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Research Article

Reference Curricula: An Impactful Tool for Institutional Capacity Building?

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Abstract: This article examines the motivation, history, development, implementation, and assessment of reference curricula by the Partnership for Peace Consortium and the Defense Education Enhancement Program. Driven by partner nations' demands to modernize teaching techniques and curricula within their professional military education institutions, this article explains how flexible yet standardized curricula catalyze institutional reform. The discussion then transitions to a theoretical exploration of reference curricula development, focusing on educational standardization, institutional transfer, and military transformation. Next, the article describes the implementation of reference curricula, illustrated by a case study from the Moldovan Military Academy. The article concludes with both theoretical and practical discussions to assess the impact of reference curricula, using Kirkpatrick's Four-Level Evaluation Model, as well as alternatives that account for national and cultural contexts.

Keywords: professional military education, PME, DEEP, curriculum design, evaluation, case study.

Introduction

Defense education plays a crucial role in modernizing militaries within the current security landscape. Since 2007, the Partnership for Peace Consortium (PfPC) and the Defence Education Enhancement Programme (DEEP) have been at the forefront of this movement, collaborating to improve and standardize military

education among partner nations.[1] The increasingly multinational nature of modern military operations, coupled with complex, emerging security threats, necessitates a standardized approach to Professional Military Education (PME).[2] Together, PfPC and DEEP provide a unique opportunity to reform defense education in NATO partner nations, focusing on building institutional capacity in PME institutions and faculty through progressive engagement.

To address the need for standardized, interoperable PME with NATO nations, the PfPC and NATO launched a reference curricula initiative, offering comprehensive educational frameworks that meet Alliance standards while providing flexibility for adaptation to individual national contexts. These reference curricula are not intended to be prescriptive or exhaustive; rather, they serve as starting points for dialogue and development. The initiative focuses on key aspects of military education reform, including curriculum and faculty development, along with providing guidance on teaching methodologies and the adoption of NATO standards. One of the primary goals of these reference curricula is to achieve intellectual interoperability between NATO Allies and partner nations, fostering a shared understanding of strategic concepts and operational approaches.[3]

The reference curricula initiative has demonstrated its responsiveness to the evolving security landscape by expanding beyond traditional military subjects to encompass areas such as cybersecurity, hybrid threats, and building integrity. This emphasis on relevance reflects both PfPC and NATO's commitment to addressing emerging security challenges through defense education reform, ensuring partner nations have the knowledge and skills necessary to address current and future threats.

This article first provides an overview of DEEP as the implementing agent responsible for curriculum development in partner nations and the early motivations behind drafting reference curricula. Following this, the article transitions to a discussion on how standards in PME catalyze reform, emphasizing the pivotal role standards play in driving institutional change. The reference curricula development process is then examined, delving into its theoretical framework and the design and development methodologies employed. This is followed by an in-depth look at the implementation of reference curricula, featuring a case study highlighting a successful application of the curricula. Finally, the article analyzes

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1 John Berry, "Defense Education Enhancement Program: The Consortium Perspective," *Connections: The Quarterly Journal* 11, no. 4 (2012): 27-33, https://doi.org/10.11610/Connections.11.4.03.

2 Alan G. Stolberg, Stuart Johnson, and Laura Kupe, *Building Partner-Nation Capacity Through the Defense Education Enhancement Program* (Santa Monica, CA: RAND Corporation, 2018), https://www.rand.org/pubs/perspectives/PE286.html.

3 James M. Keagle and Tiffany G. Petros, "Building Partner Capacity Through Education: NATO Engagement with the Partnership for Peace," *Connections: The Quarterly Journal* 10, no. 1 (2010): 46-63, https://doi.org/10.11610/Connections.10.1.03.

evaluation and impact assessment, presenting Kirkpatrick's model, alternative approaches, and a forward-looking strategy for evaluating reference curricula.

Background

An Overview of DEEP

The Defence Education Enhancement Programme (DEEP) is a joint initiative between the Partnership for Peace Consortium (PfPC) and NATO, established in 2007 to support the professionalization of military education in partner nations. DEEP has proven to be a valuable tool for building capacity and promoting interoperability, particularly in the context of evolving security challenges and multinational military operations.[4] DEEP collaborates with partner PME schools to develop curricula, improve faculty expertise, and enhance institutional capacity, drawing on the knowledge of volunteer subject matter experts from NATO allies as well as other partner nations. The initiative emphasizes a peer-to-peer approach, encouraging collaboration and knowledge-sharing to cultivate lasting institutional changes in the defense education systems of partner nations.[5]

DEEP's origins lie in the need to reform and standardize military education across partner nations, aligning them with Euro-Atlantic standards while respecting national contexts. This initiative has been particularly significant for countries emerging from the Soviet sphere of influence, helping them transition away from Soviet-era teaching methodologies towards more learner-centered andragogy.[6] DEEP's impact extends beyond technical expertise; it also aims to foster a new military culture that embraces individual initiative and critical thinking. The program's impact is evident in the creation of new PME institutions, courses, and curricula, along with the adoption of modern teaching methodologies. DEEP's success is rooted in its emphasis on long-term engagement, continuous assessment, and adapting to evolving partner needs and priorities.[7]

Motivations for Reference Curricula

The creation of reference curricula was driven by the need to reform and standardize military education across NATO partner nations, aligning them with Euro-Atlantic standards while respecting national contexts. This need arose from the changing nature of modern military operations, which increasingly occurred in complex, multinational environments and involved new security challenges. The

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4 Frederic Labarre and Pierre Jolicoeur, "Shaping and Measuring Military Culture Development: A Case Study of the Defence Education Enhancement Program," *Canadian Foreign Policy Journal* 22, no. 2 (2016): 135-146, https://doi.org/10.1080/11926422.2016.1204929.

5 Stolberg, Johnson, and Kupe, *Building Partner-Nation Capacity Through the Defense Education Enhancement Program*.

6 Labarre and Jolicoeur, "Shaping and Measuring Military Culture Development."

7 Trevor Johnston and Alan G. Stolberg, *The Challenges and Opportunities of Institutional Capacity Building Through Professional Military Education* (Santa Monica, CA: RAND, October 2022), www.rand.org/pubs/research_reports/RRA1238-1.html.

evolution of warfare, combined with the emergence of threats such as cybersecurity and terrorism, demanded a more sophisticated and standardized approach to PME to ensure effective collaboration between NATO allies and partner forces.

Partner nations recognized that their existing PME programs proved inadequate for developing the leadership skills required in modern warfare. Reference curricula offered a means to address these shortcomings by providing comprehensive frameworks and guidance on curriculum development, faculty development, and teaching methodologies. The PfPC designed these resources to support the transition toward self-directed andragogy, emphasizing student engagement, critical analysis, and the practical application of knowledge and skills. Additionally, the reference curricula aimed to address the lack of expertise and resources in many partner nations by providing open access to the knowledge and best practices of NATO allies.[8]

Standards in Professional Military Education Catalyze Reforms

PfPC and NATO's comprehensive approach to defense education reform finds one of its most concrete expressions in developing and implementing reference curricula. Developed under the guidance of the PfPC through relevant working groups and implemented by DEEP, these curricula represent a systematic effort to standardize and enhance military education across partner nations.[9]

Reference curricula serve as foundational documents that outline comprehensive educational frameworks for various aspects of professional military education.[10] They provide detailed learning objectives, suggested content structures, and pedagogical guidance while maintaining sufficient flexibility to accommodate national requirements and educational traditions. These curricula are not intended to be adopted wholesale but to serve as starting points for discussion within partner nations, recognizing the need for flexibility in meeting diverse national requirements.

The curricula also emphasize the importance of connecting theoretical knowledge with practical military applications, ensuring that educational outcomes align with operational requirements.[11] This alignment is achieved by focusing on the development of specific skills and competencies relevant to modern military operations, such as strategic thinking, interagency coordination, and adaptability to complex security environments. Designed to support both basic and advanced levels of PME, the curricula address the needs of officers and noncommissioned officers at different stages of their careers.

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8 Berry, "Defense Education Enhancement Program: The Consortium Perspective."

9 Johnston and Stolberg, *The Challenges and Opportunities of Institutional Capacity Building Through Professional Military Education.*

10 "Reference Curricula and Guidance Documents," *What We Do*, NATO, Last updated October 31, 2024, https://www.nato.int/cps/en/natohq/topics_181578.htm.

11 Berry, "Defense Education Enhancement Program: The Consortium Perspective."

The adoption of reference curricula by partner institutions facilitates educational standardization while promoting intellectual interoperability among NATO and partner forces. When military education institutions align their programs with these curricula, they establish a common educational foundation that enables military personnel from different nations to share similar conceptual frameworks and professional understanding. This shared educational background proves particularly valuable in multinational operations and joint training exercises. Intellectual interoperability—the harmonization of perspectives and approaches to problem-solving—is essential for effective collaboration in modern military operations.[12]

Furthermore, reference curricula can serve as quality assurance tools, providing benchmarks against which institutions can evaluate and improve their educational programs. They help identify gaps in existing curricula and suggest pathways for program enhancement. This aspect is particularly valuable for institutions undertaking educational reform, as it provides clear guidance on international standards and expectations.[13,14] DEEP is a demand-driven initiative that supports partner nations in identifying and addressing specific areas where their military education programs fall short of NATO standards. The reference curricula, overseen by PfPC and developed through a multinational collaborative process, serve as a valuable resource for identifying these gaps and suggesting pathways for improvement.

Reference Curricula Development

The process of developing reference curricula involves extensive consultations with subject matter experts, educational specialists, and military professionals from both NATO and partner countries. This collaborative approach ensures that the curricula not only adhere to NATO standards but also incorporate diverse perspectives and educational experiences. This inclusivity is crucial in tailoring the curricula to meet the specific needs and contexts of various partner nations, considering their unique historical and cultural backgrounds. The resulting documents represent a consensus on what constitutes essential knowledge and competencies in specific areas of military education. PfPC relies on volunteer subject matter experts from NATO-allied PME schools to lead these efforts, ensuring that the content aligns with contemporary best practices.[15]

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[12] Labarre and Jolicoeur, "Shaping and Measuring Military Culture Development."

[13] Tim Hutchings and Danny Saunders, "Curriculum Methodology: A Case-Study in Large-Scale Curriculum Development," *Active Learning in Higher Education* 2, no. 2 (2001), https://doi.org/10.1177/1469787401002002005.

[14] "Defense Education Enhancement Program (DEEP): 2023-2024 Monitoring and Evaluation Analysis, 2025 SMART Objective Framework," last updated November 15, 2024.

[15] Stolberg, Johnson, and Kupe, *Building Partner-Nation Capacity Through the Defense Education Enhancement Program*.

Theoretical Frameworks

Reference curricula are built on a solid theoretical background embracing educational standardization, institutional transfer, and military transformation theories. Educational standardization theory provides crucial insights into the processes of establishing and maintaining common educational standards across diverse institutional contexts.[16] In professional education, standardization serves as a mechanism for ensuring consistent quality and facilitating professional mobility. In the context of military education, standardization assumes additional significance due to the operational requirements of multinational forces. PME standards must balance the need for common competencies with respect for national military traditions and cultural contexts. The development of standardized curricula in this environment requires careful consideration of educational outcomes, operational requirements, and national capacity.

Quality assurance mechanisms play a vital role in maintaining educational standards while allowing for local adaptation. These mechanisms must be sufficiently robust to ensure consistency yet flexible enough to accommodate national variations. Cross-border educational harmonization in military education differs from its civilian counterparts due to the unique requirements of military interoperability and the need for shared operational understanding.[17]

The transfer of educational practices and standards between institutions represents a complex process of knowledge exchange. Institutional transfer theory sheds light on the mechanisms through which educational practices are transmitted and integrated into different organizational contexts. Central to this concept is the deliberate reference to a foreign model.[18] The most common motive for institutional transfer is the perceived urgent need for modernization and developed institutions. The peer-to-peer learning model used in the PfPC and DEEP exemplifies how knowledge transfer can facilitate institutional development while respecting organizational autonomy. Knowledge transfer in military education occurs through multiple channels, including formal curriculum adoption, faculty development programs, and institutional partnerships. The success of these transfers depends heavily on the receiving institution's absorptive capacity and the cultural context in which the transfer takes place.[19]

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[16] Illia Lysokon, "Standardization of Higher Education as a Scientific and Pedagogical Issue: Theoretical Analysis," *Academia Polonica* 56, no. 1 (2023): 161-168, https://doi.org/10.23856/5623.

[17] Hutchings and Saunders, "Curriculum Methodology: A Case-Study in Large-Scale Curriculum Development."

[18] Hans-Jürgen Wagener, "Institutional Transfer," in *The Handbook of Political, Social, and Economic Transformation*, ed. Wolfgang Merkel, Raj Kollmorgen, and Hans-Jürgen Wagener (Oxford Academic, 2019), https://doi.org/10.1093/oso/9780198829911.003.0054.

[19] Nuno Alberto Rodrigues Santos Loureiro and Mariana Gaio Alves, "Effectiveness of Training: The Conceptual Framework and Methodological Strategy of a Longitudinal Study in the Portuguese Armed Forces," *Security and Defense Quarterly* 24, no. 2 (2019): 155-776, https://doi.org/10.35467/sdq/106084.

Military transformation theory provides a framework for understanding how educational reform contributes to broader institutional change within defense organizations. "Transformation is more than just acquiring new equipment and embracing new technology. It is rather the all-encompassing process of thinking creatively in order to work better together." [20] Educational reform serves as a catalyst for transformation by introducing new concepts, developing professional competencies, and fostering cultural change. The impact of educational reform extends beyond individual learning outcomes to influence organizational culture and professional development across military institutions.

Interoperability development, a key aspect of military transformation, relies heavily on educational standardization. Intellectual interoperability—achieved through common educational frameworks and professional standards—enables effective multinational operations and strategic cooperation. The alignment of professional standards through education creates a foundation for operational interoperability and strategic partnership. The interaction between these theoretical perspectives reveals how standardized curricula contribute to military transformation through multiple pathways. Educational standardization provides the framework for consistent professional development, while institutional transfer theory explains the mechanisms of implementation. Military transformation theory connects these educational initiatives to broader organizational change and operational effectiveness.

This theoretical framework suggests that the successful implementation of reference curricula requires attention to both educational and institutional factors. The standardization of military education must balance the need for common standards with respect for national contexts, while institutional transfer processes should facilitate adaptation without compromising essential educational outcomes. Understanding these theoretical relationships enables more effective development and implementation of standardized military education programs.

Design and Development Process

The development of reference curricula within PfPC involves a multifaceted process aimed at creating comprehensive and flexible educational frameworks. Initially, a thorough needs assessment is conducted to evaluate existing programs and identify specific educational requirements for partner nations. This assessment establishes a rationale for the curriculum, outlining desired learning outcomes and identifying gaps in current programs. This process underscores DEEP's demand-driven approach, which prioritizes addressing areas where partner nation programs fall short of NATO standards. To ensure a diverse range of perspectives, PfPC assembles a multinational team comprised of subject matter experts, educational specialists, and military professionals from both NATO and

[20] *Elements of Defense Transformation* (Washington, D.C.: Department of Defense, 2004), https://dml.armywarcollege.edu/wp-content/uploads/2022/12/DoD-Elements-of-Transformation-2004.pdf.

partner nations. This team collaboratively determines the content structure and learning objectives, organizing the curriculum into thematic blocks and modules to create a clear roadmap for learners and instructors. Finally, the curricula are peer-reviewed through subject-relevant offices within NATO headquarters before final edits and publication.[21]

The curricula emphasize a balance between theoretical knowledge and practical application, incorporating case studies, simulations, and exercises to ensure that educational outcomes align with operational requirements.[22] This emphasis on practical application ensures that military personnel from different nations develop similar conceptual frameworks and professional understanding, a crucial element for effective collaboration in modern military operations.[23] Throughout the process, iterative reviews and refinements are conducted based on feedback from subject matter experts and partner institutions, ensuring that the curriculum remains relevant and responsive to evolving educational needs and operational demands.

Reference Curricula Implementation

Reference curricula are immediately made available on the internet on both PfPC and NATO websites for unrestricted use by PME institutions worldwide.[24] They are offered as a starting point for discussion and guidance rather than a rigid set of instructions. Partner nations are encouraged to select elements from the reference curricula that align with their national policies, goals, and resources. The implementation process may involve various activities, such as determining the availability of resources, aligning assessment and evaluation methods, and consulting with institutional leadership. By providing a flexible framework, the PfPC aims to facilitate the development of robust and contextually relevant curricula that promote institutional capacity building through enhanced defense education capabilities and interoperability among partner nations.

DEEP utilizes these reference curricula as a key component of its efforts to support the professionalization of military education in partner countries. Upon request from a partner nation, DEEP typically deploys teams of two to three subject matter experts for approximately three one-week workshops over a period of 12 to 18 months to assist PME institutions with curriculum development and institutional support. These teams work with partner institutions to tailor the reference curricula to the specific needs and context of the country, ensuring

[21] Johnston and Stolberg, *The Challenges and Opportunities of Institutional Capacity Building Through Professional Military Education.*

[22] Hutchings and Saunders, "Curriculum Methodology: A Case-Study in Large-Scale Curriculum Development."

[23] Khayal Iskandarov and Piotr Gawliczek, "The South Caucasus and NATO's Defence Education Enhancement Programme: The Measurement of its Effectiveness," *Social Development and Security* 11, no. 1 (2021): 70-79, https://doi.org/10.33445/sds.2021.11.1.7.

[24] "Reference Curricula and Guidance Documents."

that the implemented curricula align with NATO standards while remaining relevant to the local security environment.[25]

Case Study of Successful Implementation

The Moldovan Military Academy (MMA) played a significant role in drafting and later implementing the Generic Officer Professional Military Education Reference Curriculum within their institution. They volunteered the expertise of their Chief of the Combined Arms Faculty to the PfPC writing team. This "win-win" situation allowed the MMA to leverage their organic experience and expertise to shape the reference curriculum while simultaneously gaining insights for its own transformation. The reference curriculum informed the redesign of the MMA's basic course and the addition of a senior officer course.[26]

The MMA's proactive engagement extended beyond curriculum design to encompass hosting multinational events for the PfPC. These events, including an advanced distributed learning workshop and a teaching methodologies workshop, directly contributed to the MMA's curriculum transformation. These workshops, combined with the adoption of the reference curricula, empowered the MMA to move away from traditional lecture-based learning toward a more interactive, learner-centric model. This shift emphasized active learning, encouraged shared experiences, and broadened the focus from assessments to a more holistic educational approach.

So far, the MMA's early success lacks a longitudinal assessment to examine the long-term impacts of its implementation or any potential challenges encountered during the process. Further investigation into these areas would provide a more complete understanding of the MMA's success story and its implications for the broader field of PME. Understanding the content incorporated from the reference curriculum could offer insights into the specific knowledge and skills the MMA aimed to impart to its officer corps. Analyzing the long-term impacts of the curriculum transformation—both on the quality of education at the MMA and the operational effectiveness of the Moldovan Armed Forces—could shed light on the tangible benefits of both the reference curricula and DEEP activities. Finally, examining the challenges faced and the mitigation strategies employed by the MMA could provide valuable lessons for other institutions seeking to enhance their PME programs through the use of reference curricula.

Evaluation and Impact Assessment

Evaluating a curriculum and assessing its impact are crucial for ensuring that curriculum development results in effective and meaningful learning experiences

[25] Stolberg, Johnson, and Kupe, *Building Partner-Nation Capacity Through the Defense Education Enhancement Program*.

[26] John F. Troxell, "The Moldovan Military Academy: Transforming Officer Education," *Connections: The Quarterly Journal* 11, no. 4 (2012): 99-107, https://doi.org/10.11610/Connections.11.4.11.

that meet the needs of students, educators, and institutions. Without a systematic approach to evaluation and impact assessment, curriculum development risks becoming a haphazard process with unclear goals and unpredictable outcomes.

Curriculum evaluation focuses on examining the value and merit of the curriculum itself. This can involve assessing whether the content is relevant and up-to-date, if the teaching methodologies are engaging and effective, and if the assessments accurately measure student learning.[27] Impact assessment, on the other hand, seeks to understand the tangible effects of the implemented curriculum. This involves going beyond simply measuring activities to examining how the curriculum influences changes in individual behavior, institutional practices, and even wider societal outcomes. While outputs measure quantifiable aspects, such as the number of courses or personnel trained, outcomes focus on the strategic effects achieved through the curriculum, such as improved professionalization of armed forces or enhanced interoperability with NATO.[28]

Kirkpatrick provides a model for PfPC and DEEP to structure their impact assessment goals and tools, allowing them to gauge the effectiveness of achieving their output and outcomes.

Kirkpatrick's Model

Kirkpatrick's model, originally introduced in 1959, provides a framework for evaluating the effectiveness of training and educational programs through four sequential levels: reaction, learning, behavior, and results. This model, widely used in various industries and educational settings, emphasizes a hierarchical approach where each level builds upon the previous one.

The first level, reaction, centers on assessing participants' immediate responses to the training. This involves gauging their satisfaction with various aspects, such as the content, delivery methods, instructors, and overall learning environment. Positive reactions are crucial, as they often correlate with increased engagement and motivation to learn, paving the way for a more receptive learning experience. Tools commonly used for evaluating reaction include surveys, feedback forms, and informal discussions, allowing participants to express their opinions and provide valuable insights for program improvement.[29]

The second level, learning, delves deeper into assessing the extent to which participants have acquired the intended knowledge, skills, and attitudes. This level aims to determine whether the training program has effectively achieved its stated learning objectives. Various assessment methods are employed to

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[27] Jill Schneiderhan, Timpoty C. Guetterman, and Margaret L. Dobson, "Curriculum Development: A How to Primer," *Family Medicine and Community Health* 7, no. 2 (2019), e000046, https://doi.org/10.1136/fmch-2018-000046.

[28] "Defense Education Enhancement Program (DEEP)."

[29] Lara Bove and Anne Little, "New Paradigms Call for New Evaluation Methods: Moving Beyond Kirkpatrick," *MODSIM World* (2019), paper 35, www.modsimworld.org/papers/2019/MODSIM_2019_paper_35.pdf.

gauge learning, ranging from traditional pre- and post-tests to more dynamic approaches like knowledge assessments, skill demonstrations, and practical exercises. The choice of assessment methods should align with the specific learning outcomes outlined in the curriculum. The goal is to measure not only the acquisition of information but also the development of critical thinking and problem-solving skills.[30]

Moving beyond the immediate learning environment, the third level, behavior, focuses on observing how participants apply their newly acquired knowledge and skills in the workplace. This level seeks to determine whether the training has led to tangible changes in on-the-job performance and behaviors. Evaluating behavior change requires a shift from self-reported data to more objective measures, such as supervisor observations, performance reviews, peer feedback, and performance metrics related to specific job tasks. The goal is to assess whether the training has successfully translated into improved job performance, ultimately demonstrating the practical value of the training program.[31]

The final level, results, examines the overarching impact of the training program on the organization as a whole. This level goes beyond individual performance to evaluate the tangible benefits that have resulted from the training in terms of organizational outcomes and return on investment. These results could include improvements in productivity, efficiency, cost savings, customer satisfaction, or other key performance indicators that align with the organization's strategic goals. Measuring results often involves connecting training outcomes to organizational data and demonstrating a clear link between the training program and positive organizational changes. This level provides valuable justification for training investments and highlights the strategic importance of effective training programs within the organization.[32]

Alternatives to Kirkpatrick

While Kirkpatrick's model has been widely influential, alternative evaluation models address some of its limitations. These models often expand upon Kirkpatrick's four levels, incorporating additional factors and emphasizing different aspects of the evaluation process. For example, the CIRO (Context, Input, Reaction, Outcome) model emphasizes a more systematic and comprehensive approach to evaluation by considering the context in which the training takes place and the inputs that contribute to its effectiveness. The CIRO model includes an initial context evaluation to determine training needs and objectives, followed by an input evaluation to assess available training resources. The reaction and outcome evaluations in the CIRO model are similar to those in Kirkpatrick's

[30] Thomas G. Reio Jr., Tonette S. Rocco, Douglas H. Smith, and Elegance Chang, "A Critique of Kirkpatrick's Evaluation Model," *New Horizons in Adult Education & Human Resource Development* 29, no. 2 (2017): 35-53, https://doi.org/10.1002/nha3.20178.

[31] Reio et al., "A Critique of Kirkpatrick's Evaluation Model."

[32] Bove and Little, "New Paradigms Call for New Evaluation Methods: Moving Beyond Kirkpatrick."

model, but the inclusion of context and input evaluations allows for a more holistic understanding of the training program's impact.[33]

In the context of assessing the impact of reference curricula, alternative models like CIRO could be employed to evaluate not only the learning outcomes but also the broader context in which the curriculum is implemented. For instance, the context evaluation could examine the institutional environment, student demographics, and existing resources that may influence the curriculum's effectiveness. The input evaluation could focus on the quality of teaching materials, instructor expertise, and available learning technologies. The reaction evaluation could assess student satisfaction with the curriculum and its delivery, while the outcome evaluation could measure the achievement of learning objectives and the impact of the curriculum on student behaviors, skills, and knowledge. This approach acknowledges that the impact of a curriculum extends beyond immediate learning outcomes and is influenced by a complex interplay of contextual factors and inputs. By employing a more comprehensive evaluation model like CIRO, PfPC and DEEP can gain a more nuanced understanding of the factors that contribute to the success of their reference curricula and identify areas for improvement.

Adjusting Assessment Methods to Gauge Reference Curricula Impact

While observing changes in behavior helps to understand the influence of reference curricula, more direct methods can be used to evaluate the impact of DEEP activities that leverage these curricula. One such method is the use of Monitoring and Evaluation (M&E) categories, particularly highlighted in the 2024 Monitoring and Evaluation Framework Analysis.[34] These categories provide a structured way to measure the impact of DEEP on partner nations. The framework focuses on evaluating changes in eight key areas, including the adoption of modern PME structures, the integration of modern subject matter into courses, and the embrace of learner-centric teaching methods.

To ensure thoroughness, each category is further assessed using the SMART Objective Framework, ensuring that the objectives are Specific, Measurable, Achievable, Relevant, and Time-bound. This systematic framework allows for tracking progress toward goals tied to the reference curriculum.

Direct feedback using alumni surveys from graduates is also crucial for assessing the value and relevance of the reference curriculum in their professional roles. Additionally, examining Individual Tailored Partnership Programmes agreed upon between partner nations and NATO provides a source for understanding the long-term impact in the context of that nation. These plans can reveal how countries integrate the principles of critical thinking, civilian control of the military, and other program objectives into their defense policies and practices.

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[33] Reio et al., "A Critique of Kirkpatrick's Evaluation Model."

[34] "Defense Education Enhancement Program (DEEP)."

Another direct method involves utilizing the expertise of DEEP SMEs. These experts observe classroom activities, participate in discussions with partner nation personnel, and use their knowledge to evaluate the implementation and impact of the curriculum. By clearly defining these objectives, program officers can create specific indicators to track progress and evaluate the effectiveness of reference curricula.[35]

In essence, while inferring impact from observed behavioral changes is important, PfPC and DEEP can increasingly utilize direct methods to measure the effectiveness of reference curricula. These methods aim to provide concrete and quantifiable evidence of the impact on partner nations. By incorporating robust evaluation and impact assessment mechanisms into curriculum development processes, the PfPC can ensure that its curricula remain relevant, effective, and aligned with the evolving needs of partner nations.

Conclusion

The PfPC and DEEP work collaboratively to develop and implement reference curricula. Motivated by partner nations' requirements to modernize teaching techniques and align military education with NATO standards, the PfPC publishes curricula with purposeful flexibility to account for national and cultural contexts. These openly available documents serve as catalysts for institutional reform by fostering intellectual interoperability, security sector cooperation, and institutional capacity building, which promote similar strategic concepts across partner nations.

Reference curricula writing teams leverage a theoretical framework that integrates concepts of educational standardization, institutional transfer, and military transformation to focus on meeting operational needs through educational outcomes. For example, the Moldovan Military Academy (MMA) played an integral role in drafting the Generic Officer PME Reference Curriculum and subsequently adopting it to create courses in their institution. Deemed a success upon implementation in the MMA, Kirkpatrick's Four-Level Evaluation Model and alternative frameworks, such as the CIRO model, provide practical recommendations to assess outcomes and impacts for the MMA and all other curriculum development activities.

These models offer tools for assessing immediate learning outcomes, behavioral changes, and long-term organizational impacts. Direct evaluation methods, such as monitoring and evaluation visits, in addition to alumni feedback, will gauge the effectiveness of reference curricula and DEEP activities. Robust evaluation practices like these will inform future iterations of reference curricula to account for evolving security and educational needs, ensuring the sustainability and enhancement of institutional capacity building.

[35] Johnston and Stolberg, *The Challenges and Opportunities of Institutional Capacity Building Through Professional Military Education.*

Appendix: Summary of Reference Curricula Published and in Draft

Reference Curricula Title	Status	Publication Date
Implications for Leadership from Emerging and Disruptive Technologies	Forming writing team	Dec 2026
Operational and Tactical Planning	Drafting	Jul 2026
Logistics	Drafting	Jul 2025
Resilience	NATO review	Jan 2025
Leadership and Ethics	Published	Jul 2024
Hybrid Threats and Hybrid Warfare	Published	Jul 2024
Russian War Against Ukraine: Lessons Learned (Curriculum Guide)	Published	Dec 2023
NCO School Instructor Development	Published	Jul 2023
Faculty Development (Curriculum Guide)	Published	Jan 2023
DEEP Strategy for Distance Learning Support	Published	Nov 2021
Counter-Terrorism	Published	May 2020
NCO Professional Development (Reference Guide)	Published	Jan 2020
Building Integrity	Published	Dec 2016
Cybersecurity	Update in peer review	Oct 2016
Counter Insurgency	Published	Oct 2016
NCO Professional Military Education (PME)	Drafting update	Oct 2013
Generic Officer Professional Military Education (PME)	Drafting update	Sep 2011
Partnership Action Plan on Defence Institution Building	Published	Oct 2008

Disclaimer

The views expressed in this article are those of the authors and do not necessarily reflect the official policies of the Partnership for Peace Consortium or its governance stakeholders.

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Elements of Defense Transformation (Washington, D.C.: Department of Defense, 2004), https://dml.armywarcollege.edu/wp-content/uploads/2022/12/DoD-Elements-of-Transformation-2004.pdf.

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