

Glocalization of Technology Capability in these Technological Constellations

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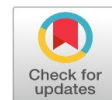
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Abstract: This paper provides a professional community's technology knowledge, accumulation, and application in the context of the global and local technological constellations from a strategic perspective to alignment issues. The pinnacle of technology capability "glocalization" is the adaptation, ability and capacity to deliver global business demands using the technology and around the particularities of local technologies in which they are used and consumed by the end-users. Technology Capability is the ability and capacity to realize a measurable result in a specific operational context of conditions using technology. The Technology Capability Matrix was used to capture the participants' capabilities in Enterprise Data Management, Infrastructure Management, Application Administration, Business Standards, Database/Data Mining, Infrastructure Administration, Utilities Administration, Business Process Analysis and Process Management, Project Management and Methodology and Project Management Process which are necessary in their discipline as learning facilitators in Computer Science and Information Technology Programs. Results of the study reveal that most of the participants were equipped and experienced in Infrastructure Administration, Utilities Administration, Business Process Analysis and Process Management, Project, Management and Methodology, Project Management Process. It was notable based on the analysis that most of the participants were not equipped and less experienced in Enterprise Data Management, Infrastructure Management, Application Administration, Database/Data Mining and Business Standards. Therefore, these facilitators have less experience (untapped capabilities) in most of the courses in Computer Science and I.T. courses. It must be noted businesses are technology-enabled and that processes and functions best work in the tactical level, hence capabilities at the strategic level. Responding to the global demands by empowering the local provider encourages glocalization context. It is recommended that the Program Chairs and College Administrators to consider and map the result of the study and provide the same in their Faculty Development Program through industry immersion, in-service training, workshop and attendances to related training and conferences.

Keywords: Glocalization, Capability matrix, Technology capability matrix, Business alignment, Capacity management

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INTRODUCTION

Impacts of information technology in globalization and ASEAN integration

In this plethora, communications, medical, education, business, transport and travel and other sectors of industries (Austria, Dasig Jr & Valderama, 2015) have been lucid because of technology (Levitt, 1993). It was further, that among the powerful forces which drive modernity's allurements of globalization (Levitt, 1993) is the information technology. This information age has maintained a borderless commonality, converged and globalized both the left and right cornerstones of the international economy and even in the academic community (Hirst, Thompson & Bromley, 2015). Rodrik (1997) argued that globalization exposed a deep fault line between groups who have the skills and mobility to flourish in

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global markets and those who don't have either of these advantages. Lituchy and Rail (2000) posited in their work "The impact of technology on the Globalization of Small Businesses", technology has changed business operations such as online reservations, bookings, and so forth. Noe, Hollenbeck, Gerhart and Wright (2006) Human resource management: Gaining a competitive advantage; technology is employed to implement workplace policies, advance HR technology and allow employees and business partners to be geographically and temporally distant from one another (Boudreau, Loch, Robey & Straud, 1998; Li, Tsai, Perng & Gao, 2015) in deploying information technologies within a virtual organization. Globalization requires technology-intensiveness and capital requirements (Storper, 1992). However; it provides developing nations with an unprecedented opportunity to meet vital development goals (Kamssu, Siekpe & Ellzy, 2004) and globalized information networks which will transform the world culture (Carnoy & Rhoten, 2002).

In the context of ASEAN Integration as stated in ASEAN Vision 2020, the ASEAN will facilitate a free flow of human resources over the region as part of the economic integration (Aphijanyatham, 2010). Among the priority areas of 'Initiative for ASEAN Integration' is the Human Resource Development. As the countries and regional enabler, job skills mismatch and reduction of skills gap must be resolved beforehand by developing training leaders and highly-skilled professionals. In this note, colleges and universities or higher education institutions have the vital role to lead in this process (Jones, 2004) to focus on factors to enhance competitiveness for new economy, education, skills development and worker training (Severino, 2007; Plummer, 2006).

Glocalization and human resources development

Human resources development as national and global capital is always associated with education as the subject of much discussion in recent decades (Bloom, 2004). The work of Burbules and Torres (2004), have had emphasized that in globalization and education, we must recognize the ontological complicity to capture the gist of the social action. Naturally, education has always been attributed as a national good which is articulately national in its etymology provided by the country's national university (Hugonnier, 2007). Globalization and education have inked acceleration in political and intellectual consideration of the inextricable set of social, technological, economic and cultural phenomena on the global plane, in local spaces, and in the connections (Ruperez, 2003; Stromquist & Monkman, 2014).

The etymology of glocalization is a Japanese word "dochakuka" which means global localization or the portmanteau of globalization and localization. Thompson and Arsel (2004) articulated that glocalization strongly suggests that the intersection of global brands and local cultures produces cultural heterogeneity. Technically, it is practical to hire people with hardware maintenance skills to deal with desktop problems who are computer-science graduates from ASEAN institutions which typically emphasize technical skills (Bauman, 1998; Sahay & Walsham, 2006). Balakrishnan and Muniapan (2006) work about "Rethinking Management Education in Malaysian Universities and Institutions of Higher Learning. Quality in education: Teaching and leadership in challenging times". They have asserted "the need for enquoteglocalization of management education and a strong collaboration between the universities and institutions of higher learning and industries in producing the required quality and quantity of management graduates. Both are the key ingredients to increasing the effectiveness of management education and to produce world-class Malaysian organizations besides making Malaysia a regional hub for management education". Glocalization valorized the local in all senses, and the geopolitical fragmentation gives those in power, even more room to maneuver (Salveti, La Rosa & Bertagni, 2015). Global localization and transnationalism are connected to immigrant cohorts (Roudometof, 2005) but the concept has been expanded to include other groups of people, as well as a whole array of activities across borders. Glocalization is "the new world's disorder, therefore, developing 'meta' skills also means acquiring the ability to reflexively select and manage specific skills that are useful to one's social adaptation just as technical and specialized skills" (Salveti et al. 2015). The pinnacle of technology capability "glocalization" is the adaptation, ability and capacity to deliver global business demands using the technology and around the particularities of local technologies in which they are used and consumed by the end-users.

Technological skills and the technology capability matrix

Due to the new big wave of information technology services (Willcocks, Hindle, Feeny & Lacity, 2004; Yang, Kim, Nam & Min, 2007) such as Information Technology Outsourcing (ITO) and Business Process Outsourcing (BPO), there are challenges to skills trainers, industry lecturers, instructors, professors, and college and university administrators on their technological capability. Technical skills, job skills, soft skills and life skills of a student must be instilled, developed and invigorated in a university/technical college as a jumpstart to the I.T. competitive industry. These technical skills may include those sought after skills in top-of-the-line industries and high-paid I.T. positions which impact process innovations and business transformation mindset (Mani, Barua & Whinston, 2010). A learning facilitator/ professor is instrumental in crafting the learner's technical skills, hence professor technical skills must be advanced and relevant being transitioned to the learners. This technology capability may likewise create economic value and competitive advantage (Lin, 2007) to the learners and facilitators.

This paper provides a professional community's technology knowledge, accumulation, and application in the context of the global and local technological constellations from a strategic perspective to alignment issues. The pinnacle of technology capability "glocalization" is the adaptation, ability and capacity to deliver global business demands using the technology and around the particularities of local technologies in which they are used and consumed by the end-users. The technology capability understudy will undermine those capabilities in I.T. services which include Enterprise Data Management, Infrastructure Management, Application Administration, Business- Standards, Database/Data Mining, Infrastructure Administration, Utilities Administration, Business Process Analysis and Process Management, Project Management and Methodology and Project Management Process. Also the study pegged to identify track and tenure of industrial practice of the faculty in using the applications and support under the matrix.

METHODOLOGY

A researchers' designed Technology Capability Matrix was used to capture the participants' technological capabilities of select information technology faculty in universities and colleges in Metro Manila. The matrix has eight questions with the 5-point Likert scale being No experience (1), Less than 1 year experience (2), 2 years and less than 3 years' experience (3), 3 years and less than 4 years' experience (4) and 4 years and up experience (5) related to the technical and technological skills which include Enterprise Data Management, Infrastructure Management, Application Administration, Business- Standards, Database/Data Mining, Infrastructure Administration, Utilities Administration, Business Process Analysis and Process Management, Project Management and Methodology and Project Management Process which are necessary in their discipline as learning facilitators in Information Technology Programs. The Technology Capability Matrix (TCM) has been administered digitally using Survey Monkey platform starting August 2016. There were 45 I.T. faculty members handling software and hardware courses who have responded to the survey. Collected data have been analyzed using Secondary Data Analysis.

RESULTS AND DISCUSSION

Based on the data gathered, the tracks of eight technologies and applications are listed below. Figures depict the number of faculty per tenure or year of experience per strand.

Enterprise data management

Enterprise Data Management is the ability of the professional and the organization to precisely define, integrate and effectively retrieve data for both internal application systems and external communication. Enterprise Data Management track includes -Business Intelligence, Database, EDM-DB2, EDM-General, EDM-Oracle Database and EDM-SQL.

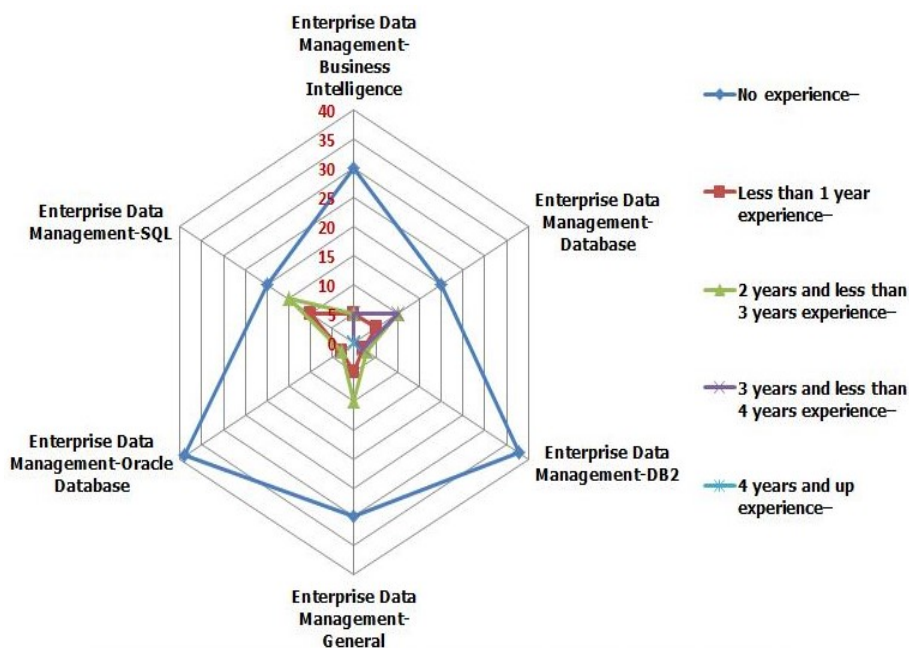


Figure 1. Enterprise data management track and tenure distribution

CONCLUSION

Infrastructure management

In the business operation with managed services, reduction of cost due to preventive and corrective maintenance and recovery are always beneficial to the company. Infrastructure management supports business glitches and system downtimes. Listed tracks are; AIX/UNIX, Infrastructure. Enterprise Architecture, Infrastructure. Microsoft, and Infrastructure. Middleware.

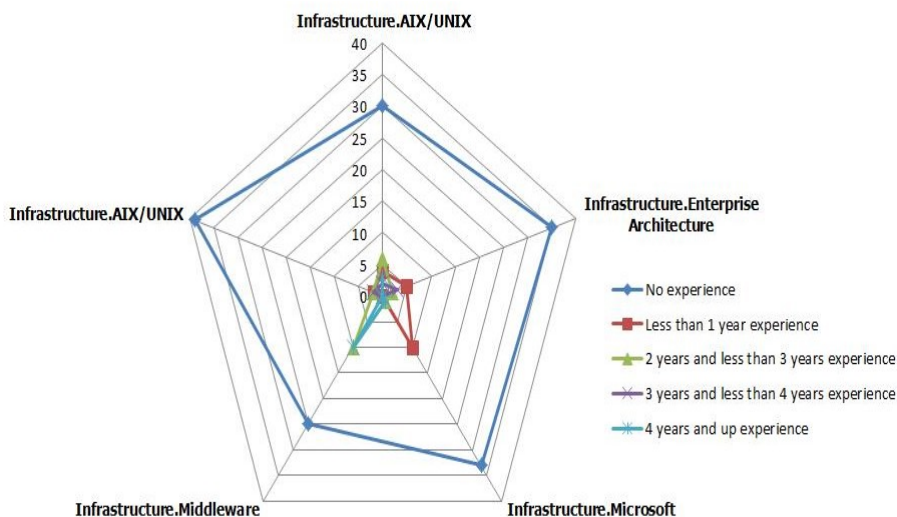


Figure 2. Infrastructure management track and tenure distribution

Application administration

Business processes and business services are delivered using dedicated and sophisticated applications which feature how to get things done. These applications or software are ankled with a business solution to deliver its product and services in cost-efficient manner. Application administration skills may include: Application Administration- Contact Center applications, Eclipse, FTP, Microsoft Office, MS Access, Netbackup, IBM Cognos, SAP ABAP, SAP Basis, Servlets, VM Ware and Learning Management System.

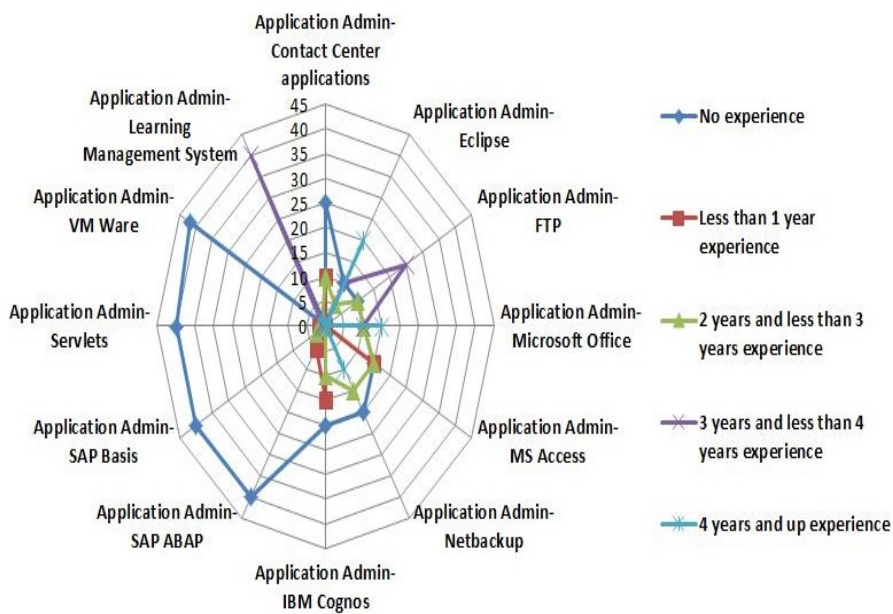


Figure 3. Application administration track and tenure distribution

Database/data mining

Every thriving company braced its operations to be technology-driven processes, from analyzing data to presenting actionable information, visualization technique and even warehousing techniques to help executives, managers and other end-users deliver and make more informed business decisions. These skills and abilities include; Business Intelligence, Data Warehouse, Database.Informatica (ETL), DB2 (for Mainframe), Informix, MS SQL Server, Oracle, and No SQL.

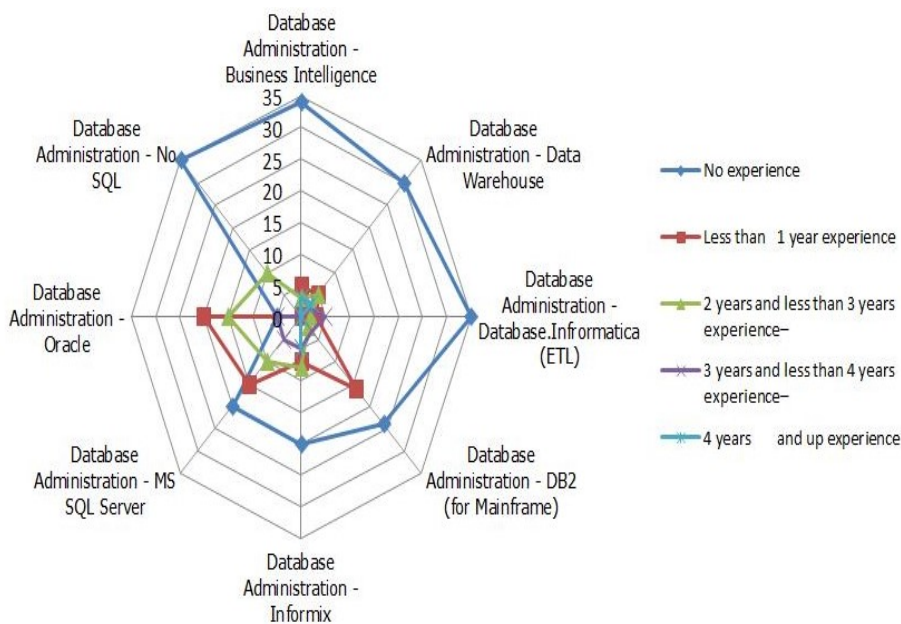


Figure 4. Database administration and data mining track and tenure distribution

Infrastructure administration

Infrastructure Administration tracks are the following: Apache, Cisco Networking, DOS Command, HP UX, IBM AIX, Networking, Infrastructure. Jboss, Infrastructure.Linux, MCSE, MS/PC-DOS, Solaris, Unix, Unix Commands, Windows 2003, Windows 2008, Windows Vista, and Windows XP.

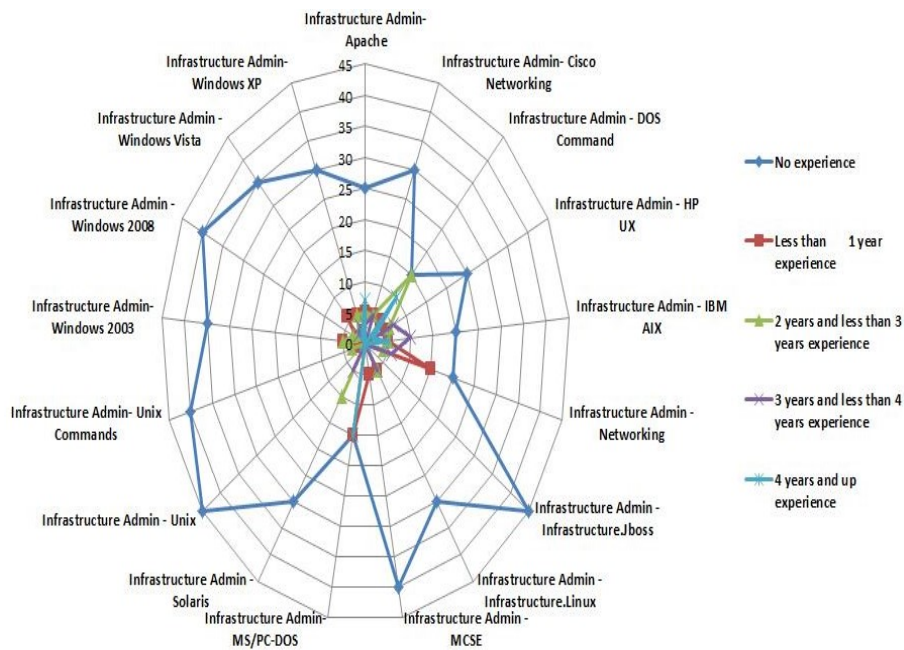


Figure 5. Infrastructure administration track and tenure distribution

Utilities administration

Utilities administrations ability deals with authentication settings, address book settings, network settings, etc. Utilities Administration tracks include the following: SFTP, TCP/IP (Networking), Terminal Services, and Windows Registry.

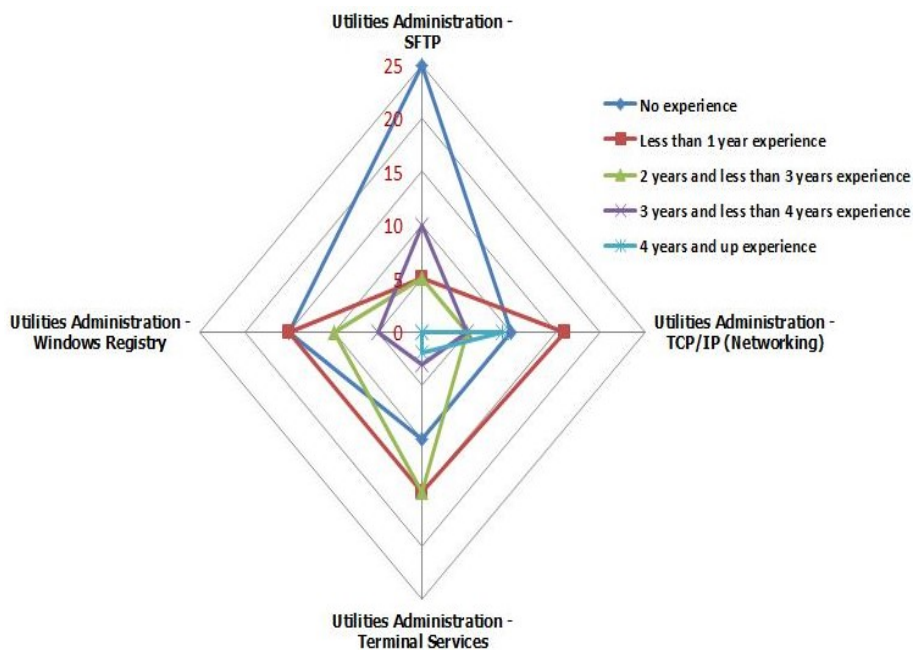


Figure 6. Utilities administration track and tenure distribution

Business process analysis and process management, project management and methodology

The tracks for Business Process Analysis and Process Management, Project Management and Methodology are as follows: Service Mgt. Process, SLDC Processes, Supply Chain, Technical Requirements, MS Project / Schedule, MS Visio, Primavera, Oracle applications, Regression Test Tool, Agile Tools, OO Concepts, Scrum and Six Sigma Methodology.

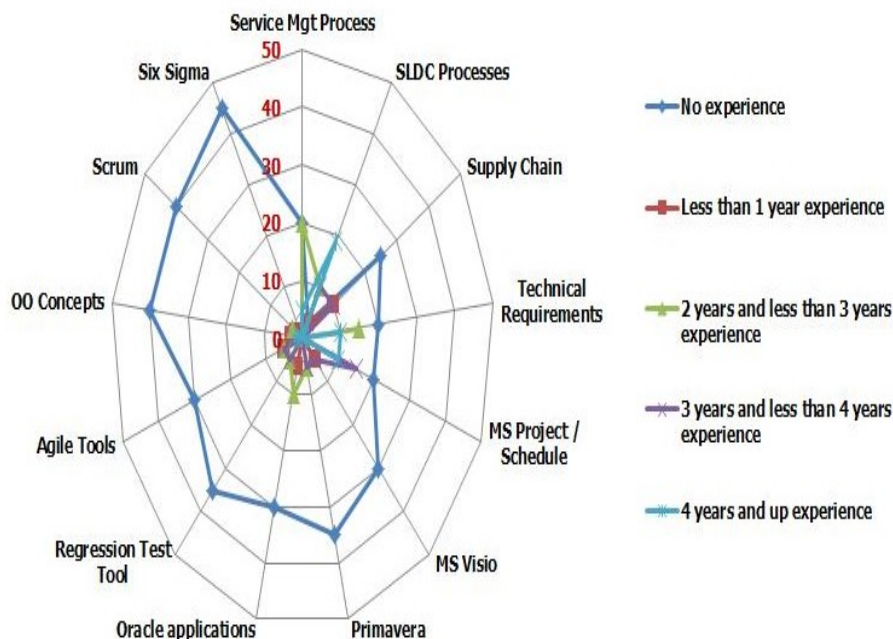


Figure 7. Business process analysis and process management, project management and methodology track and tenure distribution

Project management process

Project Management Processes tracks in this Technology Matrix are the following: Application Development, Business Intelligence, Data Management, Data Warehouse, Infrastructure Management, Information Technology Infrastructure Library, Knowledge of Project Life Cycle, Project Management Institute, Service Management, Agile Tools, Test Case Design, Test Planning, and Project Transition Management.

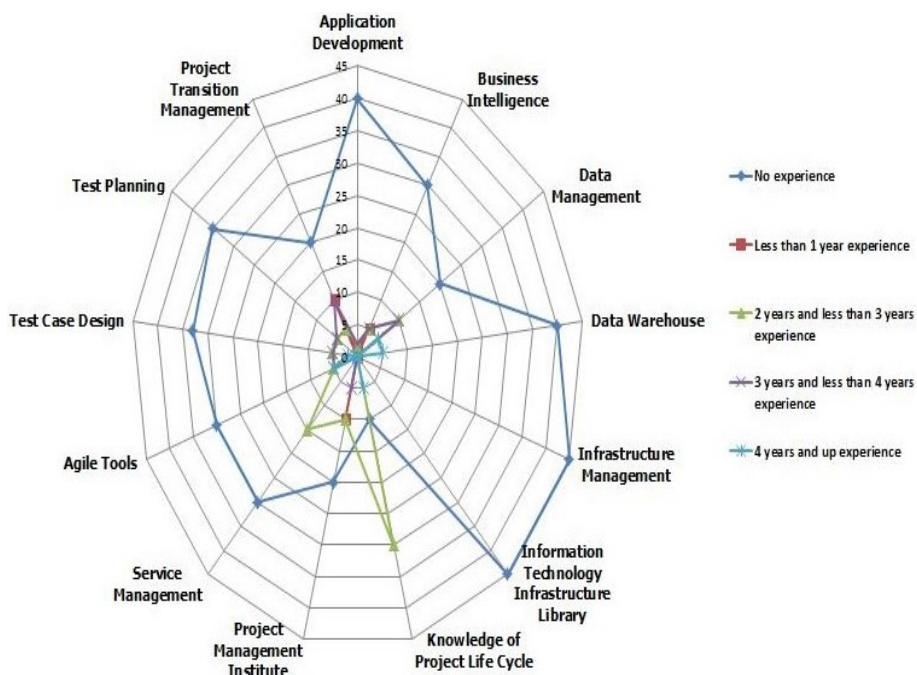


Figure 8. Project management process

The table 1 summarized the capabilities, depicts number of faculty with professional experience per track and tenure and its corresponding percentages.

CONCLUSION AND RECOMMENDATIONS

Results of the study reveal that most of the participants were equipped and experienced in Infrastructure Administration, Utilities Administration, Business Process Analysis and Process Management, Project, Management and Methodology, and Project Management Process. It was notable based on the analysis that most of the participants were not equipped and less experienced in Enterprise Data Management, Infrastructure Management, Application Administration, Database/Data Mining and Business Standards. Therefore, these facilitators have less experience (untapped capabilities) in most of the courses in Computer Science and I.T. courses. It must be noted businesses are technology-enabled and that processes and functions best work in the tactical level, hence capabilities at the strategic level. Responding to the global demands by empowering the local provider encourages glocalization context. It is recommended that the Program Chairs and College Administrators must consider and map the result of the study and provide the same in their Faculty Development Program through industry immersion, in-service training, workshop and attendances to related training and conferences.

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