

Chapter 4

Educational and Public Administration Transformation Projects: The Role of Polymathics Based Artificial Intelligence (RPBAI)

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ABSTRACT

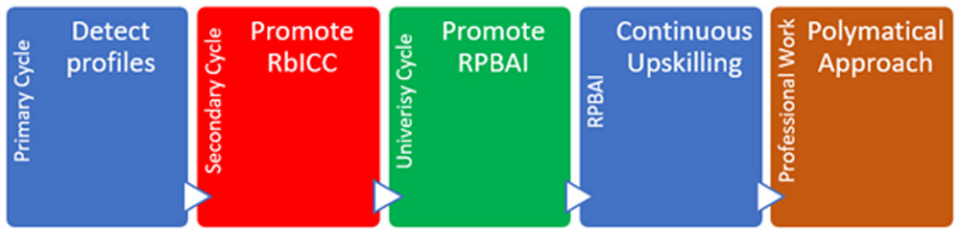
Advanced educational and public administration transformation projects (EPTP) are crucial for academic, public sector (PS), and business institutions. Unfortunately, such EPTPs are complex and have high failure rates, because of the various issues like the lack of experienced personal which should have polymathics and artificial intelligence (AI) capabilities and skills and should avoid the simplistic accountants' instant profits approach, which has long-term negative effects. The RPBAI needs to propose a holistic academic, educational, coaching, and research concept (and curriculum/roadmap), which starts in the primary and secondary schools or cycles (PSC), then is monitored in the university cycles (UC) (Bachelor, Master, and Doctorate) and continues in the professional career's upskilling activities. Such a concept and roadmap can be also applied to the PS (especially in the education/academic and industrial ministries) and business enterprises, which makes a synergy of these three majors and hard-linked sectors and domains.

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INTRODUCTION

Today there is the lack of experienced AI professionals who have Polymathic capabilities and unfortunately today’s business’ reality privileges simple accountants’ profiles who aim only the fast Return On Investment (ROI). PSCs are the jumpstart for RPBAI, because during this period AI-basics and Polymathics capable students can be detected. RbICC ensures educational sustainability and future professional and operational excellence for future project managers and specialists. The RbICC includes various AI and common domains and topics related to AI, algorithmics, data-management, data-architectures, mathematical models, PS’ (re)organization, Information and Communication Systems (ICS), Enterprise Architecture (EA), societal changes, business/financial, and geopolitical contexts, and other (simply Fields). This chapter is related to the Role Team-Based Learning in Polymathics For University Cycle (RTBLP4UC) work (Trad, 2023a, 2024a). The RPBAI uses a Polymathic approach that promotes interdisciplinary Roadmap for managers, analysts, or architects (simply Persons). This chapter uses the author’s Applied Holistic and Poly-Mathematical Model (AHMM) for Polymathics and AI (AHMM4PAI). The AHMM4PAI based RPBAI, combines various academic, educational, and professional (simply Project) Fields which also include Agile Project Management (APM), Geoeconomics, and distributed ICS. This RDP is linked to all the previous author’s works and findings that are used to prove RPBAI’s feasibility and to offer an RbICC for academic and professional cycles (simply Cycle) (Trad, 2023a, 20234). RbICC’s have mandatory subjects which Persons must go through. All the author’s works have a multi-dimensional concept to RDPs and Projects, because it includes: 1) An adapted research and development concept; 2) Shows how to build an in-house transformation framework, and to avoid locked-in Projects; 3) Uses a methodological approach that is based on Polymathic, AI, EA and complex organisations like PS; and 4) A AI Polymathic and Interdisciplinary Group Work In Complex Projects (simply Groupwork) (Trad, & Kalpić, 2023a). Groupwork is built on the AI-Team-Based Learning’s Concept (AITBLC, simply Learning) and is its main component; which supports the RbICC, as shown in Figure 1.

Figure 1. RbICC and RPBAI related cycles



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