innovation adopted: Other | 0.06 | 0.02 | - | -0.02 | 0.02 | 0.48 |

Source: Authors' computation

### 6.3.3. Sensitivity to Confounding

A sensitivity analysis is conducted to assess how strong a relationship would have to be between an unmeasured confounder and the treatment assignment, as well as between the unmeasured confounder and the outcome, to explain away an observed treatment effect (Linden, Mathur, and Vanderweele, 2020).An evaluation of the strength of the association between an unmeasured confounder and the treatment assignment as well as between the unmeasured confounder and the result is made in a sensitivity analysis to see if an observed treatment effect can be accounted (Linden, Mathur, and Vanderweele, 2020).

It is a standard practice to check for sensitivity of estimates to unobserved confounding. It is usually done by bounds testing and to answer how uncertain will estimates be if strong ignorability is relaxed. The study by Masten and Poirier (2018) introduced a new method based on conditional c-dependence by estimating bounds on average treatment effect in terms of the highest and lowest value. Moreover, a difference-in-differences was done for those unobservable confounders.

Figure 32 presents how much should propensity score shift to have zero as part of the ATE bounds. Moreover, Table 35 presents the leave-one-out calibration by showing how much would propensity score shift by leaving variable k out in the model. As much as 10% of sample would have propensity score shifts of at least 10 percentage points for most variables. Based on these, the estimates are pretty robust.

**Figure 32. Breakdown point**
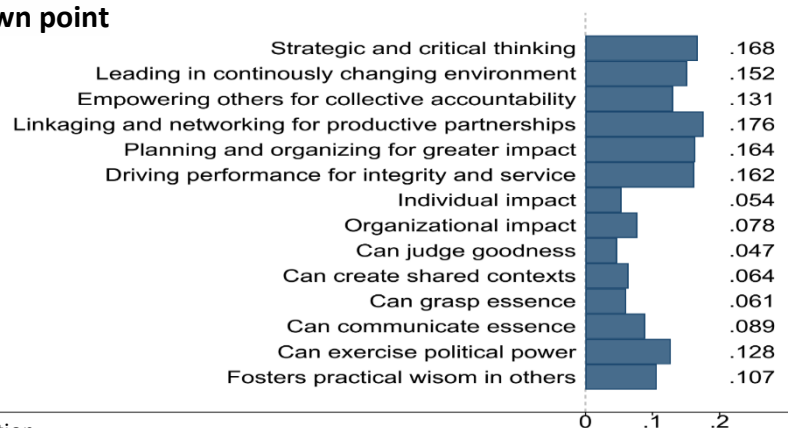


Source: Authors' computation

**Table 35. Variation in leave-one-out variable k propensity scores**

| Excluded pre-treatment variable k | 50th | 75th | 90th | 95th | 99th | Max |
|---|---|---|---|---|---|---|
| Salary Grade | 0.061 | 0.106 | 0.170 | 0.208 | 0.312 | 0.382 |
| Tenure | 0.017 | 0.029 | 0.050 | 0.073 | 0.197 | 0.386 |
| Age | 0.040 | 0.073 | 0.117 | 0.167 | 0.274 | 0.436 |
| Education: Master's | 0.051 | 0.083 | 0.127 | 0.162 | 0.204 | 0.233 |
| Education: Doctorate | 0.017 | 0.040 | 0.083 | 0.127 | 0.175 | 0.262 |
| Regional office | 0.022 | 0.034 | 0.051 | 0.063 | 0.083 | 0.089 |
| Female | 0.028 | 0.056 | 0.096 | 0.120 | 0.171 | 0.196 |
| Strategic and critical thinking | 0.038 | 0.072 | 0.116 | 0.153 | 0.208 | 0.265 |
| Leading in continuously changing environment | 0.027 | 0.055 | 0.086 | 0.107 | 0.161 | 0.177 |
| Empowering others for collective accountability | 0.007 | 0.014 | 0.023 | 0.033 | 0.042 | 0.064 |
| Linkaging and networking for productive partnerships | 0.012 | 0.027 | 0.042 | 0.052 | 0.087 | 0.093 |
| Planning and organizing for greater impact | 0.012 | 0.022 | 0.036 | 0.044 | 0.062 | 0.087 |
| Driving performance for integrity and service | - | - | - | - | 0.001 | 0.001 |
| Individual impact | 0.031 | 0.061 | 0.085 | 0.112 | 0.155 | 0.198 |
| Organizational impact | 0.024 | 0.040 | 0.071 | 0.085 | 0.114 | 0.152 |

Source: Authors' computation

### 6.3.4. Difference-in-Difference

Difference-in-difference is an evaluation method used in non-experimental settings. The goal is to estimate the causal effects of a program or an intervention. The same set of treatment and comparison individuals are observed across different time periods. The change in outcomes in the comparison group are differenced from the change in outcomes in the treatment group to account for the effect of time-invariant unobserved factors.

Table 36 shows the results for the difference-in-differences. It removes the effect of time-invariant characteristics by differencing. The results are robust and even stronger compared with baseline IPW estimates. The results show strong impact in terms of salary grade and CESB competencies. Driving performance for integrity and service received the highest impact among the CESB competencies (0.77), followed by planning and organizing for greater impact (0.73) and linkaging and networking for productive partnerships (0.73). Empowering others for collective accountability competency has been affected the least (0.61).

Meanwhile, it has mild impact on the individual (0.45) and organizational (0.49) impact of the respondents.

**Table 36. Overall average treatment effect estimates: Difference-in-differences**

| | Difference-in-differences | | | IPW Difference-in-differences | | |
|---|---|---|---|---|---|---|
| | Est. | S.E. | p-value | Est. | S.E. | p-value |
| Salary Grade | 0.37346 | 0.27953 | 0.18154 | 0.74005 | 0.24708 | 0.00274 |
| Strategic and critical thinking | 0.63244 | 0.09349 | - | 0.71446 | 0.08871 | - |
| Leading in continuously changing environment | 0.51511 | 0.09202 | - | 0.65723 | 0.08972 | - |
| Empowering others for collective accountability | 0.52957 | 0.09639 | - | 0.61649 | 0.09672 | - |
| Linkaging and networking for productive partnerships | 0.50392 | 0.09098 | - | 0.73247 | 0.09082 | - |
| Planning and organizing for greater impact | 0.51247 | 0.09489 | - | 0.73286 | 0.09579 | - |
| Driving performance for integrity and service | 0.55979 | 0.09919 | - | 0.77206 | 0.09544 | - |
| Individual impact | 0.51897 | 0.09993 | - | 0.45435 | 0.09211 | - |
| Organizational impact | 0.50043 | 0.09826 | - | 0.49303 | 0.09024 | - |

Source: Authors' computation

## 7. Conclusion, Implication, and Recommendation

### 7.1. On Extent of contribution of PMDP to changes in leadership and management attributes and work performance among PMDP graduates

The PMDP had been indicatively successful in improving CESB competencies among the PMDP graduates. This is clear when comparing the psychometric assessments pre and post PMDP timelines. PMDP graduates were generally better off based on measured core competencies than their contemporaries or comparable peers. The difference in core competencies between scholars and their comparable peers was significant. There was no significant difference in core competencies between scholars and their peers pre-PMDP, but post-PMDP, the scholars were significantly better in almost all competency areas.

The impact assessment points to a moderate to strong effect on the Program's impact on the six CESB competencies of the scholars. The highest Program effect was in the scholars' competency related to the ability to drive performance for integrity and service. This means that they have the ability to deliver and produce good results and are action-oriented and are committed to achieving results. This particular competency translates to PMDP scholars being results-driven with potential to be high performers. This makes them desirable as bureaucratic servants; and competitive in rising up the ranks within their respective institutions.

The scholars manifested the competency, strategic and critical thinking through the alignment of efforts and strategies towards realizing the agency's goals, applying critical thinking in analyzing factors that determine or undermine success towards a sustainable and competitive agency. More behaviors were associated with analysis of data/information and alignment with mission/vision than with introducing strategic plans that will create strategic change.

The Program had the lowest effect on people-centric skills, including (a) empowering others for collective accountability and (b) leading in a continuously changing environment. Empowering others for collective accountability did not involve only developing subordinates but also other stakeholders involved in the delivery of government services. A major theme that emerged in the narrative is the "empowering" factor, where the scholar who used to be directive, started engaging subordinates and peers in conceptualizing, planning, and implementing projects. This is impactful for the peers who gained more confidence to perform. Under leading in a continuously changing environment, stories featured a lot of technology adaptations. Work-from-home arrangements and the demand for business continuity during the pandemic sped up technology adaptation. But some scholars had already incorporated technology in their processes pre-pandemic to speed up the delivery of services while ensuring quality and accuracy.

As for linkaging and networking for productive partnership, the scholars would call upon their PMDP classmates/alumni and other networks for resource augmentation, for expert advice and consultation and for a "whole of government" approach that enabled the crafting of sustainable solutions.

Planning and organizing for greater impact was featured in the narratives in association with a) organizing directives from different agencies to guide the citizens at the onset of the pandemic, b) the use of project management principles to make audit work more systematic and effective, and c) improving process times, and organizing stakeholders, processes, and systems for an integrated COVID response.

Scholars' efforts on driving performance for integrity and service can be seen in the persistent effort, usually against odds, to implement improvements and adapt to the use of technology not just among co-workers, but also among partner agencies. Cases such as creating tutorial videos and mentoring others to help improve compliance with rules and regulations.

All phronetic leadership constructs were seen significant among PMDP graduates except for the "ability to judge goodness." The survey results also showed that all mean scores on Phronetic leadership traits were higher among scholars compared to their peers. Despite just being recently introduced in the SEC track, and sans intention and the actual course offering in the MMC track, the result point to phronetic leadership constructs being embedded in the original offering of the PMDP curriculum. Mild to moderate effects on phronetic leadership traits among scholars were seen with the effects on middle managers higher except for (a) exercise of potential political power and (b) creating shared context. This implies that middle managers have a proclivity to internalize Phronetic leadership constructs but are limited in terms of their respective institutional realities.

Looking at the stories through the phronetic leadership lens, one can see the behaviors characteristic of phronetic leadership: people-centeredness in crafting solutions that is good for the whole (judging goodness); making an effort to understand the client's context in terms of their culture, their needs and motivations and (grasping the essence) to provide the most

appropriate service especially to the disadvantaged in society, engaging stakeholders in insightful conversations in a safe space (create shared context), sharing personal stories and experiences so co-workers and teammates appreciate concepts from a different lens (communicate the essence), engaging stakeholders to support of a common cause while engendering their commitment (exercise political power) and modeling phronetic leadership behaviors and bringing in a resource person to speak about it (fostering phronesis). Scholars feel the odds are in their favor because of the tools, perspectives and insights gained during their stay with the PMDP.

Overall, the evaluation of competency development vis-à-vis the CESB competency model and phronetic leadership has come up with very optimistic results.

### 7.2. On extent of scholars' contribution to improved organizational performance

The PMDP's effect on the scholars' organizational performance is mild. Innovations from scholars were low, both in terms of proposals submitted and adoption. This is a possible weakness among scholars. This also points to limited opportunities to move up to more senior executive posts and create ripples. Moreover, the Program's effects on innovations were higher for middle managers, particularly for e-government, but effects were low on policy-related innovation.

In terms of linkaging and networking, there is a rising consciousness for a whole of government approach among the scholars. This motivates them to reach out to other agencies for holistic and sustainable approaches in delivering their respective mandates. The network centrality measures were also higher for middle managers than the overall average effect, implying that middle managers are more fluid and are able to operate inter-organizationally within the bureaucracy.

Under nature of change/innovation introduced, the predominant changes/innovations were those that improved systems and processes giving rise to improved citizen-centric services. There appears to have been a conscious effort to improve the lives of the underprivileged and underserved sectors of society.

Focus group discussion respondents agreed that leadership/management support, facilitative systems and processes and availability of resources are facilitative factors that if present in the organization, can ensure that capstone projects/capstone papers as well as other changes and innovations find their way into implementation. However, in the absence of a change management policy or framework within the organization scholars are left on their own to advocate for the adoption and implementation of their projects. Change is managed intuitively and mostly from the scholars' own initiatives.

The emerging themes on the driving forces that influence the sustainability of PMDP initiated change include (a) leadership, (b) systems/process, (c) availability of resources, among others. Meanwhile, hindering factors include (a) poor leadership support, (b) bureaucratic processes, (c) lack of resources, among others.

Figure 33 presents the identified push and pull factors when a scholar introduced change in their respective institutions. The support of the agency management was articulated as the top driving force. An inclusive and a change-ready culture and the institutional capability for managing change were identified under the systems/processes. On the other hand,

reassignment/job rotation and organizational silos were mentioned as hindering factors. Respondents added that access to external networks for resources and expertise and having manpower and budget could facilitate the initiated change, while the lack of manpower/budget could lead to uninitiated change. Lastly, scholars' commitment to service delivery and development, high rank of PMDP scholar/champion, and agency priorities were raised as the other driving forces.

### 7.3. Other expected and unintended outcomes as a result of PMDP implementation

Other outcomes of the PMDP implementation seen in the study include the possible organizational displacement upon the scholars' return; flight risk post- PMDP leading to middle manager drain; and the implementation of other non-capstone project innovations.

The Program's positive effects on middle managers were generally higher compared to the overall average. This highlights the potential of middle managers to excel and move up the ranks. It also indicates their readiness for higher levels of management and leadership. However, there is a flight risk among scholars attributable to more professional opportunities post-PMDP, and possible organizational discontent upon returning to their respective units. This possible middle manager drain must be mitigated.

**Figure 33. Lewin's Force Field Analysis: Factors influencing sustainability of PMDP initiated change**
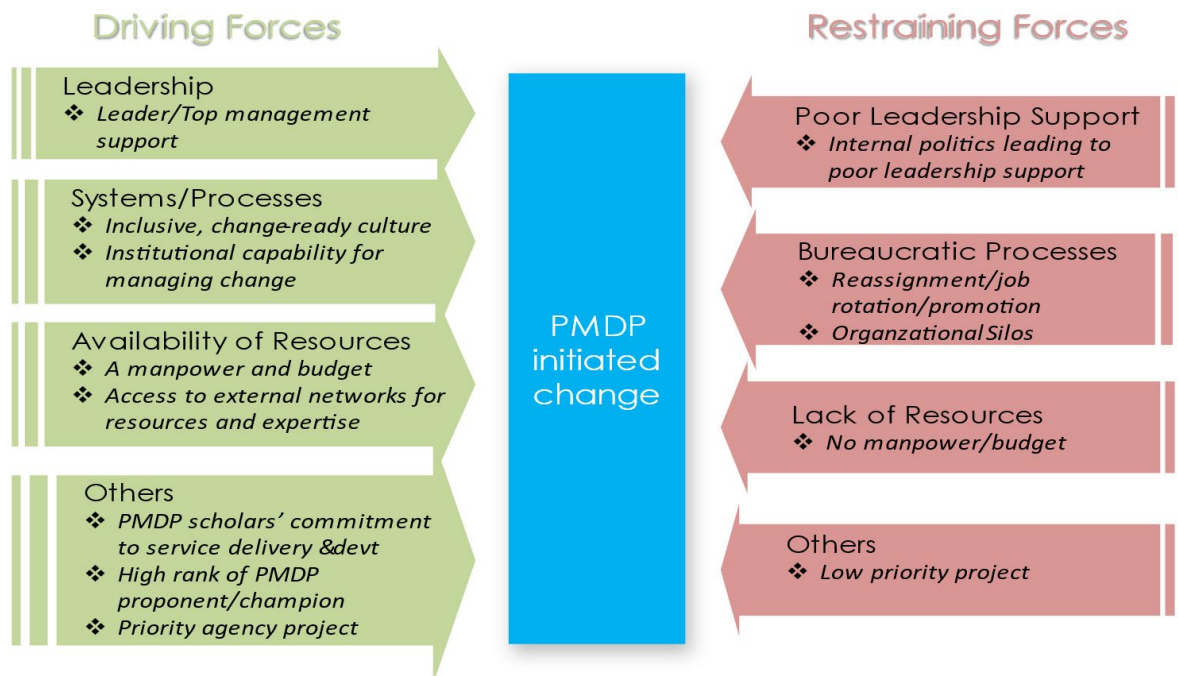


Source: Authors' illustration

Scholars were being offered the opportunity to lead other units within and outside their respective organizations. This is because high performers easily get noticed by both top management and partner organizations. In some cases, scholars were temporarily assigned to troubleshoot problematic issues and, upon successful resolution, asked to take on permanent posts.

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The Program's positive effects on middle managers were generally higher compared to the overall average. This highlights the potential of middle managers to excel and move up the ranks. It also indicates their readiness for higher levels of management and leadership. However, there is a flight risk among scholars attributable to more professional opportunities post-PMDP, and possible organizational discontent upon returning to their respective units. This possible middle manager drain must be mitigated.

Scholars were being offered the opportunity to lead other units within and outside their respective organizations. This is because high performers easily get noticed by both top management and partner organizations. In some cases, scholars were temporarily assigned to troubleshoot problematic issues and, upon successful resolution, asked to take on permanent posts.

The Program's impact on individual behavioral indicators were significant except for (a) "staying determined to continue working in government" and (b) "having regard for government executives and agencies." Effort must be exerted to ensure that the scholars remain in public service, as the result flags tendencies to move outside government service; and possibly challenge public management norms.

Flight risk can also happen in cases where scholars get frustrated in being bogged down due to bureaucratic red tape, and the slow movement of professional progression within the service. When scholars return to their organizations with augmented capacities, they most often perform assignments way beyond their pay grade. This creates misalignments between the assigned levels of responsibility and the attached compensations.

It is also noted that promotion is tempered with scholars only higher on average by one salary grade level compared to their counterparts. There is a need to reward competent service, albeit the limited opportunities to move up the bureaucratic ladder. This situation pushes staff movement within and outside the bureaucracy. Intra- and inter-agency transfers become attractive, including possibly leaving government service. In the absence of senior positions within the scholars' mother organizations, other CES vacancies within the bureaucracy must be considered.

There were also noteworthy projects/initiatives/innovations anchored on capstone/re-entry projects. Some partner institutions chose to capitalize on these gainful undertakings to carry out their mandates and further advance public service.

## 7.4. Recommendations

Overall, although avenues were seen to further strengthen the implementation of the PMDP, both the quantitative and qualitative assessments of the scholars' individual competencies and organizational contributions point to positive outcomes attributable to the Program. These manifested improvements are key in the scholars' journey toward higher levels of management and leadership in the service, contributing eventually to the bigger goal of optimal governance and professionalization in the bureaucracy.

Given the above attributable individual and organizational impacts of the PMDP, the following recommendations can be explored:

- Invest more in middle managers as they present the best pathway toward greater individual and organizational impacts. Such may include increasing the scholars' number, improving spatial representation, and sustaining high standards in recruitment and screening.
- Augment course offerings by building upon previous gains. Enhance screening of scholars, upgrade and standardize curriculum; and tap more senior practitioners and academics.
- Enhance the curriculum on Personal Efficacy and Leadership, and Evidence-based Policy Making and Public Policy Analysis. This is to address the mild impacts on people-centric skills and policy innovation.
- Offer Phronetic Leadership course to both SEC and MMC, staying true to the values of compassion, integrity, transparency, and excellence.
- Taper sensing journey to address bureaucratic appreciation. Pursue an emotional experience that embeds the value of "service for the common good."
- Create avenues for scholars to share learnings and insights with their peers. Institute mentoring arrangements within partner institutions.
- Cultivate institutional support among partner agencies upon scholars' re-entry, addressing potential displacement issues and pathways toward innovation and change.
- Capitalize on driving performance for integrity and service competency upon the scholars' return to their respective institutions. Agencies should also capture this metric in choosing candidates.
- Facilitate professional progression within the service, including opportunities to move up in rank and pursue CESB accreditation through the PMDP.
- Ensure the scholars' long-term commitment to government service. Mechanisms can be explored to keep scholars working within the bureaucracy, including possibly extending return service contracts; and career path/planning in the vetting and re-entry processes.

Table 37 presents the summary of outcomes, implications, and recommendations in the impact evaluation of the PMDP.

**Table 37. Outcome, Implications, Recommendations**

| Outcome | Implications | Recommendations |
|---|---|---|
| **Core Competencies** | | |
| Effects are moderate to strong on core competencies. | Moderate to strong effects on the different competency areas means there is room to improve the PMDP. | Augment course offerings, building up on gains.<br><br>Upgrade and standardize curriculum; tap more senior practitioners and academics. |
| The difference in core competencies between scholars and their comparable peers is significant. There is no significant difference in core competencies between scholars and their peers | The PMDP has been indicatively successful in improving CES competencies among PMDP graduates. This is clear when comparing psychometric assessments | Create avenues for scholars to share learnings and insights with their peers. Institute mentoring arrangements within partner institutions. |

| Outcome | Implications | Recommendations |
|---|---|---|
| pre-PMDP. But post PMDP, scholars are significantly better in almost all competency areas. | pre and post PMDP timelines. PMDP graduates are also generally better off, based on measured core competencies, than their contemporaries or comparable peers | |
| Highest effect on the ability to drive performance for integrity and service. It means that scholars have the ability to deliver and produce good results, are action oriented and committed to achieving results. | PMDP scholars are results-driven and are therefore with potential to be high performers. This makes them desirable as bureaucratic servants; and possibly competitive in rising up the ranks. | Need to capitalize on this competency upon the scholars' return to their respective institutions. |
| Lowest effects are on people-centric skills including: (a) empowering others for collective accountability and (b) leading in a continuously changing environment. | PMDP scholars need to be augmented on people-centric skills to effectively influence others, becoming better leaders and managers. | Augment curriculum on Personal Efficacy and Leadership. It is noted from the case studies that for some scholars, practicing collective leadership resulted in empowered staff and peers. |
| **Phronetic Leadership** | | |
| Phronetic leadership constructs are also significant except for "Ability to judge goodness". But all mean scores on Phronetic leadership traits are higher than peers. | Phronetic leadership constructs are embedded the PMDP curriculum, sans actual course offering. | Offer Phronetic leadership course to both SEC and MMC, staying true to the values of compassion, integrity, transparency and excellence. |
| Mild to moderate effects on phronetic leadership traits with effects on middle managers higher except for (a) exercise of potential political power, and (b)creating shared context | Middle managers have proclivity to internalize Phronetic leadership constructs but are limited in terms of institutional realities. | |
| **Individual Impact** | | |
| Individual impact effects are significant except for (a) "staying determined to continue working in government", and (b) having high regard for government executives and agencies. | Flags tendencies to move outside government service; and possibly challenge public management norms. | Taper sensing journey to address bureaucratic appreciation. Pursue an emotional experience that embeds the value of "service for the common good". |
| Promotion is tempered with scholars only higher on average by one salary grade level compared to counterparts. | Flags the need to reward competent service, and lack of opportunities to move up the bureaucratic ladder. This | Facilitate professional progression within the service. |

| Outcome | Implications | Recommendations |
|---------|--------------|-----------------|
| | situation pushes staff movement within and outside the bureaucracy. Intra and interagency transfers become attractive, including possibly leaving government service. | • Opportunities to progress and move up in rank.<br>• Pursue CESB accreditation link toward CESO rank. |
| **Organizational Impact** | | |
| Organizational impact is also significant except for "income generation." | Entry point for augmentation. | Income generation as another subject to embed in course offerings. |
| Mild overall organizational impact. Need to look at push and pull factors affecting the scholars' performance. Higher impact among middle managers. | Points to the potential of MM to contribute more toward organizational impact. | Enhance organizational effect by addressing push-pull factors. |
| Innovations from scholars are low, both in terms of proposals and adoption. | Possible weakness among scholars. Also points to limited opportunities to move up to more senior executive posts and create ripples. | Needs to augment curriculum stressing the value of innovation and imparting skills for proposal preparation and advocacy. |
| Effects are higher for middle managers, particularly for e-government. Effects are low especially on policy innovation. | Need to augment curriculum in the area of Policy.<br><br>Scholars to help drive digital transformation in their agencies | Enhance curriculum on Evidence-based Policy Making and Public Policy Analysis. It is noted from the case studies that for some scholars, these courses served as guide in the development of policy proposals using data and statistics. |
| Network centrality measures are higher for middle managers compared to overall average effect. | Implies that middle managers are more fluid and able to operate inter-organizationally within the bureaucracy. | Capitalize on this to promote consciousness for a whole of government approach, motivating scholars to reach out for pragmatic approaches in delivering agency mandates. |
| **Unintended Outcomes** | | |
| Effects on middle managers are generally higher compared to the overall average. | Highlights the potential of middle managers to excel and move up the ranks. Indicates readiness for higher levels of management and leadership. | Invest more on the recruitment of middle managers and sustain high standard in screening /selection process. |

| Outcome | Implications | Recommendations |
|---|---|---|
| Flight risk after PMDP and Organizational displacement | Need to mitigate middle manager drain; and potential discontent among returning scholars. | Institute mechanisms to keep scholars working within the bureaucracy.<br><br>Explore extending return service contracts; and career path/ planning in the vetting and re-entry processes. |
| Noteworthy projects /initiatives/ innovations anchored on capstone/re-entry projects | Partner institutions can capitalize on these gainful undertakings. | Cultivate institutional support among partner agencies for noteworthy initiatives. Possible resource or support commitment on contract. |

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