

Embedded Selforganizing Systems

Special Issue Topic: "Learner Centered Learning"

Digital Education and Future Skills of Public Servants

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Abstract— The COVID-19 pandemic is a game changer in capacity development. It has enabled governments to recognize that aside from shifting to digital processes and procedures, digital technology can also contribute to the development of capacities as well as future skills of public servants.

This paper discusses digital education and its role in developing the capacities and future skills of public servants in the context of the Master of Public Management Program of the University of the Philippines Open University. It also presents how activities can be re-designed to develop future skills.

Keywords— digital education, future skills, re-designed assessment, public servants

I. INTRODUCTION

The Coronavirus Disease (COVID-19) pandemic affected all aspects of society. The situation provided an impetus for Governments to utilize ICT not only in processes and procedures but also in education and capacity development.

The Organization for Economic Cooperation and Development (2021) stated that the COVID-19 pandemic hastened the facilitation of a technology-driven workplace with a flexible working environment and various collaboration and coordination among government agencies. Country leaders agreed that some of the most crucial improvements in public service are greater investment in infrastructure as well as the capacities of public servants. Public servants need to become more agile and responsive to new ways of organization and gain new knowledge to craft innovative solutions, especially during times of crisis.

The term "Public Servants" is a broad description of people working to achieve the greater good. Whether they are employed in the private or public sector, so long as their work serves the general public, they are called "public servants". An inclusive definition of the term is "someone working in public services (even outside the public sector)" (Needham & Mangan, 2014).

The Asian Development Bank (2021) cited the use of online learning applications as a means of upskilling public servants. Governments can contract firms that produce education programs or courses for public servants, or the government itself can create their own course content for its public servants through education-as-a-service or EaaS firms. This method is one of the best, quickest, and scalable ways for governments to improve the quality of public service by upskilling and reskilling of its public servants, as well as orienting and training them to new government procedures.

II. RESEARCH QUESTIONS

This paper aims to discuss the case of the Master of Public Management (MPM) Program of the University of the Philippines Open University (UPOU) in delivering digital education for public servants and the development of future skills. Specifically, it answers the questions: a) What is the concept of the digital education? b) What are the future skills needed by learners? c) How can online assessment and teaching be redesigned to ensure the development of future skills of public servants? and) What are the prospects and future of public administration and governance education in the Philippines.

III. METHODOLOGY

The study utilized primary and secondary data. It reviewed and analyzed documents, reports, online articles related to the subject. The researcher redesigned an assessment and conducted a survey of the students regarding future skills based on the 17 competencies of nextskills.org.

IV. RESULTS AND DISCUSSION

A. Digital Education for Public Servants

Mcilwhan (n.d) stated that digital education is a term that is often used interchangeably with technology-enhanced learning (TEL) or e-learning and online learning. However, these terms associated with digital learning all fall under the umbrella of digital learning or learning conducted partly, with, or through digital technology. As such, he affirms that fully online and blended learning both qualify as digital education.

The key features of digital education that make it a viable approach to learning are accessibility, personalization, flexibility, and authenticity. Learners can learn at their own pace using personalized materials and can learn using contents in various formats. Its inclusivity also allows people with disabilities or those who simply do not have the leisure time to study and learn. This increased access promotes inclusivity and aims to prevent sectors of society being left behind in opportunities for education.

Chubb (n.d), stated, however, that digital education requires capital and investment in necessary infrastructure. Due to the pandemic, many sectors of society have moved towards using digital technology to keep industries in both the public and private sector moving forward. Institutions were forced to operate in the virtual environment, prompting a transition towards the digital realm.

B. The Concept of Future Skills

Ehlers & Kellermann (2019) defined future skills as an individual's capability to successfully respond to and act on future changes and intricate problems in a self-organized way. In simpler words, these are the skills that will be instrumental to people's success in the future (Fidler, 2016). Ehlers & Kellermann (2019) categorized future skills into three dimensions: (1) subject and individual development related skills; (2) object-related skills (instrumental skills); and (3) social world/organization-related skills. These dimensions look into how the role of the individual shifted from being heavily reliant on external systems for support to taking responsibility for their own learning. These three dimensions of future skills are interconnected in a way that they influence each other.

According to Ehlers & Kellermann (2019), the learning experience provided by higher education institutions (HEIs) will also undergo significant changes. The Organisation for Economic Co-operation and Development (2018) also argued that the development of future skills of learners lies in the hands of the education sector. Aside from merely providing academic courses, HEIs must also enrich the values and skills that will help learners become responsible citizens and enable them to actively participate in building a better and sustainable society.

In general, future-proof learners must possess the sense of agency in dealing with their own learning and other situations they will encounter in their lifetime (OECD, 2018). Educators must simultaneously acknowledge the individuality of learners and their relationships with people who influence their learning. This is the so-called "co-agency" or supportive relationships that help learners achieve their goals.

Grand-Clement (2017), also expounded on the importance of integration of digital skills in formal education. The use of technology has led to the remodeling of learning into a lifelong process since learners have to be constantly up-todate with new developments and skills in the digital world. These digital skills, such as the ability to use digital technologies and digital navigation skills, serve as a tool to help learners with their daily lives and future professions.

Governments are also given the significant responsibility of ensuring that workers possess the skills and knowledge to effectively adapt to the dynamic and high technology work environments of the future (OECD, 2017). This can be achieved through improving the quality of education and training, incentives to encourage individuals to invest in developing in-demand skills, high-quality assessment systems, and efficient information and guidance systems.

C. The University of the Philippines Open University as a Digital University and the Master of Public Management Program

The University of the Philippines Open University (UPOU) became the fifth autonomous campus of the UP System in 1995. It is envisioned as a leader in teaching and learning in the digital age, helping to equip Filipinos with the knowledge and skills they need for life and work in the 21st century. Its mission is to provide Filipinos everywhere access to quality higher education through innovative methods of teaching and learning that are designed to be responsive to their needs as well as to national development priorities.

The UPOU has adopted the use of Open and Distance e-Learning (ODeL) which refers to "forms of education provision that use contemporary technologies to enable varied combinations of synchronous and asynchronous communication among learners and educators who are physically separated from one another for part or all of the education experience" (Alfonso, 2012; as cited by Arinto, 2016).

The Master of Public Management Program of UPOU was first offered in 1997 via the distance learning to assist in democratizing education in the country. It is designed for policymakers, administrators, and managers of public, private, and non-governmental organizations; practitioners in local government and administration; and other individuals interested in good governance, and public policy and administration. The program aims to provide a high level of competence in public policy, governance, and administration; prepare students to become better public managers, administrators, government or volunteer workers and/or advocates of social change, administrative, reform, and national development; and equip them with skills and knowledge needed in managing and developing organizations that work for the welfare and interest of the Filipino people (https://fmds.upou.edu.ph/academics/post-bac/mpm/).

D. The Reimagined Assessment Plan for Future Skills

Keeping in mind the concept of future skills, designing activities and assessment plans is quite challenging in an online set-up with learners not being able to see each other physically. Hence, the most convenient would be to deploy individual assignments for them to work on it at their own pace and time. The researcher designed an activity/assessment that aims to improve the skills of public servants in the future.

There were three courses under the MPM Program which were selected as part of the study which were all handled by the Researcher as the Faculty-in-Charge. The courses include: Theory and Practice of Public Administration (PM201), Public Policy and Program Administration (PM241) and Local Government and Regional Administration (PM251) for the 1st Semester, Academic Year 2021-2022.

The group tasks entailed online collaboration in analyzing public administration issues in the Philippines within the context of national development. The tasks are described below in Table 1.

	PM201	PM241	PM251
Objectives	To be able to coherently document facts (i.e. details, photos) and analyses (i.e. ideas, assessments, insights) a Sustainable Development Goal (SDG) and how it is being implemented in work or locality.	To assess a particular government policy or a program carried out by any implementing entity (i.e., government, NGO, private institution) that addresses a specific public issue in the Philippines.	To document experiences with the issues and challenges confronted by local government units and provide recommendations or proposed amendments to the Local Government Code of 1992
Output	Journal/documentation/videos based on the chosen SDG and an oral presentation	Written assessment of a certain public policy and an oral presentation	Written amendments to the Law and an oral presentation
Ethical considerations	All outputs should be signed by the students that the output is their original work.	All outputs should be signed by the students that the output is their original work	All outputs should be signed by the students that the output is their original work

TABLE I. DESCRIPTION OF THE REIMAGINED ASSESSMENT

There was a total of 50 students who participated in the survey. They were asked to give their perceptions regarding the 17 competencies based on the group tasks that were given to them. Table 2 shows that all "strongly agreed" that the activity have enhanced their competencies with "Digital Literacy" given the highest rating of 4.74. This is followed by "Initiative and performance competence" with 4.70 and "Cooperation Competence" with 4.68. The lowest rating is "Future Design Competence" and "Ambiguity competence" with 4.40. This means that learning activities play an important role in the development of future skills of public servants.

TABLE II.PERCEPTIONS OF STUDENTS ONTHE 17 COMPETENCIES BASED ON FUTURE SKILLS

	(N:50)		
Org	Rating*		
1.	Communicatio n Competence	Entails not only language skills, but also discourse, dialogue, and strategic communication aspects	4.58
2.	Cooperation Competence	The ability and disposition to cooperate and collaborate in (intercultural) teams	4.68
3.	Future Design Competence	The ability to master the current situation with courage for the new, willingness to change and forward thinking	4.40
4.	Sensemaking	The willingness and ability to construct meaning and understanding from the rapidly changing structures of meaning within future work and life contexts	4.48
5.	Self determination	An individual's ability to act productively within the field of tension between external structure and self-organization	4.64
	bject Development lated		
1.	Learning Literacy	The ability and willingness to learn in a self-directed and self- initiated fashion	4.66
2.	Self-efficacy	The belief and one's(self-) confidence to be able to master the tasks at hand, relying on one's own abilities and taking over responsibility for one's decisions	4.58
3.	Self- competence	The ability to develop one's own personal and professional capabilities largely independent of external influences	4.62

4.	Reflective competence	The willingness and ability to reflect, i.e. the ability to question oneself and others for the purpose of constructive further development	4.50
5.	Decision competence	The ability to seize decisions and to evaluate different alternatives against each other, as well as making a final decision and taking over the responsibility for it	4.56
6.	Initiative and performance competence	An individual's ability to motivate him-/herself as well as to his/her wish of contributing to achievement	4.70
7.	Ambiguity competence	An individual's ability to recognize, understand, and finally productively handle ambiguity, heterogeneity, and uncertainty, as well as to act in different roles	4.40
8.	Ethical competence	The ability to perceive a situation as ethically relevant, including its conceptual, empirical and contextual consideration	4.42
Obj	ect Related		
1.	Design thinking competence	The ability to use concrete methods to carry out creative development processes open- endedly with regard to given problems and topics	4.46
2.	Innovation competence	The willingness to promote innovation as an integral part of any organizational object, topic and process	4.60
3.	Systems competence	The ability to recognize and understand complex personal- psychological, social and technical (organizational) systems as well as their mutual influences	4.52
4. *Sta	Digital literacy	The ability and disposition to use digital media, to develop them in a productive and creative way, and to critically reflect on its usage and the impact media it has on society 3; Agree - 3.41 - 4.20; Undecided - 2.61 - 3.40; D	4.74

2.60; Strongly Disagree - 1.00 - 1.80

V. PROSPECTS AND FUTURE OF PUBLIC ADMINISTRATION AND GOVERNANCE EDUCATION IN THE PHILIPPINES

The paper concludes that Digital Education or technologyenhanced learning is one of the strategies to develop the capacities and future skills of public servants under the new normal. Thus, it is important that it should be adopted, and learning activities can be re-designed to future-proof not only the MPM Program but also other degrees.

One of the prospects of the MPM Program is the development of microlearning courses on the sustainable development goals (SDGs). This is with the aim of providing

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micro credentials to public servants who play an important role in the implementation of SDGs.