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BRIDGING THE DIVIDE: UNIFYING TACTICAL AND STRATEGIC SKILLS IN THE RCEME CORPS

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Exercise *Solo Flight*

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INTRODUCTION

For the men and women of the Corps of Royal Canadian Electrical Mechanical Engineering (RCEME) there exists a well-understood, divide in the employment of Electrical and Mechanical Engineering (EME) officers. Colloquially, it is voiced in terms of "field" employment versus "Ottawa" employment. In effect, field employment surrounds those positions, normally held with in the Canadian Army (CA) or a deployed unit that involve the leading of a maintenance or support organization or the associated staff positions directly involved in supporting the field force. Ottawa employment is generally defined as the intuitional or strategic positions that support the Canadian Armed Forces (CAF) or Department of National Defence (DND) but are usually at arm's length to the field force. The field employment is characterized by leading in a tactical environment whereas the Ottawa employment is seen as "project management" and as a result of this divide, many junior EME officers strive to stay as long as possible in field positions avoiding the fate of becoming involved in project management. This state is partly instilled (albeit inadvertently) in EME officers by the conduct of officer training at the RCEME School in Borden. The curriculum is almost exclusive based on preparing junior officers for their first employment which is invariably within the field force. Any training for senior or project management positions is left for later ad hoc courses or to be gained through experience.

This approach to training has a two-fold impact on the RCEME Corps. EME officers are reluctant to expand their experience to include advancement to senior institutional positions and it ill-prepares those who do. Is it possible to both prepare junior officers for the demands of employment at the tactical level and set the stage to not only encourage opportunities in strategic institutional positions but also to prepare them for this challenge? Rather than simply adding

additional training, for this to be possible, common ground would have to exist between the two roles that could be trained and applied. This paper will demonstrate that EME officers would be better prepared for both junior and senior officer employment through the training in and application of project management fundamental at all levels of EME Officer employment, tactical to strategic.

This will be demonstrated by identifying the most common roles and tasks of EME officers at both the senior and junior levels in the tactical (field) role and the strategic (institutional) role. The currently trained tools provided by the training system will be examined for their suitability for EME tasks and subsequently, the fundamentals of project management will be examined to demonstrate that their suitability and applicability at all rank levels. Lastly, it will be shown that such training and use is supported by educational and curriculum development theories in that they will better prepare EME officers for the breadth and depth of their employment.

CURRENT SITUATION

The Electrical Mechanical Engineering (EME) Occupation is the leadership component of the RCEME Corps. The occupation works as a subset within the Land Equipment Management system (LEMS) along with other technical occupations to manage the land-based equipment on behalf of the Canadian Armed Forces. The primary responsibly of EME officers is to provide expertise and technical engineering advice for land equipment across the CAF in Canada and on all deployed operations. The 2017 Occupational Study confirmed that “EME officers are responsible for the technical management of all land combat systems and equipment through their complete life cycle (from acquisition to disposal), everywhere from tactical to

strategic headquarters."[1] This report also delineated the responsibility between the tactical and strategic level. At the strategic level, "EME Officers are custodians and the principal CAF managers of [the] Land Equipment Program Management (LEPM)." Whereas, "EME Officers provide engineering services to quickly improve, adapt and restore the land equipment"[2] at the tactical level.

This institutional divide between the tactical and strategic levels has a correlation between that of junior and senior officer employment. This was highlighted by the Military Employment Structure Implementation Plan (MES IP) that examined the range and breadth of employment available to a EME Officer. By examining the "hard"[3] EME positions assigned to Regular Force EME officers, it can be seen that 79% of senior officer positions are at the strategic level where as a converse of 75% of junior officer positions are at the tactical level.[4] Because of the high ratio of junior officers employed at the tactical level, the training for the entry level is "based on the tasks associated with the platoon commander job which has been assessed as the predominant job…and is considered the building block for subsequent leadership employment…"[5]

The roles and responsibilities associated with employment at the tactical level differ fundamentally from those at the strategic level. The tactical level is concerned with maintenance and repair of equipment. Whereas at the strategic level EME officer employment is focused on

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[1] Canada. Dept. of National Defence. *Military Employment Structure Implementation Plan for the Electrical and Mechanical Engineering Occupation.* (Ottawa: Chief of Military Personnel, 2017), 2.

[2] Ibid., 2.

[3] "hard" is a colloquial term to refer to positions that are solely assigned solely to one occupation due to the unique nature and qualification requirements

[4] Canada. Dept. of National Defence. *Military Employment Structure Implementation Plan…* E-2-1/2.

[5] Ibid., C-4/4.

the maintenance of readiness, capabilities through program and project management.[6] Consequently, employment at the strategic level for an EME officer marks a dramatic shift in the experience and knowledge requirements. The foundation provided as a junior officer provides context and understanding that serves the senior officer in their employment, but it does not address the fundamental baseline of knowledge that is required to undertake the employment in which this experience and contextual knowledge would be employed.

Although there are leadership positions at the strategic level, the focus the employment EME officers fundamentally shifts from leadership and problem-solving at the tactical level to management and technical expertise in program and project management at the strategic level. With 55 of 73 major positions and 22 of 23 (hard EME) Lieutenant Colonel positions[7] directly engaged in program and project management, it must question whether these officers are suitable prepared for this fundamental shift in employment through the foundation training and experience up to that point. It has been noted that there exists a deficiency in project management expertise in the Department of National Defence. In 2007, Treasury Board mandated a new policy on project management, that states "an appropriate capacity for managing projects which reflects the level of project complexity and risk, and integrates decision-making across projects, will support the achievement and demonstration of value for money and sound stewardship."[8], DND officials identified a critical need to a new competency framework for its project managers[9]. As the RCEME Corps provides the bulk of military project and program

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[6] Canada. Dept. of National Defence. *Feasibility Report Electrical and Mechanical Engineering Officer Occupational analysis.* (Ottawa: Director Personnel Generation Requirements, 2016), 2.

[7] Canada. Dept. of National Defence. *Military Employment Structure Implementation Plan…*, E-2-2/2.

[8] Canada. Dept. of National Defence. *VCDS Direction - Project Manager Competency Development Programme.* (Ottawa: Vice Chief of Defence Staff, 2015). 1.

[9] Project Management Institute. *Building High-Performance Project Talent - A Transitional Initiative*. Accessed 22 April 2017 http://www.pmi.org/business-solutions/white-papers/building-high-performance-talent-transformational-initiative

managers for land equipment management and procurement the gap identified is directly applicable to EME Officers, in addition to the civilian (public servant) counterparts. To address the gap the Assistant Deputy Minister Material (ADM Mat) initiated the Project Management Competency Development (PMCD) program. The PMCD program is a "comprehensive and robust program that aims to effectively develop and formally qualify all project managers…"[10] that consists of 3 components: Technical, based on the fundamentals of project management; Leadership; and Contextual, based on government and DND knowledge.[11] Each PMCD level, of which there are 4, requires approximately three years' experience in project management as well as numerous training courses. To be prepared for employment and certification within this program it behooves the EME officer to be introduced to these concepts early in their career to ensure the officer is employable upon promotion and posting and not sidelined on courses during their initial senior officer employment.

To address this shift in knowledge requirements, a change to the current situation is required. Either an extensive intermediate level of training is required or the original foundation, what is given in the initial rank qualification, must include appropriate training and education that is applicable throughout the career path. There are several arguments against this practice of early training and education. The prospect of adding additional training to an entry level course increases costs and delays the entry of new officer into the workforce. In an era of increased resource constraints and manpower shortages, this is not a favourable idea. Critics also point to the aspects of knowledge-fade, where skills and knowledge are lost when it is trained too early and not employed for a considerable length of time. This idea has led to delivering training at

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[10] Ibid., 1.
[11] Ibid., 5.

the time it is required. However, in practice this often leads to the inconsistent application as training is unavailable at the time required or it demand outstrips supply. Therefore, any proposal to increase of change training must be both cost effective and provided at a time when it would be used and re-enforced at the time of completion.

CURRENT TRAINING AND TOOLS

Throughout the span of employment, an EME officer is exposed to or trained to use, several tools in order to effectively plan and conduct activities ranging from simple, linear tasks to complex multi-dimensional tasks.[12] These tools are largely tailored for Army-centric tasks that are generally applicable to all Army occupations. The complexity and the applicability of each tool varies as greatly as the possible tasks. Generally, the first and simplest tool is the Combat Estimate, followed by the Operational Planning Process, and, specific to the support community, the Sustainment Estimate. Finally, when an EME Officer commences work in the project management realm they are then expected to understand and employ the fundamentals of project management and the associated planning tools. The linear introduction and segregation of each into specific applications and situations has led to the divide between the tactical and the strategic EME Officer.

The simplest tool, the Combat estimate, is trained at the earliest point in an officer's military training. And is the primary tool provided to junior officers or planning for the execution of relatively simple tasks and activities. The Infantry Section and Platoon in Battle defines the estimate process as containing 4 steps: 1) conduct mission analysis; 2) identify and consider the relevant factors; 3) consider courses open; and, 4) select the best course of action

[12] Canada. Dept. of National Defence. *Qualification Standard - DP 1 Electrical Mechanical Engineering Officer.* (Ottawa: Canadian Army, 2016), 1-3/3.

and translate it into a plan.[13] This method of planning was developed with tactical problems in mind giving a checklist of actions that are to be performed in order to develop a plan with the greatest likelihood of success given the factors and information available. It is simple, quickly completed and is adaptable to many simple problems.

On the surface, the combat estimate would seem to be ideal for a junior officer's tasks. However, it was formulated and taught with tactical problems in mind and as such the factors that are associated with it tend towards military tasks such as consideration of terrain, weather, and enemy dispositions. These factors are not readily transferable to many EME officer tasks. It is accepted that an EME officer is first and foremost an army officer and he must be able to conduct operations in a combat environment and, therefore, require the army-centric tools. However, the nature and complexity of RCEME tasks exceed this. The combat estimate does little to consider many of the factors a EME Officer must consider including support relationships, resource allocation, and priority, financial constraints, engineering principles, and regulations. Not only does this tool fail for complex tasks it treats problems as discrete issues. As such, they do not require the examination of peripheral inputs or complicating factors; the consideration of risk, stakeholder influence, communications, and resources are not integral to this planning tool.[14] The tasks of support officers are often complicated by some, or all, of these factors, ignoring them is done at the peril of the officer. Because of this shortfall, the combat estimate is particularly unsuited to be a primary tool of an EME officer other than for those tasks that are directly related to the execution of tactical army operations in the field.

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[13] Canada. Dept. of National Defence. *The Infantry Section and Platoon in Battle*. Vol. 3, part 2; 309(3), part 2. (St. Hubert, Que: Mobile Command Headquarters, 1988).

[14] Ibid., 3-2-22.

The operational planning process is taught to army junior officers as they are about to take on a role of a senior captain. It is intended to provide the tools and understanding for that officer to work in a formation headquarters. According to Colonel R.D. Walker, then Commandant of the Canadian Army Command and Staff College, "An Army Operations Course graduate has the common foundational knowledge that is necessary to succeed as a staff officer in a joint operational-level headquarters."[15] This training expands on the estimate process increasing the complexity of the problems however, it is also a planning method particularly suited for tactical missions. Apart from general planning, an EME Officer is required to understand and conduct tasks specific to support planning as these differ from general military planning. Sustainment planning "provides a means to validate the feasibility of the courses of action developed by the operations staff."[16] This ensures the commander has the support required to enable mission success. This planning is enabled by the sustainment estimate, which follows the same type of format as both the combat estimate and the Operational Planning Process. Namely, if involves a mission analysis, evaluation of factors, consideration, and comparison of courses of action and finally a decision.[17] Where the sustainment estimate differs is that the factors involved are geared towards the fundamentals of sustainment and the functional areas of sustainment (e.g. transportation, supply, maintenance, personnel services, etc.).

In this manner, the use of the sustainment estimate as part of the operational planning process is an effective means for creating a support plan that dovetails into a larger manoeuvre

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[15] Canadian Army News. "Exercise FINAL DRIVE 2014 concludes course for future Canadian Army leaders in a multi-national environment," last modified 17 December 2014. http://www.army-armee.forces.gc.ca/en/news-publications/national-news-details-no-menu.page?doc=exercise-final-drive-2014-concludes-course-for-future-canadian-army-leaders-in-a-multi-national-environment/i3iqorpu

[16] Canada. Dept. of National Defence. *Sustainment of Land Operations (English)*. (Fort Frontenac, Kingston, On: Army Publishing Office, 2010). 7-1.

[17] Ibid., 7-4.

plan. It is effective at focusing the efforts of support planners and is very effective at addressing relatively simple tactical missions.

It is with these tools that the EME officer is armed to address planning and execution of their duties through the breadth and span of their career. The fundamental premise of preparing an EME officer for employment by preparing them for their initial position as a platoon command is based on a broadly defined view of what a platoon commander does and does not adequately reflect the unique nature of a commanding a platoon in a supporting role, especially when that platoon is embedding within one of the other arms unit.

A maintenance platoon, either within a service battalion but especially in an arms unit, is unique with discrete tasks from the other platoons that support the common goal. This manifests itself in differences that must be made to the previously described tools. For example, since a maintenance platoon undertakes independent tasks in concert with other specialist platoons, communications requirements, and understanding of stakeholders, it becomes more important. The technical nature of engineering requires the employment of specialist human resources, as well as a consideration of measures of quality and risk analysis. As a result, the estimate process that the junior officer is armed with, including the support estimate, is ill-suited for the complex and complicated nature of the job. At a basic level, the current tools are insufficient for EME tasks as the concentrate on the initiation and planning of solutions to problems. Therefore, RCEME officers are not armed with a toolbox full of processes that are effective for the breadth of their employment.

THE GAP BRIDGED

EME Officer Training can be seen to differ from the generally accepted inverse pyramid of training that is applied to military training and education. Opposite to most professions, "[soldiers] begin with a specialized body of knowledge and then develop more general knowledge as they progress to the rank of General."[18] Although EME Officer training follows this model for much of its training, it provides generalist knowledge that is expected to be translated into being a specialist project/program manager at senior ranks.[19] Therefore, it can be seen that there exists, not only a gap in knowledge required by senior officers but that the current training and education curriculum do not wholly prepare junior officers for the complexities of their initial employment.[20] Initiatives such as the Project Management Competency Development program and other training opportunities, including the EME Advanced Officer Course[21] are in place in order to attempt to cover the gap that exists in training and education for senior officers. But essentially it means that the EME senior officer is starting anew when they commence employment in the strategic environment. The ideal solution would be one where the foundation training creates a basis that not only sets the condition for success as a junior officer but also one that establishes building blocks that will be used as a senior officer. In order for this foundation to be successful, it would have to be applicable from the first employment to the last

[18] Last, David. "Irritants to Pearls: Military Education, Epistemic Communities, Communities of Practice and Networks of Learning." *International Society of Military Sciences, at Vienna, Austria, Volume: Military Working Group (#9)* (2014). 8.

[19] Canada. Dept. of National Defence. *Qualification Standard- Electrical Mechanical Engineering Officer Advanced.* (Ottawa: Canadian Forces Support Training Group, 2015).

[20] Canada. Dept. of National Defence. *Director and Corps SM Direction and Guidance- RCEME Employment and Training Concept.* (Ottawa: Director RCEME, 2016). 5/12.

[21] Canada. Dept. of National Defence. *Qualification Standard- Electrical Mechanical Engineering Officer Advanced….*

and not be a set of skills and knowledge presented at the start and sidelined until many years later when the employed at the strategic level.

The fundamentals of program management are one such process that could be used to satisfy the requirement of a holistic planning and execution tool. Since it is in use and applicable at the strategic level of EME tasks it would be a natural fit if it could be first introduced and employed at a tactical level and used throughout the breadth and depth of an officer's employment. This requires two fundamental shifts in thinking. First, it must be recognized that the tasks and challenges of a junior officer are complex and require different tools from those taught to all army officers. And second, the CA and the RCEME Corps must change the narrative internal to the Canadian Armed Forces and the Department of National Defence that project management only occurs for capital acquisition.

Outside of those educated in or actively working within the project management field, there is a misconception about project management in the Canadian Armed Forces and the Department of National Defence. Most people equate project management solely with the business of capital acquisition that is conducted by within the Assistant Deputy Minster Material (ADM Mat) organization, and its subordinate divisions. Although project management does occur there it does not tell the whole story of project management in the CAF. The fundamentals of project management are certainly part of and incorporated into capital acquisition, however, the process of acquisition within the federal government is a much larger and more complicated than just project management. Therefore, using the terms synonymously would be incorrect and relegating project management to only having a home in capital acquisition would be equally wrong. Project management occurs in every corner of the CAF with most people never recognizing it as such. To correct this, it is appropriate the use the accepting official definition

of a project. The Project Management Institute, the international governing body for project management, defines a project as "a temporary endeavor undertaken to create a unique product, service, or result."[22] This definition, although bounding the limits of what a project is, leaves enormous scope for what could be included from very small, short-term activities to long-term and complex projects.

The wide-ranging applicability and success of project management techniques has resulted in the exponential growth of the use of project management in large and small organizations. PMI membership in recent years; from 93,000 in 2002 to over 270,000 in 2011.[23] Project management can be seen as providing more than just a set of tools that improves the ability to plan, implement, and manage activities; it is a "results-oriented management style that places a premium on building collaborative relationships among a diverse cast of characters."[24] Larson and Gray take the PMI definition further and detail five characteristics of projects. Project have: 1. An established objective; 2. A defined life span with a beginning and end; 3. The involvement of several departments or individuals; 4. Doing something that has not been done before; 5. Specific time, cost and performance requirements.[25] From this characterization, it can be demonstrated that the vast multitude of tasks assigned to an EME officer are, in fact, projects.

The key to engraining project management into the daily activities of EME officers is to first change the lexicon of the RCEME Corps. Fundamentally, this means reclassifying tasks, missions, or activities in the minds of EME officers. If the activities, mission or tasks can be defined in accordance with the PMI definition as a temporary endeavor undertaken to create a

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[22] Project Management Institute. *A Guide to the Project Management Body of Knowledge (PMBOK Guide)*. 5th ed. (Newtown Square, Penn: Project Management Institute, 2013), 3.

[23] E.W. Larson and C.F. Gray. Project Management: The Managerial Process. (McGraw- Hill, 2011), 3.

[24] Ibid., 3.

[25] Ibid., 5.

unique product, service, or result then it would be appropriate, and better served, to utilize the fundamentals of project management. Examples of this at the tactical level include providing maintenance and recovery support to a unit exercise, introducing a new process to a workshop, organizing a RCEME day celebration, developing and implementing an annual maintenance plan. At the operational level, projects could include developing a theatre maintenance concept for a deployed mission, or introducing and fielding new equipment to the field force. And, at the strategic level, it could include capital acquisition, implementing a fleet repair and overhaul program.

Recognizing military tasks as projects at the tactical level, next to be a better tool than the existing military tools, the fundamentals of project management must provide a start to finish process for task, activity, mission completion. Project management encompasses five process groups as shown in figure 1. These five process groups begin with Initiating, progress through Planning, and Execution, are continually reviewed by the Monitoring and Controlling group and finally, everything is wrapped up in the Closing Process Group.[26] These groups are not independent as they interact and overlap each other with the Monitoring and Controlling group evaluating progress and performance over all processes.

[26] Ibid., 49.

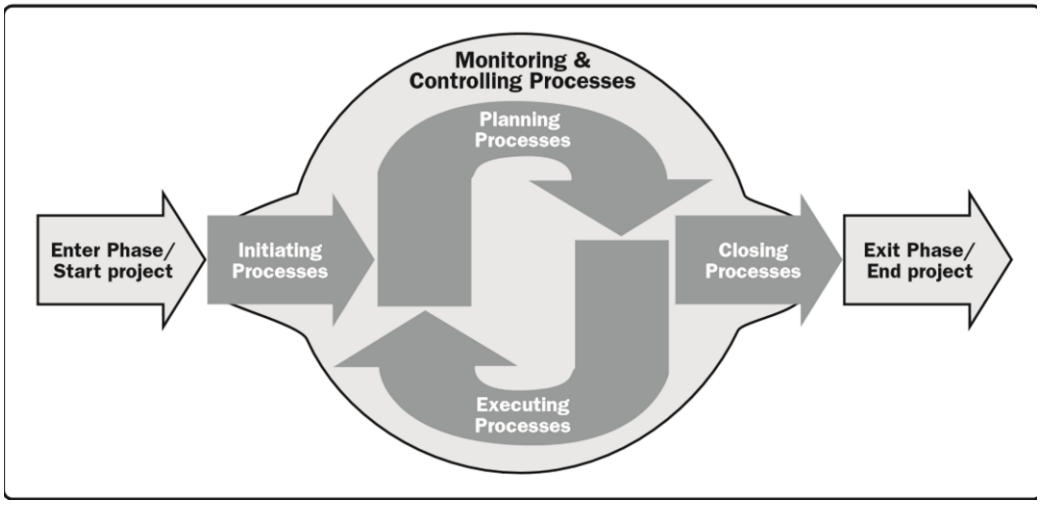

Figure1: The Project Management Process Groups from cradle to grave.

Each project, task, mission or activity begins with Initiation by "defin[ing] a new project or a new phase of an existing project by obtaining authorization to start the project or phase."[27] The Planning and Executing groups create the plan to be used for execution and, naturally the Executing group puts the plan into action. The Monitoring and Controlling Process Group "consists of those processes required to track, review, and orchestrate the progress and performance of the project; identify any areas in which changes to the plan are required; and initiate the corresponding changes." As stated this occurs continually through the project. And finally, the Closing group includes all the actions required to conclude all of the elements of the project including reporting, lessons learned and releasing the project team. [28]

By using all 5 of the process groups a tactical task can be shepherded from the beginning to the end ensuring an organized and coordinated approach where every aspect is monitored and reviewed for effectiveness. This would mark the first improvement over the current tools as one single process guides the task from initiation to completion.

[27] Ibid., 54.
[28] Ibid., 57.

The next benefit over the current tools is the completeness of the project management fundamentals in covering all aspects internal and external to a task that must be considered. The nature and complexity of the project would dictate the applicability of each is used. The PMBOK details 10 Knowledge Areas to be utilized: Integration, Scope, Time, Cost, Quality, Human Resource, Communications, Risk, Procurement and Stakeholder Management. It is common in tactical tasks to focus only on the triple constraint of Cost, Time and Scope. In other words, what is to be accomplished, how must time is available and what is the budget and the other aspect of the task can be left to chance? By utilizing these Knowledge Areas, a leader can be sure to cover all important aspects of the task are considered. Not all may be applicable to the project but as a minimum, they are considered and consciously dismissed.

These seven Knowledge Areas are shown to be of particular importance by using a relatively simple example of initiating a vehicle fleet inspection following a technical failure. After determining what is to be done, and the budget and time frame bounding the problem, a maintenance platoon commander should consider: how the quality of the work will be measured and verified; how the importance, schedule and work requirements and reporting will be communicated; what risk exists, either to the project itself or internal to project; what needs to be purchased to enable the task (nuts, bolts, filters, etc.) and finally what human resources should be used, either internal or external. An experienced Platoon Commander may have been able to anticipate off of this, but it would benefit the RCEME Corps to ensure every maintenance platoon command had the same background in order to draw out the components of the task. This would be done with a firm grounding in project management.

The thoroughness and completeness of the project management fundamentals provide a better basis for task completion than any other single system used in the Canadian Armed Forces

if it is taught with its applicability and tailor-ability to military problems emphasized. The third benefit to indoctrinating project management fundamentals at the onset of a military career is perhaps the most important. By having junior EME officer understand that they are managing projects in every position they hold there is not the need to that fundamental shift to occur when they become senior officers. Employment as a senior officer builds off of the project management fundamentals and is augmented with specialist knowledge on certain areas of expertise such as Systems Engineering of Integrated Logistic Support. It is a beneficial position to be in where an officer need only augment their past knowledge and experience with unique knowledge and qualifications rather than starting front scratch.

Lastly, the continuation of one process from the tactical to the strategic unifies the perception of EME officer employment. It is an intangible effect, but by reducing or limited the transition that occurs between the tactical officer and the Strategic officer, the reluctance or aversion to serving at the strategic level can be reduced.

There are competing arguments for either teaching these skills early in a career versus just-in-time for use. There exists a great deal of literature written on knowledge fade, the pioneer of this work was Hermann Ebbinghaus, who developed the theory of the "Forgetting Curve" in 1895 that related forgetting to the passage of time. [29] This has subsequently been expanded to include skills fade in modern research. Skill fade has been noted to occur "in situations where individuals receive initial training on knowledge or skills that they may not be required to use or exercise for extended periods of time."[30] There are several factors noted in the degree of skill/ knowledge fade including the interval, method of instruction, the degree of overlearning and task

[29] Encyclopedia Britannica Inc, 2016. "*Ebbinghaus, Hermann."*

[30] Arthur Jr, Winfred, Winston Bennett Jr, Pamela L. Stanush, and Theresa L. McNelly. "Factors that Influence Skill Decay and Retention: A Quantitative Review and Analysis." (*Human Performance* 11, no. 1,1998), 58.

type. However, the overriding factor is the interval of retention. Therefore, to be retained and therefore effective when an officer reaches senior rank the knowledge and skills of program management not be relevant and used throughout the tactical junior officers' employment, else knowledge fate would likely occur.

The view of early training and implementation is supported by the concept of spiral curriculum advanced by the psychologist Jerome Bruner in 1960. The concept states that learning should be structured in such a manner that complex subjects are first taught at a simplified level and then revisited in a more complex state at a later time.[31] The progressive introduction of project management training into the development of an EME officer would fit this model. The basic principles of project management could be taught to junior officers, allowing them to utilize them to address the relatively simple project and tasks that a junior officer faces. By doing so they would gain understanding on which more advanced concepts such as risk, and scope management could be built upon to the point where the officer would be prepared for the complex problems faced by senior officers in a strategic role.

The benefit of increasing project management knowledge has been noted in studies. It was noted that the greatest impact to project success occurs when "organizations increase project management maturity from an initial understanding to a standardized level, with a much lower benefit from investing in higher levels of understanding."[32] Under this theory, the greatest impact on improving success (task completion) in the military would be to introduce project management to bringing it to a standardized (normal) level for all personnel and not focusing solely on advancing a small number of officers to the highest levels.

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[31] Bruner, J. S.. *The Process of education.* Cambridge, Mass. (Harvard University Press, 1960), 39.

[32] Spalek, Seweryn. "Does Investment in Project Management Pay Off?" *Industrial Management & Data Systems* 114, no. 5 (2014), 840.

CONCLUSION

The fundamental shift in employment without sufficient education or training that is required of EME Officers upon promotion to senior officer rank is detrimental to the Corps and the Department of National Defence. The lack of experience and training in project management contributes to the lack of success of the procurement system as well as the long-term program management of the Canadian Armed Forces equipment. ADM Mat has attempted to address this deficiency with an ad hoc band-aid approach that required far more time than is available to a senior officer once confronted with the challenge of moving to a program or project management position. The RCEME Corps must fundamentally change its approach to project management to instill the basics into every aspect of EME activities in order to ensure the officers are properly educated and experienced for these roles. Otherwise, there will be no place left for a uniformed officer in the leadership of equipment governance in DND.

Early exposure and continually reinforcement of project management fundamentals will have a two-fold benefit. It will increase the project management capacity of the CAF and DND at senior ranks and it will provide more effective and appropriate tools for junior officers to address the face in their daily employment as EME Officers. The challenges and tasks of EME officers are unique and must be trained and educated for. The reliance on generic Army tools may provide a common language but limits the effectiveness of the Corps. The Officers of the RCEME Corps must be equipped with the tools of their trade that will serve them from cradle to grave anything less would be a disservice for the individuals the Corps and the CAF.

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