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EDUCATION FOR THE FUTURE FORCE: A PROFESSIONAL DEVELOPMENT FRAMEWORK TO SUPPORT HOW WE FIGHT

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Solo Flight

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FRAMEWORK TO SUPPORT HOW WE FIGHT**

By Lieutenant-Commander Laurel Cardy

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INTRODUCTION

In June 2017, the Minister of National Defence, The Honourable Harjit Sajjan, announced “*Strong Secure Engaged, Canada’s Defence Policy*” and with it, brought forward a new vision for the Defence team.¹ In a rapidly changing and less predictable world, Minister Sajjan noted the federal government’s recognition that the distinction between domestic and international threats was becoming increasingly blurred and Canada cannot be strong at home unless it is also engaged in the world thus producing the moto “strong at home, secure in North America, and engaged in the world.”² *Strong, Secure Engaged* (SSE) makes several references to the people in uniform and ensuring they are fully prepared and equipped to succeed on operations.³ This preparedness is further broken down to include personal support from recruitment through to retirement and beyond and professional resources, equipment and training across the full spectrum of military operations including humanitarian assistance and disaster relief, to peacekeeping, to combat.⁴

In the period following the release of SSE, several progress updates have been released detailing the initiation of the various projects and the progression.⁵ While many reports include statistics of funding, capital projects, recruiting and employment

¹ Department of National Defence, *Strong, Secure, Engaged, Canada’s Defence Policy* (Ottawa: Her Majesty the Queen in Right of Canada, 2017), 6.

² *Ibid*, 6.

³ *Ibid*, 11.

⁴ *Ibid*, 11.

⁵ Department of National Defence, “Canada’s Defence Policy “ accessed 13 April 2020, <https://www.canada.ca/en/department-national-defence/corporate/policies-standards/canada-defence-policy.html>.

initiatives for the future, there has been little movement regarding changes to the current process of preparation of military members to fulfil the new vision for the Defence team. In his memorandum to his staff “*How We Fight: Commander CJOC’s Thoughts*”, Lieutenant-General Rouleau, Commander of the Canadian Joint Operations Command (CJOC), made multiple references to the changing geopolitical environment and the types of conflict the Canadian Armed Forces (CAF) will be required to engage it. Most importantly, Lieutenant-General Rouleau advocated for Professional Military Education (PME) reform that will enable commanders and staffs to excel in tomorrow’s complex environment.⁶ This was the first written acknowledgement that the CAF’s current PME programs were insufficient to prepare future leaders to actualize the vision of SSE.

Professional Military Education within the CAF is provided to both officers and non-commissioned members (NCM) throughout their careers. PME is a component of professional development intended to provide training, education, and development in the profession of arms including teamwork, leadership, ethics, and military ethos.⁷ To govern PME the CAF has established the Canadian Forces Professional Development System (CFPDS) sponsored by the Canadian Defence Academy and supported by the training centers of the Royal Canadian Navy (RCN), the Canadian Army(CA), and the Royal Canadian Air Force(RCAF). The CFPDS is a career – long sequential development process of “education, training, self-development, and experience intended to provide a continuous learning environment to develop and enhance the capabilities and leadership

⁶ Lieutenant-General Michael Rouleau, “‘How We Fight:’ Commander CJOC Thoughts” (Internal Correspondence, Canadian Joint Operations Command, Ottawa, 10 February 2019, 8.

⁷ Department of National Defence, “DAOD 5031-8 Canadian Forces Professional Development,” accessed 12 February 2020, <https://www.canada.ca/en/department-national-defence/corporate/policies-standards/defence-administrative-orders-directives/5000-series/5031/5031-8-canadian-forces-professional-development.html>.

of CAF members.⁸ The framework of the CFPDS is rigid. Having been in place for over a decade, it has shown little growth or evolution in recent years in response to the new vision for the Defence team provided by SSE. The CAF requires a fundamental shift in PD for officers and NCMs to deliver a more agile and responsive future force in support of Canada's defence strategy. A professional development system (DPS) that supports SSE would integrate officer and NCM developmental periods, be more responsive to technological advancement, and produce leaders capable of reimagining the way the CAF engages in conflict.

This paper will identify the shortcomings of the current CFPDS and its sub-components. It will outline a more effective and robust PDS capable of supporting the vision of SSE and the professional development of CAF members responsible for carrying out CAF missions. Finally, this paper will provide recommendations to improve the CFPDS and identify short, medium, and long-term solutions to better position the CAF to achieve the vision of SSE.

SHORTCOMINGS OF THE CFPDS

When addressing issues of change, it is reasonable for there to be a lag in significant change. Strategic level changes take time to work downward through the various networks and processes and have strategic level decisions be observable and measurable at the tactical level. Therefore, it is understandable that a defence policy released in June 2017 has yet to make any significant impact on the CAF's PD and PME programs. What is not acceptable is the fact that the CFPDS has seen no change at all, not

⁸ Department of National Defence, "Canadian Armed Forces Professional Development Framework," accessed 12 February 2020, <https://www.canada.ca/en/department-national-defence/services/benefits-military/education-training/professional-development/framework.html>.

even at the higher levels, in the past three years and there has been little attempt to initiate a realignment of PD to support the initiatives identified in SSE.

The CFDPDS consists of; a framework of policies, instructions, guidelines, and specifications; and a developmental timeframe structure that facilitates the effective development of CAF members from recruit to retirement.⁹ The purpose of PD within the CAF is the ethical, social and intellectual development of CAF personnel^{10,11} and the accumulation of a professional military education to deal with the broad range of leadership and staff responsibilities throughout the full spectrum of military activities that can be anticipated during an individual's career¹² This is intended to span the length of the member's military career progressing through five Developmental Periods (DP). Each DP is a timeframe during the member's career when they receive specific training and are employed in positions to develop their occupational and professional skills and knowledge.¹³ The DP levels align with progression through the rank structure and are closely tied to increases in the level of competency, authority, responsibility, accountability, military leadership ability and the knowledge of operations and war.¹⁴

The infographic in figure 1 (on the following page) identifies the components of the CFPDS and how they relate to each other to establish well rounded members of the profession of arms.

⁹ DAOD 5031-8

¹⁰ Chief Military Personnel, *Canadian Forces Officer General Specification* (Ottawa: 2017), 2-6.

¹¹ Chief Military Personnel, *Non-Commissioned Member General Specification* (Ottawa: 2011), 2-8.

¹² Canadian Forces Professional Development Framework.

¹³ DAOD 5031-8.

¹⁴ *Ibid.*

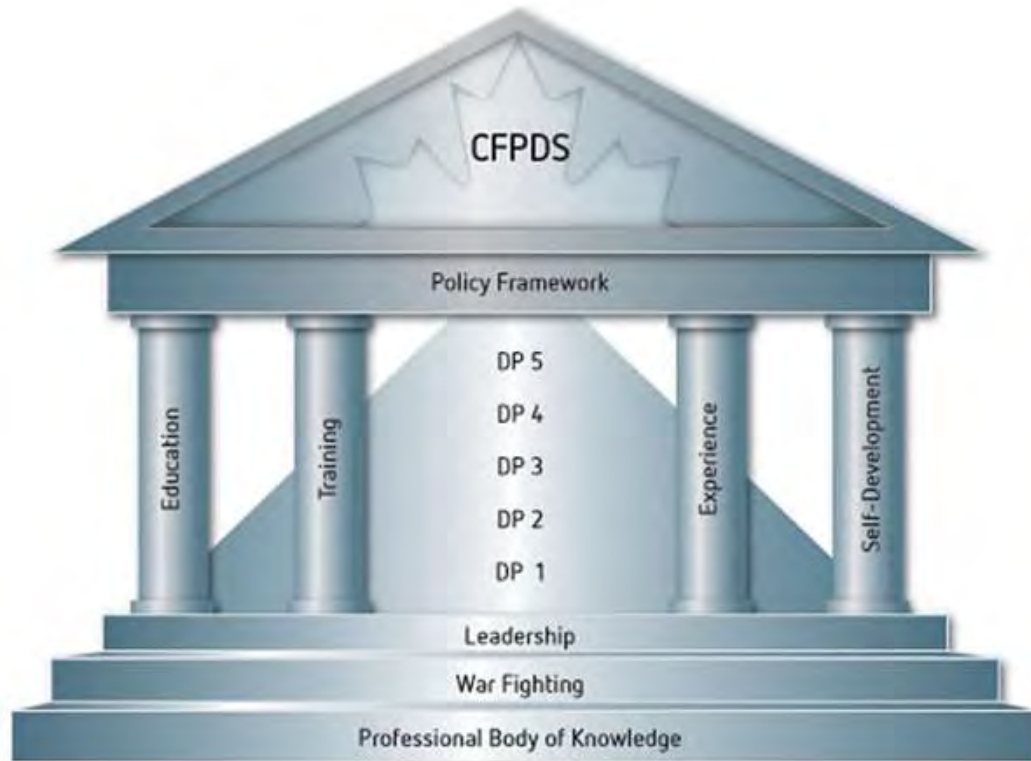


Figure 1: The Canadian Armed Forces Professional Development System

Source: DND, “Canadian Armed Forces professional development framework”¹⁵

As demonstrated in the infographic, the CFPDS is built upon the fundamental principles of a professional body knowledge, war fighting skills, and leadership competencies. Building from the foundational knowledge, the four pillars are intended to compliment each other as a member proceeds through the five developmental periods. The four pillars of education, training, work experience and self-development are further defined below:

- Education: the provision of a body of knowledge and intellectual skill sets, upon which judgement among competing facts, information and ideas can be critically examined, assessed, and interpreted.

¹⁵ Canadian Forces Professional Development Framework.

- Training: the provision of specific skills, knowledge and attitudes required to perform assigned tasks and duties.
- Employment experience: the application and continued development of the knowledge, skills and attitudes obtained through education, training, and/or self-development in the performance of assigned roles and duties; and
- self-development: self-initiated training and/or education that refines or further develops an individual's body of knowledge, intellectual and/or professional skill sets, and attitudes that leads to improving the level of a desired competency or competencies. Self-development is normally done outside of formal professional development activities.

Based on the publication dates, the Defence Administrative Orders and Directives (DOAD) 5031 series, for Learning and Professional Development, was initially created in 2003. The series was intended to outline a framework for professional development of officers and NCMs in support of the CAF mission to defend Canada and Canadian interests. Over time, as Canada's defence policy was updated the policy and directives within the CFPDS were also updated as necessary. One of the key tenants of the CFPDS is that it is structured in such a way to be agile and able to evolve with the changing needs of the CAF. The most recent updates to the CFPDS occurred simultaneously with the release of Strong Secure Engaged in June 2017,¹⁶ however the updates thus far have been minor. There has yet to be any significant change to demonstrate the agility of the system to respond to the PD requirements identified in SSE. The commonality among

¹⁶ Canadian Forces Professional Development Framework.

historical updates is the linear fashion of action-reaction when attempting to evolve the military training and education. Which is to say, the CAF is continually preparing for the previous conflict.

In his memorandum to CJOC Staff *'How We Fight'* Lieutenant-General Rouleau advocated for a PME reform to provide future CAF leaders the array of tools necessary to excel in tomorrow's complex environment.¹⁷ While the CAF PME system has evolved over the years, the basic tenants have remained the same since the cold war; officers and NCMs train and education separately,^{18,19,20} current leaders study the actions and behaviours of previous leaders under historical conditions to learn from their mistakes, and lastly, incorporation of evolving warfare methods and techniques are not included or explored.^{21,22} Given the evolving nature of global conflict, the CFPDS would benefit from an equivalent overhaul reflective of alternative concepts of war fighting.

Under the CFPDS, the DP levels are spread out across the breadth of an officer or NCM's career. With the intent to progress gradually through the responsibility and authority levels, it is reasonable that officers and NCM PD streams are separated to accommodate the duties and responsibilities in which each will be employed throughout their career. Where the CAF PD continuum fall short is recognizing that similar skills and competencies exist between offset DP levels and represent an opportunity to develop future leaders in similar contexts to how they will be employed. As identified in the NCM general specifications, non-commissioned officers (NCO, holding the rank of Sergeant/

¹⁷ How We Fight, 8.

¹⁸ DAOD 5031-8.

¹⁹ Officer General Specification, 2-8.

²⁰ NCM General Specification, 2-10.

²¹ Officer General Specification, 2C-1.

²² NCM General Specification, 2C-1.

Petty Officer Second Class and above) are “increasingly required to be knowledgeable about all levels of conflict (tactical, operational, and strategic) to one degree or another, and to demonstrate the capacity for creative thinking and sound judgement.”²³ Upon reviewing the competencies for officers and NCMs from the general specifications, the required skills set for officers at the DP level 2 are similar to those of NCMs at DP level 3. The same can be said for Officers DP level 3 and NCM DP level 4, representing opportunities for CAF members to engage in training and education opportunities reflective of how they are employed. Research reveals stove piped PME programs lack the robust contributions that differing ranks and experience contribute to overall learning.^{24,25} These may be generalizations for joint operations, and they may also be based on element driven operational employment. Either way, the CAF has made little attempt to alter from the current PME plan of stove-piped ranks and DP levels to improve operational effectiveness in operations.

The format of CAF PME has changed significantly over the past decades from professional development courses,²⁶ to undergraduate level courses,²⁷ to the current the Canadian Armed Forces Junior Officer Development (CAFJOD) program.²⁸ The commonality in each of these programs was the repeated study of Canadian military history and the ways and means the CAF employed to conduct military operations.

²³ NCM General Specification, 2-3.

²⁴ Rhonda Keister, Robert Slanger, Matthew Bain, David Pavlic, “Joint PME, Closing the Gap for Junior Officers,” *Joint Forces Quarterly*, 3rd Quarter (2014): 67.

²⁵ Frazier, “Professional Military Education, Building Capacity Through the Warrant Officer Tribes,” *Special Warfare*, (2016): 10.

²⁶ The Officer Professional Development Program was established in 1989 and consisted of seven courses required for promotion to Major/ Lieutenant Commander.

²⁷ The Officer Professional Military Education program replaced the OPDP 2001 and consisted of 2 administrative courses and 4 undergraduate level courses.

²⁸ The Canadian Armed Forces Junior Officer Development program replaced the OPME program in 2012 and consist of seven distance learning courses for junior officers to complete during DP1 and DP2.

Maneuver warfare philosophy emerged as a method to wage war in state-on-state conflicts²⁹ however it took conflicts in Afghanistan and Iraq to force a change to military operations in conflict with non-state actors in a non-traditional battlespace.³⁰ While the planning and conduct of CAF operations has evolved, the PDS that supports them has remained stagnant. Lieutenant-General Rouleau identified “a business as usual approach moving forward would seriously compromise our ability to a) wage meaningful coalition warfare and b) tactically succeed when we do.”³¹ The ad hoc updates, either my element, or by joint collective training, is meeting the need on the battlespace, but as above, it is reactive in nature and does not prepare the CAF to succeed in the pan-domain environment.

A review of CAF general specification updates for both officers and NCMs indicates that evolving warfare technologies such as space and cyber threats have gradually been incorporated into CAF PME programs however these inclusions appear to be at a very superficial level. Any in-depth understanding of advanced technologies and their impact and effective use in war fighting is left for members to investigate and study individually either through post-graduate studies or personal research.³² The CAF may still be in a position to benefit from these individualized study and research opportunities however if they are not incorporated into the PME mainstream CAF PME will not evolve

²⁹ David Furness, “Winning Tomorrow’s Battles Today,” *Marine Corps Gazette (Web edition)* (2019): 38.

³⁰ Stephen Biddle, “Allies, Airpower, and Modern Warfare: The Afghan Model in Afghanistan and Iraq,” *International Security* vol 30 issue 3, (2005): 171.

³¹ How We Fight, 5.

³² Department of National Defence, “DAOD 5031-5 Canadian Forces continuing Education Program,” accessed 13 April 2020, <https://www.canada.ca/en/department-national-defence/corporate/policies-standards/defence-administrative-orders-directives/5000-series/5031/5031-5-canadian-forces-continuing-education-program.html>.

to incorporate the concepts and applications and future leaders will be left to research on their own.

Maintaining a professional development framework that has not evolved since the Cold War era provides little opportunity for the CAF to grow and revolutionize its PD systems in conjunction with the changing conditions of warfare. The previously defined levels of warfare; tactical, operational, and strategic, are experiencing blurred lines and as Lieutenant-General Rouleau suggested, “the CAF is currently involved in conflicts where the operational level of war is compressing into a grey zone where tactical actions have real time strategic significance.”³³ As DND/CAF repositions itself to address the changes in warfare and global conflict, the time is ripe for a PME revolution to support the officers and NCMs that will lead the CAF forward over the next horizon.

DEVELOPING THE FUTURE FORCE

Upon release of SSE the federal government provided clear guidance and direction where DND and the CAF should be focused in the years to come. SSE set the new vision for defence in the global context based on “three key security trends: the evolving balance of power, the changing nature of conflict, and the rapid evolution of technology.”³⁴ In response to the new vision for the Defence team, the evolving requirements of the global security situation, and Lieutenant-General Rouleau’s “How We Fight” memorandum, DND/CAF released the “*Pan-Domain Force Employment Concept: Prevailing in an uncertain world*” in March 2020. The Pan-Domain Force Employment Concept (PFEC) a critical step in the CAF’s adaptation of the way it conducts operations. According to General Vance, Chief of the Defence Staff, the PFEC

³³ How We Fight, 6.

³⁴ Strong, Secure, Engaged, 49.

is the rough framework of where the CAF needs to shift and a catalyst for change required to achieve that shift. The PFEC will “enable the CAF to adopt the mindset needed to compete with, contest, confront and combat our nation’s adversaries.”³⁵ The PFEC identifies changes the CAF must undertake to prepare for future strategic and operational environment. The elements that relate to PME and can be incorporated into the CFPDS include analytical thinking to solve complex problems, challenging the technology curve of the future, and global application (pan-domain campaigning). For the CAF to deliver a highly trained, professional, well-equipped military, the CFPDS framework must evolve for all areas to mutually support the future of operations.

The nature of conflict has changed significantly,^{36,37} over the past decade the underlying causes, the actors, and the means and methods they employ have all changed. Both state and non-state actors have shown an increased willingness to use violence to achieve political goals, quite often taking a significant toll on the civilian population.³⁸ In pursuing their agendas, participants use hybrid methods in a ‘grey zone’ that exists just below the threshold of armed conflict increasing the potential for misperception and miscalculation. This proves challenging in terms of detection, attribution, and response, for national forces such as the CAF. Within the CFPDS, the fundamental principles of war fighting should reflect both above and below the threshold of warfare. Instead of preparing solutioneers³⁹ that apply a historical above the threshold solution to an evolving

³⁵ Department of National Defence, *Pan-Domain Force Employment Construct*, (Ottawa: Her Majesty the Queen in Right of Canada, 2017), 2.

³⁶ Stephen Biddle, “Allies, Airpower, and Modern Warfare...”, 168.

³⁷ Hans Martin Seig, “How the Transformation of Military Power Leads to Increasing Asymmetries in Warfare?,” *Armed Forces Society* vol 40(2) (2013), 142.

³⁸ Strong, Secure, Engaged, 52.

³⁹ From the Urban Dictionary, a solutioneer is one who attempts to solve a problem or deal with a difficult situation without understanding it.

below-threshold situation, the CAF requires leaders that are creative and innovative thinkers with strong analytical skills to analyze complex problems, produce better solutions, and employ resources in the most effective manner for the desired outcomes.⁴⁰ To actualize the PFEC, the CAF requires leaders that ‘think about how we fight’ therefore it is critical that cognitive skills are developed to rapidly adjust to the evolving nature of each individual conflict.

The rapid pace of technological development is changing the way in which war and conflict are waged. It is no longer reliable that the side with the largest weapon will win the fight. Military applications of technology are having a greater emphasis on information technologies, data analytics, quantum computing, deep learning, autonomous systems, cybernetics, and artificial intelligence. Each of these has the potential to change the fundamentals of military operations and the way in which wars are waged. In releasing SSE, the federal government identified a significant amount of equipment procurement projects and investment in next-generation technology to enable the CAF. At issue, is the adversary’s ability to procure and implement equally advanced systems to interrupt or negate those of our own. It is no longer viable to learn a technical skill once and employ it for the duration of one’s career. The CAF required adaptive learners “who are comfortable with a permanently temporary mode of operating”⁴¹ and a constant rate of change. A CFPDS that supports the rapid pace of technological advancement must refocus individual training and education (IT&E) away from procedures and buttonology and embrace technology concepts, processes, and reasoning.⁴² To be efficient at training

⁴⁰ Goeff Colvin, “Humans are Underrated, What High Achievers Know that Brilliant Machines Never Will,” *Science* vol291 Issue 5503 (2015): 455.

⁴¹ Brigadier-General David Anderson, “How We Fight presentation” 20 February 2020.

⁴² Strong, Secure, Engaged, 20.

an effective technologically advanced military, the CAF must undergo a fundamental shift in its training delivery. For operators and maintainers, mastering the fundamentals of technical processes, operations, and trouble shooting skills will allow for rapid integration of new equipment. For leaders, a more fulsome understanding of individual system capabilities and limitations will promote increased networking and integration of systems to provide maximum military capability within the allowable constraints of domestic and international legal and governance systems.⁴³

As technology elevates the threshold of warfare, the domains of space and cyber have moved from supporting elements of conflict to the domain in which conflict is engaged. Up until the last few years, both space and cyber domains were utilized by land, sea and air elements for the operational functions of Shield, Sense, and Sustain in a purely defensive posture.⁴⁴ Only recently has the CAF initiated a coordinated effort to harness the capabilities within the cyber and space domains and within the Act function, conduct offensive operations against potential adversaries in the context of government authorized military missions.^{45,46} Under this new reality of pan-domain operations which include space and cyber within the Act function, leaders are inadequately prepared to employ the full spectrum of capabilities if they consider both space and cyber domains in stove pipes as supporting functions. The CFPDS framework requires the flexibility to include and evolve space and cyber capabilities within all areas of operational planning and execution to achieve the desired effect of the PFEC.

⁴³ Strong Secure, Engaged, 70.

⁴⁴ *Ibid*, 72.

⁴⁵ Brigadier-General Andrew Jayne, “Cyber Operations for JCSP,” presentation 30 January 2020.

⁴⁶ Major Alex Lacasse, Maj Forrest Poole, “Space Operations, Operational Enablers,” presentation 17 January 2020.

To round out the CFPDS, a robust PME system that produces agile and creative thinkers that are capable of employing evolving technology will only prove to be effective if future leaders inform their decision making processes with a solid understanding of the complex geopolitical environment. With threats that transcend national borders⁴⁷ and conflict both above and below the threshold, the “evolving balance of power has created a more diffuse environment in which an increasing number of actors can exercise varying degrees of influence.”⁴⁸ With a significant portion of the CFPDS focused on military and technical education, much of the global context for areas of conflict is left until the last minute prior to operations which makes for awkward decision making with less than adequate understanding of the regional and/or global impact. An effective PME structure should be based on not only capabilities, but also threats, liabilities and risk.

When considering the construct of the future Defence team, SSE included options such as revitalizing partnerships with external experts to capitalize on the expertise of Canadians.⁴⁹ While these experts have much to contribute, it is often challenging for practitioners of the profession of arms to directly relate and apply recommendations from external contributors. An effective CFPDS framework would include a PME system that supports the requirement for officers and NCMs to engage in post-graduate level learning, internships, and interdepartmental exchanges, much earlier during thier career path and much more frequently than is currently possible. Inclusion of PD programs external to the CAF encourage a-typical solutions to military problems. The current

⁴⁷ Strong, Secure, Engaged, 11.

⁴⁸ *Ibid*, 51.

⁴⁹ *Ibid*, 15.

sponsored post-graduate full-time studies program is open to officers only,⁵⁰ and only in a few cases is the education program related to future employment within the CAF.⁵¹

Internships and interdepartmental exchanges are extremely rare, with formal opportunities established for DP level 3 officers attending the Joint Command and Staff Program (JCSP) or RCAF senior staff. The RCN and CA have yet to establish equivalent programs for their staff officers to benefit from. As the CAF attempts to ‘push power to the edge’ and enable commanders to have increased responsibility and authority, the geopolitical awareness is becoming increasingly important for lower ranks. Incorporating these type of PD opportunities earlier in a member’s career, such as DP2 for officers and DP3 for NCMs, would provide the CAF with leaders that are technologically capable, creative thinkers, with a stronger understanding of geopolitics to be functionally operational in a pan-domain environment.

IDENTIFIABLE GAP

With the release of SSE back in 2017, the Federal government laid out a plan for what DND and the CAF were to achieve over the next decade. Since that time there has been little progress towards the changes necessary within the organization to actualize the plan. The recent release of the PFEC has provided initial guidance on how the CAF should evolve, however the specifics of the process have yet to be determined.

In order to support the evolving conditions of conflict and warfare of the future, the CFPDS must maintain solid foundational principles of leadership and profession of arms. Under the future construct of CAF operations as detailed in SSE and PFEC, a linear

⁵⁰ DAOD 5031-5.

⁵¹ CANFORGEN 085/19 CMP 051/19 121410Z Jun 19 2020 subsidized education for entry-level masters (SEELM) – Competition.

stove piped PDS will severely limit the strengths and capabilities of future leaders rendering them unprepared to effectively plan and execute operations. A PDS that is more interconnected and leverages both internal and external resources and opportunities to prepare members earlier in their careers for the multitude of employment requirements will deliver a versatile force capable of adapting to modern warfare.

As the lines begin to blur between the threshold of conflict and the location of the battlespace, the CAF requires a PDS that supports joint operations in the ‘grey zone’ across the whole-of-government at lower levels of authority and responsibility. The skills, education, and experiences necessary to be successful should not be limited to senior ranks and DP levels, they should be available based on force employment requirements and drawn from the PFEC. The current PD framework and PME programs that address ‘how we fight’ must be reimagined and refocused towards ‘how we think’ about *what* we fight, *who* we fight, and *how* we fight. For future leaders, thinking about the ‘*what*’ and ‘*who*’ will better inform the ‘*how*’ of engaging in military operations. Experience and exposure gained from professional engagements via internships and interdepartmental exchanges will also serve to better inform when a military solution is not the best course of action and what aspects of a whole-of-government approach could be best supported by the CAF.

Many DND/CAF framework graphics are represented using the Parthenon-like structures with foundations, columns, and pediment, similar to the CFPDS back in Figure 1. The structure serves to reinforce foundational principles which support progressive advancement through various stove-pipes culminating in an overarching paradigm and although the real Parthenon is three-dimensional, the framework and systems it represents

are often linear, two-dimensional systems and are becoming of little use for a multi-dimensional world. A CFPDS that is agile and responsive to both the needs of the CAF and those of uniformed members is better represented using the graphic in Figure 2 below. This proposed framework would actually exist in a three-dimensional space with axis of actors, activity, and time. Each ellipsoid represents a sub-system of the CFPDS, flexible depending on the requirements in time of each axis, and the linkages are identified by overlapping ellipsoids. Leadership and professional knowledge are the backbone systems of this framework, a foundation of military training provides support for the backbone to rest upon, education and experience are interwoven with leadership and professional knowledge because they all interact throughout the spectrum of employment and warfare has linkages to all nodes as it will continually evolve based on inputs from each system.

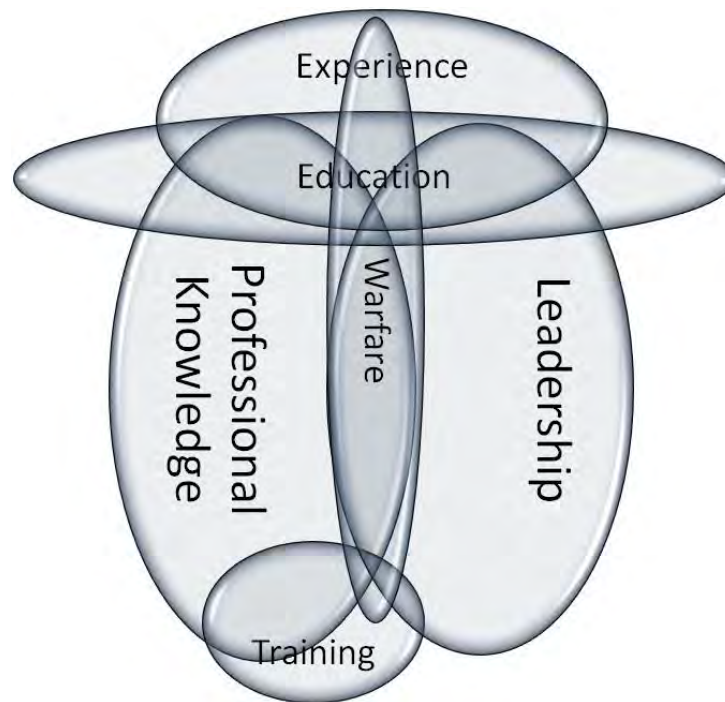


Figure 2: Proposed framework for CFPDS

The current PDS for both officers and NCMs is stove piped based on element, rank, and occupation. While the PME continuum is intended to compliment a members' career progression, there are redundancies and repetitive opportunities that members are only able to take advantage of after they require the training and education. Placing members into positions with no exposure or experience causes inefficiencies in the system and often employment and/or career dissatisfaction.⁵² Many PME programs are stove piped by element and rank causing duplication of effort across the CAF. Education and training in support of joint operations should be provided for all elements and all ranks that engage in the planning and execution of joint operations. The contributions from junior officers and senior NCOs develop from a symbiotic relationship in the work environment, and should be exploited for the greater good of CAF PD. There are multiple congruencies across pan-domain operations that must be leveraged for joint education and experience to collaborate.

RECOMMENDATIONS

Based on the initiatives put forward in SSE and the 14 elements of the PFEC to address the imperatives of the strategic and operational environment, the following recommended updates to the CFPDS are put forward, based on priority and level of effort to implement.

- a. The following short-term requirements should be achieved within six months:
 - An examination and realignment of post-graduate education and internship/ exchange programs to align with unit tasks.

⁵² Eli Berman, *Small wars, big data: the information revolution in modern conflict*, (Princeton, Princeton University Press:2018): 71.

- Investment from senior leadership in professional development of CAF personnel including education, work experience, mentorship, self-development, and time away from work to accomplish these
- b. The following medium-term requirements should be achieved within 18 months:
- Revitalized PD program combining officers and NCMs at the equivalent DP level based on tasks and work assignments.
 - Addition of joint operational planning earlier in the career path for all CAF members.
 - Formal internship and work exchange programs established with both the private and public sector to better leverage similar work experience and foster increased collaborations and cooperation.
- c. The following long-term requirements should be achieved within three years:
- Redesign the CFPDS to be more agile and responsive to the evolving needs of the CAF in support of the PFEC.
 - Investigate near-peer options for IT&E and work exchanges to leverage experiences and advancements in joint operations and PME.

CONCLUSION

The current CFPDS is not sufficiently flexible to prepare future leaders for the spectrum of military operations in which Canada will be engaging. The CAF requires a fundamental shift in professional development for officers and NCMs to deliver a more agile and responsive future force capable of success on military operations in a pan-domain environment. This paper identified the shortcomings of the current CFPDS and its sub-components, it outlined a more effective and robust PDS capable of supporting

the vision of SSE and the professional development of CAF members, and finally, it provided recommendations to evolve the CFPDS in the short, medium and long-term to better position the CAF to achieve the vision of SSE.

As the nature of military operations evolves, so must the system that prepares CAF members to plan, operate and lead these missions. Fortuitously, the characteristics of CAF personnel are also changing and bring with them a multitude of backgrounds and experiences. A PDS that is stove-piped and only allowing for linear growth and progression is no longer sufficient to support the requirements of the CAF and uniformed members. The proposed networked PDS in Figure 2 is in stark contrast to the historical corporate preference of Parthenon-like structures, however as the nature of conflict is changing so must the system which prepares the CAF to operate within it. A backbone comprised of leadership and a professional body of knowledge will provide the structure around which the remaining elements of the networked system exist. The main difference is the agility of the system to respond to both the requirements of the CAF as well as the requirements of uniformed members. The nature of conflict has already stretched beyond the conventional state-on-state threshold and the CAF has adapted PD and PME to incorporate these changes, but these are linear reactions to known situations. Moving forward, a reimagined PDS will prepare officers and NCMs to think in a pan-domain environment and to remain relevant and responsive to the multitude of scenarios not yet even imagined.

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