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ORIGINAL ARTICLE

Human resource profiling for post-pandemic curriculum reconfiguration in higher education

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ABSTRACT

National governments and academic higher education institutions continue to realign human resource development (HRD) strategies to address the gaps in HRD mandate. This study will investigate new and recalibrated skills that higher institutions (HEIs) professionals and the labor force produce to reconfigure curriculum development in tertiary education. The study extracts narrative from 6 curriculum developers, 3 HRD heads and h3 manpower organizations on the labor landscapes from different local and multinational industries from entry-level to mid-career ranges through case scenario-based interviews and focus group discussions to determine the skills around motivation, innovativeness, and adaptability and subsequently integrate strategic initiatives to reconfigure the compatibility of these skills from higher education institutions to post-pandemic industries. The findings reveal skills that can be managed at the individual level, e.g., self-motivation and adaptability as well as the need to emerge from the technological pressures by adapting to organizational and clientele demands. These human resource traits become the mantra of surviving and progressing in a landscape shaped by the pre- and post-pandemic setting and become the basis of HEI programs to match the needs of the labor force and the industries.

KEYWORDS

human resources; profiling; post pandemic; reconfiguration of curriculum; higher education

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1. Introduction

The complexity of the organization, particularly in the division of responsibilities, has a significant impact on the organization (Putra et al., 2021). Organizational climate is always present in any organization and has a significant impact on the behavior of its members and stakeholders. Employees who thrive at work are highly motivated and involved in the work activities of the organization, which contributes to organizational performance. Self-motivation of employees is an important aspect of labor force because of its capacity to influence the processes in the organization

(Putra et al., 2021). Leaders increase tolerance in certain adversities and employee motivation, create culture and values, and develop organizational structure in order to achieve efficiency and effectiveness.

The progression of industrial revolutions has been marked by an observable upward trend in job complexity. In the 21st century, it has been observed that continued learning plays a significant role in the realm of higher education (Li, 2022). Nonetheless, there is a discrepancy in the pursuit of continuous education among individuals (Schwab and Samans, 2016). The findings of Aristovnik et al. (2020) indicate that a significant proportion of students, specifically 42.6%, expressed concerns about their future professional careers during the pandemic. It is encouraged that individuals take advantage of the various opportunities available to enhance and update their professional skill sets, thereby contributing to the economic development of the 21st century.

Positive emotions instill confidence in employees, allowing them to attempt new approaches and strategies at work (Phungsoonthorn and Charoensukmongkol, 2022). The ability of employees to emotionally adapt to their challenges influence their work productivity caused by either institutional or environmental factors (Puyod and Charoensukmongkol, 2021). Employees that approach their work with an innovative thinking benefit their organizations while also increasing their individual wellbeing. Innovativeness will allow organizations to move faster and hence grow stronger. Knowing the characteristics that influence innovativeness may be valuable for organizations in this regard (Cobanoglu, 2021).

In Philippine setting, Puyod and Charoensukmongkol (2021) analyzed the cases of Filipino University teachers. Their analysis suggested that role ambiguity and emotional exhaustion were common among Filipino workers. The results indicate that the combination of workplace rumor and organizational formalization has a significant impact on the levels of role uncertainty and emotional exhaustion experienced by employees. The findings indicate that the negative impact on employees' comprehension of their job responsibilities and psychological well-being is exacerbated by the co-occurrence of rumors and a strongly rigid organizational framework.

Employee adaptability is the capacity to rapidly modify one's behavior in response to innovative internal difficulties and external environmental conditions. Employees' receptivity to and subsequent utilization of feedback gives the data necessary for swiftly adjusting behavior as they encounter workplace adversities. This insight should enable individuals in a stronger position to adapt their behavior quickly, particularly in the face of unexpected situational or environmental shocks (Weiss and Merrigan, 2021). Therefore, when highly coachable individuals meet uncertain or unfamiliar situations, they are more likely to seek and integrate feedback to better understanding how to function in these new contexts.

Critical thinking, active learning, analytical thinking and innovativeness, complex problem-solving aptitude, and self-management skills, e.g., resilience to stress and flexibility are among the top qualities that will ascend to the top (Li, 2022; Schwab and Samans, 2016). Schwab and Zahidi (2020) indicated in their estimate that 84% of businesses are interested in a digitalized work setting, including a large increase in remote labor (Li, 2022). While different industries are engaging in fast development, the higher education is urged to take part in training competent graduates (Li, 2022).

The primary duty of an educator is to ascertain the subject matter that must be comprehended

and subsequently imparted to students in a given course (Leitzel and Vogler, 1994; Rapanta et al., 2021). Essentially, the process of curriculum alignment necessitates a robust correlation between the intended learning outcomes and the evaluation methods, between the intended learning outcomes and the instructional strategies and resources, and between the evaluation methods and the instructional strategies and resources (Anderson, 2002).

The term "alignment" in the Curriculum Alignment Theory denotes a purposeful and inherent correlation between various components of the curriculum, such as assessment techniques, teaching methods, institutional policies, and climate (Biggs and Tang, 2012). The process of teaching and learning occurs within a cohesive system, where each component functions in connection to facilitate and reinforces the other (Biggs and Tang, 2012; Chavez and Lamorinas, 2023; Rapanta et al., 2021). The Curriculum Alignment Theory inspires this study to understand more on what skills the post-pandemic industries require their employees to have and use this discovery to reconfigure the higher education curriculum.

Given the widespread impact of the pandemic, including the challenges posed by emergency remote teaching, educators have been prompted to reconsider their responsibilities, approaches to facilitating student learning, and perceptions of students as independent learners, engaged members of society, and self-directed agents (Rapanta et al., 2021). The COVID-19 pandemic has provided an opportunity to reconsider ideas about education and its curriculum in a post-pandemic setting.

Educational professionals and institutions have faced challenges and were unprepared, but there is now a greater willingness to adopt new learning opportunities and innovation. A flexible design is necessary for learning environments to adapt to different learning settings, such as in-person or remote, and to meet students' needs and learning goals (Chavez, 2022; Rapanta et al., 2021). Learning environments that are flexible in design allow for curriculum personalization.

This study aims to determine the micro-skills of the labor force in higher education. Previous studies showed the significance of skills (e.g., innovativeness, and creativity) in education which influenced different aspects of teaching and workplace setting. However, limited studies had been carried out on micro-skills that are equally essential to the development of the teaching atmosphere.

2. Research objectives

Determine the post-pandemic micro-skills needed by the labor force as dictated by the industries in terms of:

a) Self-motivation
b) Innovativeness
c) Adaptive instinct
d) Other micro-skills

Identify management strategies that human resource departments use to enable the labor force in terms of:

a) Self-motivation
b) Innovativeness
c) Adaptive instinct
d) Other micro-skills

Determine if there is a reconfiguration of courses or subjects among all programs to integrate post-pandemic micro skills in terms of (explaining with specific cases or analogies):

a) Self-motivation
b) Innovativeness
c) Adaptive instinct
d) Other micro-skills

Identify specific curriculum development strategies or actions of higher education institutions (HEIs) to integrate post-pandemic micro-skills in the higher education curriculum.

3. Literature review

Limited studies had been done regarding the influence of micro-skills on the higher education institutions. This study provides insight on the relevant components of this type of skill and aims to capture its significance to the development of higher education curriculum in a post-pandemic setting.

The association can be seen in the areas of self-motivation and the development of social skills. This is because when teacher master the practices and concepts of the emotional intelligence component, which is assimilated with technology in learning, they can increase students' levels of self-motivation as well as their capacity to build excellent and responsive communication between themselves and their students through interactive learning (Defrianti and Iskandar, 2022).

When teachers can maintain their composure, it is much simpler for them to inspire their students to develop a stable emotional state. Teachers who are intelligent and have a stable emotional state find it much simpler to learn new things and continue to build their abilities (Defrianti and Iskandar, 2022). However, few research have focused on productivity loss among academic personnel in order to determine how or if the perceived loss is affected by the identified difficulties and challenges in teaching, either alone or in association with work motivation and working attitudes (Lohela-Karlsson et al., 2022).

A climate for innovation is critical to improving the quality of education systems because it is associated with creativity and a creativity in the workplace with job participation that addresses children's needs; it develops innovative behavior at work among teachers, it is associated with changes in teachers' practices and engagement, and it encourages teachers to share and build on each other's ideas and suggestions (Da'as et al., 2022).

In addition, organizations provide money for educational innovations, and central departments of learning and teaching in higher education institutions as well as nonprofit organizations are often the ones that launch new educational programs (Stasewitsch and Kauffeld, 2022). Teachers and institutions are not required to have access to financing to launch educational innovations because such innovations depend on the enthusiasm and motivation of higher education professors to innovate and change their teaching methods (Stasewitsch and Kauffeld, 2022). One of the factors that might be considered when determining whether an educational innovation has been successful in higher education is whether it is project- or system-oriented.

Resilience is the process of managing or handling considerable stress effectively, with the aid of

personal and environmental assets and resources. Individuals exhibit positive adaptation in the face of adversity as a result (Morote et al., 2022). Regardless of a student's home situation, schools may give them with a supportive and safe atmosphere that fosters resilience. In a whole-school approach, teachers and staff contribute to the development of a school community that fosters resilience in all students. They are conscious of the potential general and long-term implications on a school culture that fosters resilience (Morote et al., 2022). Frequently, teachers administer the curriculum; therefore, they must obtain appropriate training to feel competent and understand the curriculum and the teaching materials to be used.

When it comes to fostering holistic and long-term human development, the primary role that schools and the education system play is to develop the curriculum-based on the competencies of their stakeholders (Morote et al., 2022). For an organization to provide an effective education amidst a post-pandemic setting, the quality of its services and strategies must be maintained at a high level. When considering the wide range of activities that universities engage in both internally and externally, quality management develops into a challenging operational sector for the entire establishment (Ozsen et al., 2022).

4. Methods

The purpose of this study was to determine the micro-skills of higher education teachers based on self-motivation, innovativeness, adaptability, among other micro-skills. This study aimed to assess its influence on the development of the higher education curriculum in a post-pandemic setting. To determine a more profound extraction of experience and narratives, this research made use of a qualitative design as the research method. The exploratory research was employed to extract more in-depth information from the participants of the study who had established experiences and narratives in higher education institutions and teaching. Theoretical and developmental research rely on narrative data as their primary source of evidence.

4.1. Participants

The study used purposive sampling, which included 12 higher education officers, staffs, and experts. These participants have background in human resource and development, innovation, research, and organizational management. Specifically, the participants in this study are human resource managers or officers (3 participants), manpower organizations managers or organizational heads (3 participants), and curriculum development experts (6 participants).

Purposive sampling was employed in this study to ensure that the participants were able to represent the population. Purposive sampling helps the researchers to gather participants who are more likely to be involved in the subject matter (Aguirre et al., 2023; Calaro et al., 2023; Hassan, 2022). In purposive sampling, the study has to determine certain characteristics that their participants should have (Hassan, 2022), i.e., in this study, the human resource officers, curriculum development experts, and managers of manpower organizations. Purposive sampling allows the researchers to collect first-hand narrative data from limited number of respondents.

4.2. Instrument

The participants of the study undergone an interview process to collect narratives based on

motivation, innovativeness, adaptability, and other micro-skills. Presented in **Table 1** are the interview question guides being used in the study:

1) What are the post-pandemic micro-skills needed by the labor force as dictated by the industries?
2) What management strategies should human resource departments use to enable the labor force?
3) Should there be a reconfiguration of courses or subjects among all programs to integrate post-pandemic micro skills? Explain with specific cases or analogies.
4) How should higher education institutions (HEIs) integrate post-pandemic micro-skills in the higher education curriculum? Elaborate on specific curriculum development strategies or actions.

Table 1. Instrument of the study.

Objective	Interview questions	Participants	*n*
1. Determine the post-pandemic micro-skills needed by the labor force as dictated by the industries in terms of: a. Self-motivation b. Innovativeness c. Adaptive instinct d. Other micro-skills	1. What are the post-pandemic micro-skills needed by the labor force as dictated by the industries in terms of: a. Self-motivation b. Innovativeness c. Adaptive instinct d. Other micro-skills	Human resource managers or officers	3
2. Identify management strategies that human resource departments use to enable the labor force in terms of: e. Self-motivation f. Innovativeness g. Adaptive instinct h. Other micro-skills	2. What management strategies should human resource departments use to enable the labor force in terms of: e. Self-motivation f. Innovativeness g. Adaptive instinct h. Other micro-skills	Manpower organizations managers or organizational heads	3
3. Determine if there is a need for the reconfiguration of courses or subjects among all programs to integrate post-pandemic micro skills in terms of (explaining with specific cases or analogies): i. Self-motivation j. Innovativeness k. Adaptive instinct l. Other micro-skills	3. Should there be a reconfiguration of courses or subjects among all programs to integrate post-pandemic micro skills in terms of (explaining with specific cases or analogies): i. Self-motivation j. Innovativeness k. Adaptive instinct l. Other micro-skills	Curriculum development experts	3
4. Identify specific curriculum development strategies or actions of higher education institutions HEIs to integrate post-pandemic micro-skills in the higher education curriculum	4. How should higher education institutions (HEIs) integrate post-pandemic micro-skills in the higher education curriculum? Elaborate on specific curriculum development strategies or actions.	Curriculum development Experts	3

4.3. Research procedures

The researchers asked permission from the school administrators to interview the 12 participants. All participants who agreed to participate in this study signed a consent form. Before conducting the interview, detailed instructions were provided to respondents. With the consent of the authorities and the researchers, the researchers established a schedule for the individual interview. Participation

in the interview was complete. The narrative data were examined using coded respondent replies and themes based on the research objectives and emerging topics. Significant answers highlighted the data's relevance to the research aims.

4.4. Data analysis

The primary data in this study was the narratives of the participants collected through case scenario-based interviews and focus group discussions. This study used unstructured questions in collecting the narrative data from the participants. Zhang and Wildemuth (2009) described unstructured interviews as "… as a natural extension of participant observation, because they so often occur as part of ongoing participant observation…" (p. 2).

The narrative data from the unstructured interview sessions were coded and were analyzed through thematic analysis. Thematic analysis allows the researchers to make codes for responses, translate the data, and interpret the statements into meaningful reflections (Nowell et al., 2017). For qualitative studies, thematic analysis allows the researchers to analyze the data using inductive and deductive methods. This study utilized the principle of thematic analysis described by Lochmiller (2021) where the narrative responses were broken into smaller and comprehensible ideas. In analyzing, the researchers break down, or conceptually described as "to fracture", the statements into smaller bits of information useful for developing themes (Riessman, 2011).

5. Results

Objective 1: Determine the post-pandemic micro-skills needed by the labor force as dictated by the industries.

Self-motivation

Two participants highlight the importance of self-motivation in post-pandemic setting. Major reflections of self-motivation were "to be driven to keep going" and "to understand the calling". These are the emerging components of self-motivation in a post-pandemic setting of industries. It has been determined that motivation skills also reflect the capacity of an individual to be adaptive. Basically, the components of self-motivation and adaptation are interrelated based on how the human resource perceive self-motivation as the ability to see situations positively and adapting to challenges.

> *"I feel it's an ever-needed skill, like no specific time that you need it. If you really want to succeed, or if you really want to keep going because motivation is fragile. I think, it depends on people who had been impacted by the pandemic. They need to be motivated. Because of lay-offs, lost opportunities, that is why some people lost motivation. I need to be motivated all the time to keep going. I feel it is driven by different feelings in different levels."*

> *"The motivation skills that you should have during the post-pandemic should be something that help you cope in anything stressful. I don't think we are done with the pandemic; I think there is always a problem. It is stressful because it is giving teachers a double job. Instead of concentrating on face-to-face lecturing, teachers also do online or virtual classes. So that is very stressful. As a teacher, we can motivate ourselves, we understand our calling that we are here not just to be happy with our job but also make others happy."*

Innovativeness

For an administrative and workforce standpoint, three participants think that innovation is an essential part of competency because the pandemic requires the manpower to be innovative. It requires them to innovate with the use of technology, being responsive, dynamic, and inclusive. However, innovation focuses on different points, e.g., technical, managerial, and individual innovativeness. These are the emerging characteristics of innovation in the post-pandemic setting of different industries.

> *"Innovation that is very evident on how manpower communicates to customers. Because before, it needs to be face-to-face, but now we are open for virtual meetings, including our customers. From there, the skills of our sales post must be up to date, these are skills that had been developed, as well as what the important results that needed to be delivered."*

Adaptive instinct

Three participants consider adaptation as the most relevant micro-skill during post pandemic. There are also hidden characteristics of adaptive instincts as a micro-skill. Adaptive skills have been determined in different perceptions, e.g., attitude-based, competition, and stress-driven environment. Adaptive instincts require these components to develop an optimal level of adaptability amidst the post-pandemic setting.

> *"I observe, aside from adapting, one of the reasons they do it is to really expose their selves. Some are doing practical things; at the same time, they also leave a mark to be noticed. Being adaptive is also part of that. Eventually, all will adapt because you introduce this, then this will be followed."*

Other micro-skills

Two participants think that there is a need to develop the reliability of labor force in the post-pandemic setting. Reliability involves the ability to accomplish the tasks on time, connectivity, communication, cooperation, and involvement. Reliability appears to be a separate micro-skill that shows the willingness and drive of a work force to do tasks remotely. However, it is also determined that reliability involves motivation to be competent and productive.

> *"Reliability, since we can work from home, we can't go to office, so it demands you to become reliable. Some employees were not reliable especially when it is not scheduled to work in office. The workloads that needed to be accomplished are not being turned over. There are many factors for this, the internet, or whatever issues. This is where I notice the need to become reliable in a specific working space. If there is a need to accomplish a workload in each due date, some are not able to do. They are not as reliable as before the pandemic. This is something that we clearly need."*

Objective 2: Identify management strategies that human resource departments use to enable the labor force.

Self-motivation

One participant thinks that motivation is an external factor that can impact the self-motivation of

employees. The workplace setting of the labor force can influence their level of motivation. It is an essential component of management strategies during post pandemic in terms of motivation because it employs emotional support and lenient workplace. This enables the workforce to be more self-motivated, to improve their self-efficacy, and competency.

> *"Ang motivation is driven by more on external. Good for us, we are not widely impacted by the pandemic. Because of how the company treat the people, the motivation is sustainable. That is why it's like an external factor as it also triggers the internal motivation."*

Innovativeness

Two participants agree that innovations involve virtual programs and trainings. Industries incorporate online trainings to improve the competencies and skills of their employees. One participant also added that in the post-pandemic setting, their industry is "back to normal" operations in training and skill development. Industries are integrated to innovativeness in different processes depending on which applies to them. Nevertheless, innovativeness in the post-pandemic setting requires the ability to engage in technology, planning, risk management, and mitigation.

> *"One of the innovations was the virtual trainings and programs that even without trainers, employees can still be coached because learning doesn't stop. Now in post pandemic, basically, we are back to regular way of engaging, the classroom training, the mentoring. So, it's like back to normal activities. The main different is that we are always one-step ahead. If there's similar problems, the learning will not stop—it will be continuous."*

Adaptive instinct

In terms of how the human resource departments integrate strategies, there are various characteristics that emerge. One is the localization of responsibilities to people who have difficulties in transportation due to restrictions. This allows them to work remotely and "maximize" their time. Two participants also think that awareness on the environment (e.g., risks, opportunities, and advantages) allows the workforce to have initiative to mitigate the limitations that they experience and develop their adaptive skills.

> *"Even with people, the adjustments, for example, are confined in an area, we are not able to travel. If what is our area of responsibility, you are only operating there to maximize your time. Those are the adjustments that if in case something happens, we have our push button models. Your capacity to be adaptable in your situation, you should be able to understand your environment. So, you should have this perspective—you will not stop, what you can do for the mean time, it's like having an initiative."*

Other micro-skills

Two participants view leniency of the management and departments as an emerging skill that the industries should have during post pandemic. Leniency in workloads, time, activities, and participation are some of the components of this skill. This allows the workforce to adapt and to be flexible in their situations. Labor force exposed in this type of workplace is capable to be competent in terms of applying innovative strategies.

> *"The people are well attended to. We didn't feel we are being left behind, we didn't feet that the*

company doesn't care. Some industries like… there is little effort done for their employee. If you say this is a managerial strategy, maybe it is because it worked for us. The company is very supportive, they give us adjustments."

"There are times some are not able to work on time, they are not being laid off. Without making them feel that they are disconnected or being left behind."

Objective 3: Determine if there is a reconfiguration of courses or subjects among all programs to integrate post-pandemic micro skills.

Self-motivation

One participant from the higher education industry believed that self-motivation is an important part of a professional endeavor. One must be able to understand their situation because it keeps them motivated. Motivation helps teachers to integrate the learning in the post-pandemic setting with an emphasis on assessing the mission and purpose of the institution. This showed that self-motivation also pertains to how workforce align their selves to the purpose of their organization and develops strategies that change their situation.

"So, the school right not is trying its best to offer quality education. So as teachers, you need to be a person who understand the past—the pandemic—and then the post-pandemic. You also need to understand your role because if you understand your role as a teacher, you will be motivated despite the circumstance. Whatever the situation is, you will be motivated to teach and encourage and impact the lives of students."

Innovativeness

Three participants agreed that innovativeness is a skill that the workforce should have. They also highlighted that their institution was applying innovative management strategies that govern flexibility. Innovation, in terms of the institutional level, involves integration into technology, flexibility, and management. Innovation was a broad concept that differs on how the workforce perceive innovativeness as a skill. It was clear that innovation was not being contained in a specific condition or description—it is a series of activities that aim to mitigate any circumstance.

"Basically, the post-pandemic is really demanding us to be innovative. In our situation, you cannot just have you focus on face-to-face classes because you also need to employ virtual discussion. We divided our students into two groups, the group A for this week will go face-to-face, for Group B in this week they will go online. You need to be innovative; you need to embrace the reality that technology helps a lot when it comes to teaching."

"Now, we are using different platforms like the Google Meet, Zoom, Messenger in actually addressing the academic gap that has been there for a while during the pandemic. The post-pandemic requires for us to be innovative in all aspects."

Adaptive instinct

Two participants believed that adaptive instinct is a skill that can help improve the workforce. A participant suggested that, in education, teachers should be adaptive because this can help their students be productive and excel even in the online setting. This also opened the concept

of institutional adaptive instinct that focuses on how the institution improves the ability of their workforce to adapt to the situation. However, it was unclear as to how the institutions integrate into this; but it was determined that some introduce strategies that also share characteristics of adaptive instincts.

"We need to be adaptive, because if you will not, you will be left behind. For example, during the post-pandemic, we need to be digital, we need to use technology. We need to be adaptive because if you will not, the students will no longer excel."

"It's not only the teachers who will be adaptive but also the students because this is how it works; this is how the new normal works. If you will not adapt to the changes, then you will be left behind, the students will suffer and the quality that you are supposed to give to your students will no longer excel."

Other micro-skills

One described a remarkable emerging skill as "assuring the people" in a workplace. This includes checking their performance, personal life, health, and mentality. This was described as a "new skill" that needed to be strategized especially in the post-pandemic setting. Although there was no definite parameter in this specific micro-skill, it shares similarities to other skills described before. This was essential in developing lenient and safe workplaces during post-pandemic condition.

"You're dealing with people; it is necessary that you are looking after for your people. This is the soft skill that we don't know before. We do mentor, we do coaching, but that's more on how to deliver your sales, deliver your targets. But when it comes to engagement like 'how are you?', 'how's your family, your health?'—like you are assuring everything is handled carefully—you can see the support of the company. This is a different skill. This is something that we should know. I think, this is the skill that the managers need."

Objective 4: Identify specific curriculum development strategies or actions of higher education institutions (HEIs) to integrate post-pandemic micro-skills in the higher education curriculum.

One participant from higher education described how their industry integrated post-pandemic micro skills in their curriculum. One significant micro skill was the adaptability of their curriculum to the present situation. They see their mission, vision, and goals as their basis and purpose which predicts the outcome of the curriculum. This served as the blueprint of their strategies and implementation.

Additionally, they innovate their teaching processes through the development of essential competency models where teachers will assess which lessons are widely needed to be discussed. These models often focus on skill development, career assessment, and personal improvement which help students to be "value-laden" individuals.

"In our curriculum, we always go back to the mission, vision, and goals of the school. In our college, we always integrate our mission, vision, and goals to whatever thing we are doing, whether it is for curriculum, activities, or extracurricular activities. If we have these core values, you can develop the students into value-laden individuals. We can develop our students to become driven individuals because our values will always be our values at something very

important for students to learn."

"Even during the pandemic, we are already trying to change the curriculum. So instead of discussing, the whole group will only select the best which we think are important in the development of students; so that's the most essential learning competency. We are even adapting that to the new syllabus because we have also realized as teachers, we are discussing too many, yet we are missing out essential elements of the course. So right now, we are trying to change that, so instead of discussing everything, we are only select the most essential learning competency. This essential learning competency will be used when the students will graduate, or when they apply for a job, so these are what they really need to know."

6. Discussion

Objective 1: Determine the post-pandemic micro-skills needed by the labor force as dictated by the industries.

In this study, self-motivation, innovativeness, and adaptive instincts were some of the important skills that the post-pandemic industries need. Workplaces in post-pandemic industries require their stakeholders to be competent in assessing their current situation, develop problem-solving strategies, and adapt to changes that their industry offers. This study realized that motivation is a key driving factor for this—when an employee is motivated enough to take actions to the challenges that he experiences, these results in increased social engagement and work accountability.

Self Determination Theory posits that motivation can be directly influenced by the needs, values, and interests of an employee which results in higher level of workplace motivation (Rigby and Ryan, 2018). The relationship of motivation and intentions to continue was examined because understanding the components that influence decision making is essential for enhancing decision making of employees (Brown and Daus, 2016; Panisoara et al., 2020). In the theoretical aspect of affectivity, Zajonc (1980) explained that "affect plays a more central role in the decision-making process." In addition, intrinsic motivation was found to have a significant impact on the desire to continue using online instruction (Guay et al., 2000) and this condition was still present even current time (Panisoara et al., 2020).

Also, as a micro-skill, most importantly, innovations do not necessarily need to be implemented on a large scale because innovations can also be thought of as locally based, inventive modifications to already established procedures (Ellis et al., 2020). This study was also able to determine the connection of innovativeness to the ability to integrate technology in teaching. During this period, the diffusion of technology frequently surpassed social and national borders and extended around the globe (Ågerfalk et al., 2020; Dey et al., 2020). For instance, the increase in usage and popularity of Zoom and TikTok demonstrates the speed with which a technical application can spread globally (Dey et al., 2020).

Specifically, in the academic and education setting, the curriculum developers observed changes on how teachers deliver their lessons to their students through online and extended instructional strategies. This opens a new opportunity for teachers to build their competence in meeting the goals of their institution without following conventional strategies prescribed by their institution. Innovative and creative approaches in learning could develop students' respectfulness and critical

thinking (Duhaylungsod and Chavez, 2023). Organizational support could be a powerful strategy for administrators to improve the quality of staff and the curriculum (Dela Calzada, 2023). Generally, innovativeness in this study can be described as the ability of an individual to take autonomous steps applicable for their situation.

Resilience is an adaptive power to restructure practices and structures in response to systemic breakdowns or environmental changes (Bento et al., 2021). The principle emphasizes learning from unexpected events and the development of new understanding, which makes the system more resilient to future disruptions (Bento et al., 2021; Müller et al., 2021). In education, teachers need to be able to solve problems and to be capable of providing students with an education that is appropriate for them (Munastiwi, 2021; Mutlu Göcmen and Gülec, 2018; Yavuz et al., 2010).

In the context of a post-pandemic sphere, adaptability emerges as a critical factor for businesses as they strive to navigate through the uncertainties and dynamic market conditions. Organizations stand to benefit from employees who exhibit responsiveness, adaptability, and willingness to acquire new competencies in a timely manner. With the increasing adoption of hybrid models by organizations, there is a growing demand for employees who possess the ability to work autonomously and demonstrate proactive behavior.

This study explored how employees develop their skills in time management, make effective work decisions, and have solutions to their work challenges. Development of these skills has a positive effect on productivity, work efficiency, and trust within the employer-employee relationship.

Objective 2: Identify management strategies that human resource departments use to enable the labor force.

The stabilization of the situation was characterized by an emphasis on urgent, reportedly short-term, and high-pressure problem-solving (Ellis et al., 2020). Nonetheless, these conveyed a potent sense of their agency—albeit implicitly at first—and the ways in which they embraced responsibility (Ellis et al., 2020). The extent of the system shock necessitated a stabilizing response within a framework of fundamentally boundless horizons (Ellis et al, 2020; Scull et al., 2020). For instance, schools reported that dividing classes into study groups was an option to implement bended learning. Because the class size is small, the lessons are expected to be delivered effectively (Munastiwi, 2021).

Earlier studies on the formation of innovation in educational practices in higher education has revealed examples in which novelty developed from local complex interactions among interdependent individuals rather than from the idealization of people in formal leadership roles (Bento, 2011; Bento et al., 2021). In such circumstances, institutional leaders recognized and facilitated emergent processes by providing institutional support and spaces for discussion about what was occurring (Duchek, 2020)

In a broader sense, among HEIs and educational sector, complex networks of relationships cannot be fully comprehended by examining formal organizational structures (Bento, 2011; Aouad and Bento, 2020). In order to accommodate the inconvenience caused by the COVID-19 pandemic, the instructional plan was also modified (Munastiwi, 2021; Yao et al., 2020).

Because of the nature of innovativeness as being fluid and diverse, teachers incorporate “creative”

strategies that allow them to create an online setting. Creativity is an important aspect to carry out education effectively (Munastiwi, 2021). There are various methods available to be utilized in teaching activities (Yao et al., 2020). Because of that, some strategies under innovation are described as "creative".

Industries in this study realized that integrating to innovative and adaptive strategies coherently provides a synergistic effect, fostering a flexible and resilient workforce. Strong interpersonal relationships, skill development opportunities, a healthy work environment, and emotional support empower employees to navigate the challenges of a post-pandemic industry. This holistic approach improves employee engagement, productivity, and overall well-being, resulting in a workforce capable of driving industry adaptation.

Furthermore, there is a complicated exchange of resources between the system and its environmental elements, which influences system interactions and behaviors (Bento et al., 2021; Panisoara et al., 2020). The resilience approach to social economic systems emphasizes nonlinearities, uncertainty, and a temporal progression spanning a period of gradual and drastic change (Bento, 2011; Bento et al., 2021; Folke, 2006). Hence, strategies vary based on its applicability and lived experiences of the people. In education, institutions use multi-level strategies that connect emotions, mental, and psychological being (e.g., support, motivation) with institutional and organizational processes (e.g., leadership, skill development).

This study determined that some industries in the post-pandemic era have recognized the importance of investing in ongoing enhancement of employee competencies, which can be achieved through relevant training programs, workshops, and growth prospects. By acquiring advanced skill sets, employees become better equipped to handle evolving responsibilities, technological advancements, and market requirements, thereby ensuring competitiveness and adaptability in a dynamic post-pandemic environment.

Objective 3: Determine if there is a reconfiguration of courses or subjects among all programs to integrate post-pandemic micro skills.

Teachers are unable to manage the educational environment in which they operate under the current pandemic crisis (Panisoara et al., 2020). Certain unknown elements may influence the continuation intention of online education, particularly in a crisis scenario where the involvement of emotions is explicitly had high uncertainty regarding the working environment (Panisoara et al., 2020; San-Martín et al., 2020).

Furthermore, many locations, particularly in distant areas, have a scarcity of instructional resources (Kusumastuti et al., 2020; Nugroho and Atmojo, 2020). This could be the result of a shifting curriculum or a lack of preparedness on the part of the students. However, teachers should have resources for their prior instructional actions (Munastiwi, 2021).

The implementation of the curriculum was also impacted by the disruptions that occurred in educational practice (Munastiwi, 2021). Due to the difficulty of fulfilling the teaching/learning objective, institutions of higher learning altered their learning plans in order to retain the education activities. Although it could be deemed a loss, it was still preferable to receiving no knowledge at all (Chick et al., 2020).

Teachers' problem-solving abilities were one of the obstacles to maximizing education delivery. There is a close connection between the ability to think critically and the ability to solve problems (Kozikoğlu, 2019; Munastiwi, 2021). Therefore, a comprehensive understanding of the issues and potential solutions is necessary. Problem-solving abilities must be regenerated by constant training and education (Munastiwi, 2021; Yavuz et al., 2010). Teachers should have the necessary knowledge to design effective problem-solving solutions. Certain settings, such as remote, underdeveloped regions, offer a native environment and sociocultural characteristics that are beneficial for developing problem-solving skills (Parmin and Fibriana, 2019).

Personal traits, organizational intelligence, job competency, and social intelligence are the key aspects that have established the benchmark for university graduates in industrial needs (Charoensukmongkol and Pandey, 2022; Chavez, 2020; Fayolle and Redford, 2014; Pino-Mejías and Luque-Calvo, 2021; Rahmah and Fadhli, 2021; Sartika and Nengsi, 2022). Consequently, universities serve as the administrators for achieving various competences in hard and soft skills, most particularly, those skills on technology (Levano-Francia et al., 2019; Sartika and Nengsi, 2022). It is also essential for administrators to build the parental involvement in learning to improve student competence and learning capacity (Chavez, 2022; Chavez et al., 2023).

The contextual exploration in this study indicated shifts in the need for curriculum development. The post-pandemic landscape has placed greater emphasis on the significance of soft skills, including adaptability, communication, critical thinking, and collaboration, in addition to technical skills. The emphasis on technical knowledge in higher education curricula often results in the neglect of the development of crucial soft skills.

Additionally, intrinsic motivation was a strong factor for motivation to persevere, demonstrating that in-service teachers integrate into online training because they find it engaging, a challenge for their growth, innovative skills, creativity, and ability to work in stressful setting. Teachers should leverage many knowledge sources as the technological pedagogical knowledge framework (TPK) suggests (Panisoara et al., 2020). Teachers should also examine different contextual aspects and test the viability of their intended online lesson (Dong et al., 2020; Panisoara et al., 2020). Consistent with prior findings, perceived TPK self-efficacy greatly encouraged the intention to continue using online teaching (Ifinedo et al., 2019; Chang et al., 2013).

In some complicated systems, positive feedback loops may arise spontaneously and without external input. Small local changes in starting conditions may result in system-level adjustments in such systems (Bento et al., 2021). At this point, a concern emerges regarding the feasibility of enabling positive feedback loops when they do not occur naturally (Krispin, 2017). In a study conducted among debate participants, positive and constructive feedbacks aid their language learning and competence to its use (Ceneciro et al., 2023). These are the major components of course reconfigurations that would integrate the learning in the post-pandemic setting.

The narratives in this study indicated that the dynamic nature of technology, industry trends, and market needs poses a challenge to higher education curricula, which may find it difficult to keep up with the pace of change. In the same vein, learning should be motivational rather than a responsibility of students. There was a need for a proactive and holistic curriculum that meets the post-pandemic industries.

Objective 4: Identify specific curriculum development strategies or actions of higher education institutions (HEIs) to integrate post-pandemic micro-skills in the higher education curriculum.

The COVID-19 pandemic will become a part of the educational institution history as they progress through their evolutionary process (Bento et al., 2021). The COVID-19 period may open new dimensions for theoretical advancement and additional empirical investigation (Dey et al., 2020). Understanding how learning and novel behavioral patterns emerged because of a complex web of interactions between several factors and in the setting of resource engagements between the system and its environment is necessary for implementing the complex system perspective to HEIs (Bento et al., 2021; Berkes, 2017).

The need for micro-skills, e.g., self-motivation, innovativeness, and adaptability, depends on the situation that a workforce is exposed into. For instance, in-service online instruction is used by teachers because they find it to be an engaging technique and "interesting method" (Panisoara et al., 2020). Innovation, on the other hand, revolved on a specific kind of "deliberate, creatively-driven change" (Ellis, Mansell, and Steadman, 2021; Ellis, Steadman adn Mao, 2020; Miettinen, 2013). Several studies have already emphasized the educational challenges raised by the pandemic (Adov and Mäeots, 2021; Folkman et al., 2023; Müller et al., 2021; Peimani and Kamalipour, 2021). Research has shown obstacles such as the inadequacy of online teaching infrastructures, the minimal access of teachers to online teaching methods, the information gap, a non-conducive atmosphere for home learning, and disparity in many nations (Adov and Mäeots, 2021; Bento et al., 2021; Chavez et al., 2023).

Industries should adapt to the changing social and economic surroundings to last and thrive over the long run (Ågerfalk et al., 2020). Due to lockdown and social distancing measures, the urge for using technological applications like Zoom and social networking apps has given additional dimensions to technology usage (Dey et al., 2020). Additionally, self-organization, or the formation of new structures, education, and the investigation of novel possibilities, are all aspects of resilience (Berkes, 2017). This typically needs fostering collaborative networks, knowledge co-production, and human interaction systems (Bento et al., 2021; Berkes, 2017).

The curriculum developers in this study realized that the education system needs to place a primary emphasis on encouraging students to cultivate "micro-skills" including self-motivation, inventiveness, and flexibility. Learning these fundamental skills to prepare students to an ever-changing setting is crucial, and this learning can be aided by participatory and immersive pedagogical methods such as web-based professional development, which has been shown to be both effective and interesting for educators.

Teachers who do not believe they are technologically efficient or well supported by their institutions have more severe negative perception when teaching online and are less driven and autonomously involved in their profession (Moreira-Fontán et al., 2019; Panisoara et al., 2020). As a result, personnel were constantly struggling to adjust to new work patterns and cope with the increased need for technology use (Dey et al., 2020; Tuzovic and Kabadayi, 2020).

Folke (2006) defines resilience as a system's ability to rearrange its structures and the creation of new behavioral patterns. This is an adaptive capability that extends beyond absorbing disruptions and retaining functionality, which are typically associated with system robustness (Bento et al.,

2021).

Duchek (2020) claimed that to deal with unpredictable circumstances, resilient organizations build a broad and diversified knowledge base, which is frequently accomplished through enabling inquiry rather than simply utilizing already existing knowledge. As described by March (1994), "… exploration includes things captured by terms such as search, variation, risk taking, experimentation, play, flexibility, discovery, innovation." The curriculum developers as well as the teachers thought of mobilizing the minds of the students—engaging them in developing their thinking skills rather than theoretical-based learning.

Not only are these strategies helpful in increasing operational efficiency for the short term, but they also have the potential to prove effective in developing the firms' transformation to enhance their survival and sustainability of business in order to deal with the situation that has arisen in the wake of COVID-19 (Carnevale and Hatak, 2020; Dey et al., 2020). Nevertheless, organizations are becoming more effective in this challenging time.

The integration of deliberate, creatively driven change and the fostering of resilience should be considered essential components of the curriculum. It is imperative for students to cultivate the skill of adapting to disruptions, restructuring systems, and embracing innovative opportunities. The establishment of collaborative networks, co-production of knowledge, and human interaction systems within the educational setting can facilitate the attainment of this objective.

7. Future directions of human resource profiling in curriculum

Narrative analysis in this study provided in-depth assessment on what skills that post-pandemic industries need. Curriculum has to adapt to the changes that these industries experienced, and craft specific curriculum designed to meet the competencies required.

Future directions of human resource profiling specifically for curriculum development revolve on the contexts of motivation, innovativeness, and adaptation. These major skills were seen by the industries as important competencies that their human resources should possess.

"*The motivation is driven by more on external [factors].*" A manager of a manpower organization expressed how external factors can influence one's internal motivation. This reflects the need of curriculum developers to take step on how to increase students' ability to manage external pressure. Hence, there is a need for a curriculum that measures the motivation of a student based on several metrics. This enables the administration to map and monitor the competencies of their students, at the same time, preparing them to take leadership responsibilities outside academic setting.

"*If there [are] problems, the learning will not stop—it will be continuous.*" Human resource departments in different industries were aware of how it is demanding to be employed in their field. Innovativeness is an important skill for future leaders, managers, and workers. Although the current curriculum offers substantial theoretical knowledge for students, the industries need human resources who are capable to innovate to meet the goals of their industries. Post-pandemic industries need human resources that are not only knowledgeable in their filed but also who can transfer their theoretical knowledge into tangible and proactive innovative strategies. This is an opportunity for curriculum developers to build the innovative minds of their students, reconfiguring them to employ

creative abilities in solving workplace-relevant problems.

"*We need to be adaptive, because if you will not, you will be left behind.*" This statement was from a curriculum developer who realized the importance of adaptation in sudden changes in the environment. He saw how his school administration shifted its priority to distance learning. Some of the teachers were instructed to deliver their lessons online or modular. This change in the structure of the schools represents an important lesson to the colleges and universities, i.e., to develop responsive students in mitigating the impacts of external pressures.

Figure 1 highlights the diagram for administrative skill profiling for curriculum reconfiguration. Initially, administrators have to be responsive to the needs of their workforce. Through continual skill development mechanisms, administrators in education ensure their stakeholders are competent and productive. Other institutional factors, e.g., motivation, connection, and communication, have to be incorporated in these forms of growth management. This enables the institution to respond to the needs of students after transitioning from distance learning.

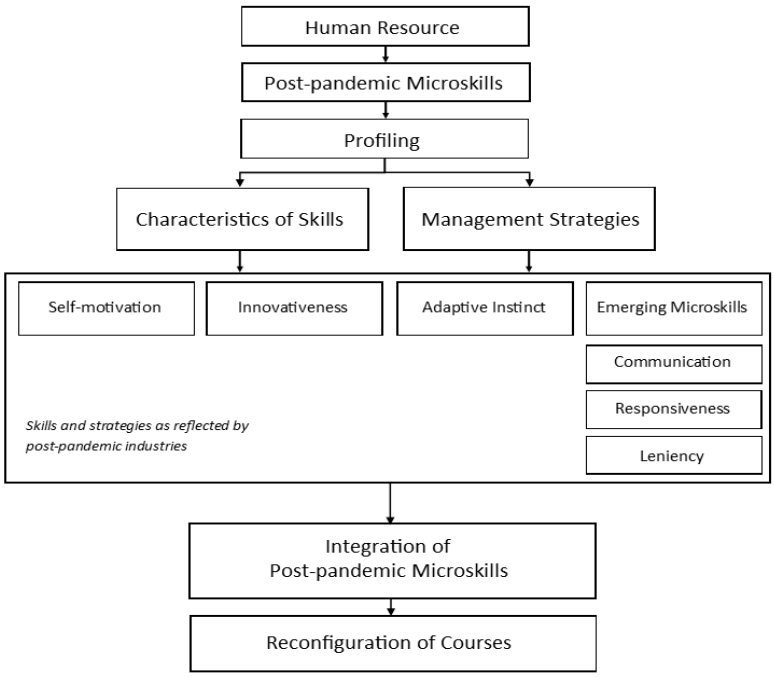

Figure 1. Diagram of the recommendation of the study.

Experiential education is a crucial component of a higher education degree program. Universities have implemented a student-centric approach aimed at providing a practical and industry-oriented learning experience. Simultaneously, they prioritize the development of students' capacity to apply theoretical concepts to real-world issues (Li, 2022). Internships are considered to be a crucial step towards preparing oneself as a future-ready employee. Through pre-graduation engagement with employers and customers within their respective fields, students are able to refine their career objectives and enhance their marketability as potential job candidates (Li, 2020, 2022).

The narratives from human resource personnel and administrators from different industries were the reflection of the current workplaces. Curriculum designers should graph the trends and needs

of the stakeholders, forecast changes, and report opportunities. This allows the institutions to map changes and respond to the changes immediately. This also empowers the institutions to mitigate the impacts of the changes to learning and development.

China is the leading provider of vocational and technical education graduates globally (Li, 2022). Colleges and universities can offer specialized trainings to students focusing on essential industry skills. Such an approach equips college students with the skills necessary to satisfy the demands of their future industries.

Vocational schools and technical colleges have been integrated into the economic development framework as they provide specialized training to produce a workforce that is readily equipped with the necessary skills for employment (Li, 2020). The integration of theoretical concepts into the curricula of vocational education programs is aimed at equipping students with the necessary skills that are highly sought by companies.

Because of the opportunities and mechanisms that the narratives provide, utilizing these points is a potential avenue for curriculum and institutional changes. Integrating strategies that reflect innovativeness, adaptability, and motivation introduces new forms of developments that were not widely discussed before. This opens a new pedological approach that covers micro factors and intellectual disciplines.

8. Conclusion

The complexity of an organization, including the division of responsibilities and organizational climate, significantly impacts employee behavior and organizational performance. Furthermore, the progression of industrial revolutions and the increasing need for continuous learning emphasize the importance of individuals enhancing their professional skill sets to contribute to economic development. Positive emotions, innovativeness, and employee adaptability are crucial for organizational growth and individual well-being.

Post-pandemic industries also emphasized the need for higher education to adapt to the changing demands of the workforce, including digitalization and remote work. Curriculum alignment theory suggests that there should be a purposeful correlation between different components of the curriculum to meet the needs of post-pandemic industries. The COVID-19 pandemic has prompted educational professionals and institutions to reconsider their approaches to teaching and curriculum design, leading to greater willingness to adopt new learning opportunities and innovation. Finally, this study highlighted the importance of studying micro-skills in post-pandemic industries, which are essential for the development of the teaching atmosphere but have received limited research attention.

There were limitations discovered in the study, i.e., unclear specific strategies that lead to increased micro-skills competence, absence of empirical data to support the theoretical stands, and presence of case-specific applications. Future studies should comprehensively address these limitations and develop an instructional framework that reflects the micro-skills, policies, and institutional strategies.

Author contributions

Conceptualization, JVC, JML, MWG, and NPC; methodology, JML and MWG; software, NPL; validation, JVC and JML; formal analysis, JVC; investigation, JML, MWG and NPL; resources, NPL; data curation, JVC; writing—original draft preparation, JML and MWG; writing—review and editing, JVC; visualization, NPL; supervision, JVC and NPL; project administration, JVC and NPL. All authors have read and agreed to the published version of the manuscript.

Conflict of interest

The authors declare no conflict of interest.

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