SHC–CBAMACS WHITE PAPER

NAVIGATING THE FUTURE OF ESSENTIAL SKILLS FOR BUSINESS COLLEGE STUDENTS

in the Context of Technological Advancements, Skills Shortages, and Globalization

Arnel Lopez Cadeliña

JANUARY 2025

Context of Technological Advancements, Skills Shortages, and Globalization

SHC-CBAMACS white paper | January 27, 2025 | Written by Arnel Lopez Cadeliña

Executive Summary

A host of technological advancements, skills shortages and Globalization are shaping the future of needed skills. For example, technological advancements cause skills mismatch as employers seek individuals equipped with the skills necessary to navigate and utilize emerging technologies, the crucial connection between skills mismatches and education systems and globalization have the potential to radically increase competition in the labor market as businesses seek talent from a broader pool. These changes will have a significant impact on the way how business education is done in the future, the skills and capabilities required to teach in the future workforce to meet these changing needs, and critical ways in which business schools must be redesigned to prepare for a new future. This study summarized key trends that business schools should be aware of when thinking about and preparing for the business students in the future of work as well as highlight key imperatives and skills that business schools should focus on to prepare the workforce of tomorrow. These trends emerged from a review of several research-based consulting reports, and findings from organizations such as the International Labor Organization, World Bank (WB), Institute of Labor Economics, and the Philippine Institute for Development Studies. More specifically, the study proposed a framework that combines macro-level themes (Technological advancements, Skills Mismatches and Education Systems, and Globalization); the strategies for skills matching (i.e. shifting away from a traditional lecture-based approach to a more experiential and practical model, the introducing of new concentrations in high-demand fields and strong partnerships with industry), and implications for the Business schools.

Introduction

In today's rapidly evolving world, technological advancements are a primary driver of skills mismatch, creating a chasm between the abilities employers need and those job seekers possess. As businesses increasingly rely on emerging technologies, they actively seek individuals with the skills to navigate and utilize these advancements effectively. This study outlines a three-level framework encompassing the interplay of technological advancements, skills shortages, and globalization in exacerbating skills mismatch, ultimately intensifying competition in the labor market. By exploring this framework, consumers of this study find three advantages in adopting the model to mitigate skills mismatches.

First, at the first level, the reader will understand how rapid technological changes, particularly automation, digitalization, and the emergence of new technologies, are transforming job requirements. The second level of the framework enlightens the readers on the critical connection between skills shortages and education systems. Finally, the third level explores the impact of globalization on skills mismatch. Due to its comprehensive and cross-disciplinary applicability, it

helps leaders of business schools to prepare their business students for the future of work from multiple perspectives.

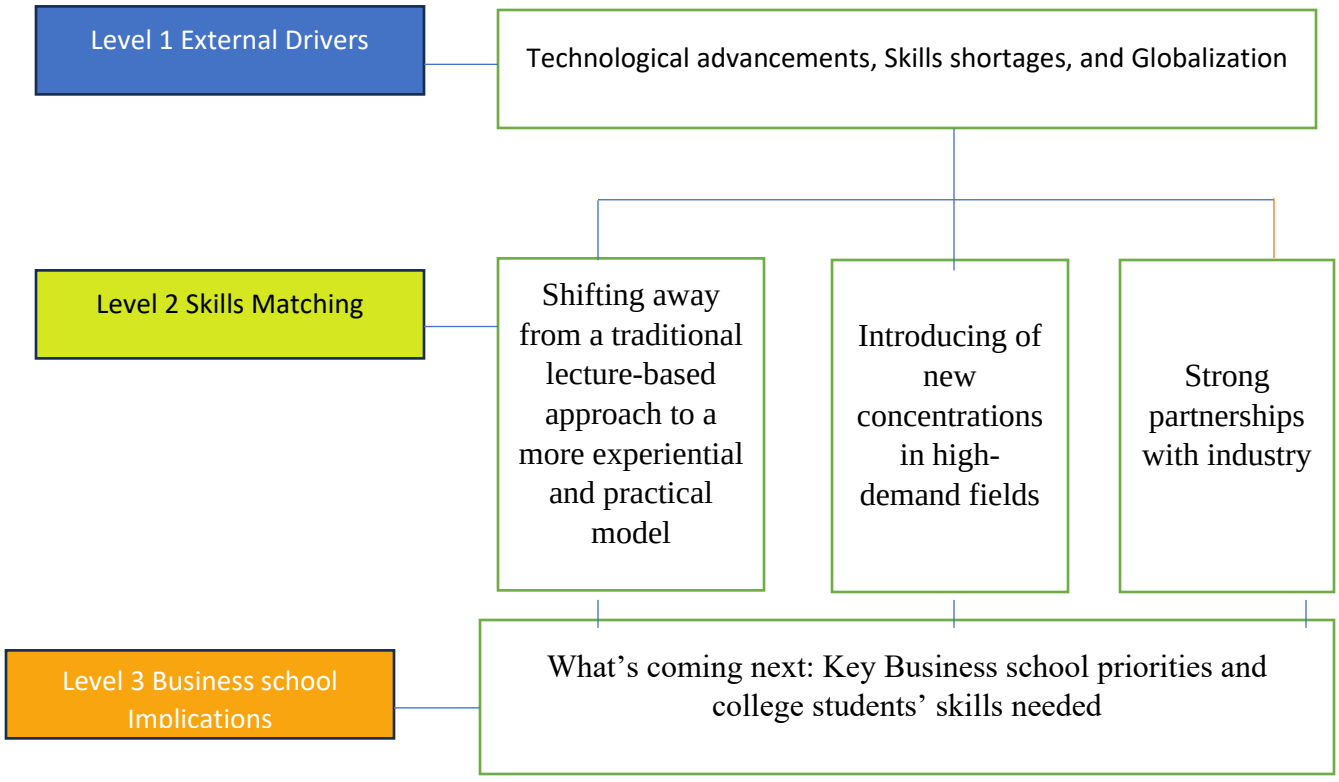
Overview of Research Process and Framework

A review was conducted across recent literature on skills mismatch. This includes research-backed consulting reports and pieces published by several organizations such as the International Labor Organization (ILO), World Bank (WB), Institute of Labor Economics, and the Philippine Institute for Development Studies. Following the identification of common themes across the multiple sources, a frequency count was conducted to extract the most salient themes. These were later clustered into different categories (see below).

The proposed framework is a matrix-model, with three levels of analysis, and three thematic domains.

Three levels: The macro-level discusses the external factors that will shape the nature of jobs in the future. These are technological advancements, skills shortages and Globalization. The micro-level considers the implications of these macro-factors on finding employment for college graduates.

Three thematic domains: The model identifies three thematic clusters wherein implications for the skills matching are discussed. These are the shifting away from a traditional lecture-based approach to a more experiential and practical model, the introducing of new concentrations in high-demand fields and strong partnerships with industry.



LEVEL 1. EXTERNAL DRIVERS OF CHANGE

Globally, several trends drive changes at an economy- and organization-wide scale, and affect the nature, scale, and design of the needed skills. This report explores three of them - technological advancements, skills shortages and Globalization.

Technological Advancements:

There is a growing challenge of skills mismatch in the face of rapid technological advancements and this mismatch arises as employers seek individuals equipped with the skills necessary to navigate and utilize emerging technologies, while many job graduates find themselves lacking these specific competencies. The swift pace of technological change causes skills to become obsolete quickly and the emergence of jobs that don't currently exist due to rapid technological advancements where technical skills, in particular, can become outdated in a short span of time, highlighting the need for continuous learning and retraining to remain competitive in the evolving job market. For instance, there is a notable shortage of skilled workers in STEM fields, which are crucial for driving technological advancements in various sectors, including the business process outsourcing (BPO) industry. This shortage can hinder the adoption and implementation of new technologies, such as artificial intelligence (AI). In the Philippines, the situation is further complicated by a considerable number of college graduates entering the workforce without the necessary skills for their chosen fields. The rapid evolution of technologies like artificial intelligence (AI), automation, and digitization is transforming industries, altering job roles, and creating new occupations that didn't exist a few years ago. For instance, by 2022, 27% of available jobs are projected to be in roles that are yet to emerge. Automation is increasingly taking over routine tasks, pushing workers toward jobs requiring higher levels of skill, such as problem-solving, critical thinking, and creativity. As a result, organizations often find themselves needing to provide supplementary training to bridge the skills gap. This trend emphasizes the significance of aligning educational programs with industry needs, potentially through methods like enhanced apprenticeship and dual training systems. This approach would better prepare graduates for the demands of the current and future job market, fostering a smoother transition from education to employment. The importance of lifelong learning and continuous retraining as vital strategies for addressing skills mismatches. Workers must actively adapt to the ever-changing nature of work and proactively acquire new skill sets to remain employable. This continuous learning process enables individuals to keep pace with technological advancements and maintain their relevance in the dynamic labor market.

New Jobs, New Skills

Technology are creating new jobs and requiring new skills that BCG source predicts in 2022, 27% of available jobs will be in roles that don't currently exist. This makes it difficult for traditional education systems to prepare workers for tasks that haven't been defined yet. Instead of focusing on skills for existing jobs, training should prioritize adaptable and transferable skills. Technical skills, especially, become obsolete quickly because technology is constantly evolving. Technical skills can become outdated in as little as two to five years, which is less time than the average training period for highly skilled professionals. Workers need to be prepared to continuously

update their skills throughout their careers to remain employable. As automation takes over routine tasks, workers will need higher-level skills, like complex problem-solving, critical thinking, creativity, and adaptability. Jobs requiring skills in digital technologies and data analysis will be in increasing demand. A key challenge associated with rapidly changing skills requirements is skills mismatch, where workers' skills don't align with available jobs. This can be caused by technological changes outpacing current skills, education systems not adapting to workforce needs, and insufficient reskilling opportunities. Skills mismatch is especially problematic in the Philippines, where many graduates lack the skills needed for their chosen fields. To address this, the suggestions to transform education systems to be more personalized and flexible, encouraging lifelong learning, and strengthening collaboration between governments, businesses, and educational institution

Rapid Obsolescence

The acceleration in skill obsolescence is primarily driven by the rapid evolution of technology and presents a significant challenge for workers who need to constantly adapt to stay employable. The BCG note that technical skills can become obsolete in a mere two to five years, a period shorter than the average training time for highly skilled professionals. This emphasizes the need for continuous learning and upskilling throughout a worker's career.

There is a need to transform the education systems by shifting from traditional, rigid education models towards more personalized and flexible learning pathways that equip individuals with adaptable and transferable skills. There is also a need for stronger collaboration between governments, businesses, and educational institutions where collaboration can help align education and training programs with industry demands, fostering a workforce better prepared for the jobs of the future. To arrest rapid obsolescence the importance of creating a culture of lifelong learning should be consistent. This means individuals must embrace continuous learning and proactively seek opportunities to update their knowledge and skills. Individuals and schools should invest in training programs, particularly those focusing on emerging technologies and in-demand skills, to provide future workers with the necessary reskilling and upskilling opportunities.

Automation's Impact

Automation is increasingly taking over routine tasks, leading to a significant shift in the skills required in the workforce. This trend is particularly pronounced in sectors experiencing rapid technological advancements, where tasks previously performed by humans are being automated, leading to a decline in demand for workers with traditional skillsets. For instance, the McKinsey source points out that while jobs in areas like healthcare and STEM fields are expected to grow, middle- and low-skill jobs, such as those in food service, production, and office support, are likely to decline as automation takes hold. This shift towards automation necessitates a workforce capable of adapting to new technologies and acquiring higher-level skills that complement, rather than compete with, automation. Skills such as complex problem-solving, adaptability, and continuous learning in this evolving landscape. They also highlight the need for individuals to embrace lifelong learning and reskilling opportunities to remain competitive in a job market increasingly shaped by automation.

AI and Job Transformation

Advancements in technology, especially artificial intelligence (AI), are profoundly transforming the job market and it was predicted that substantial job creation in roles that currently do not exist will be driven by emerging technologies like AI. A BCG article suggested that in 2022, 27% of available jobs are in entirely new roles. This rapid evolution makes it challenging for traditional education systems to prepare workers for these undefined tasks. There is now a need to shift from focusing on skills for existing jobs to prioritizing transferable skills like adaptability, critical thinking, and problem-solving as well as hard skills such as digital technologies and data analysis.

The IT-BPM industry in the Philippines, for example, faces a shortage of AI-equipped talent, hindering the sector's growth despite a high AI adoption rate. Industry experts recognize the need for upskilling and retraining initiatives to equip the workforce with the necessary AI skills. The need to invest in talent development and create a workforce proficient in AI and cybersecurity will position the Philippines as a competitive AI hub. This shift towards AI necessitates not only technical proficiency but also the development of higher-level analytical skills, such as data analysis.

Skills Obsolescence

The accelerating pace of technological change where technical skills can become outdated within 2 to 5 years creates a challenge for college students, as the skills they acquire during their studies may become irrelevant by the time they graduate and enter the workforce. These concerns over outdated skills raises questions about the relevance of college curricula and unless educational institutions actively update their programs to incorporate emerging technologies and industry trends, graduates may face a skills mismatch upon entering the job market. The importance of lifelong learning and continuous upskilling are the tools to combat skills obsolescence. Colleges and Universities need to cultivate to their students a mindset of continuous learning and proactively seek opportunities to update the students skills and knowledge throughout their undergraduate stay.

Globalization

Globalization is another significant driver of change, fostering interconnectedness and competition on a global scale. This interconnectedness impacts job markets through trends like offshoring, international trade, and the rise of global value chains. These trends influence the types of jobs available, the skills required, and the geographical distribution of work. Part of this globalization is urbanization which leads to the concentration of economic activity in urban centers, influencing job markets and the geographical distribution of skills. This concentration of jobs in urban areas can lead to challenges in terms competition for skilled workers. Globalization increases competition in the labor market as businesses seek talent from a broader pool. This heightened competition makes it crucial for workers to possess skills that set them apart in a globalized workforce. Countries with open economies and labor markets tend to have better economic growth, highlighting the importance of a global perspective in talent development. Globalization also results for individuals to develop skills relevant to the virtual work environment especially digital

literacy and proficiency in online collaboration tools. Traditional education systems often lag in equipping individuals with the necessary skills for a globalized, virtual work environment.

Level 2. Skills Matching

Shifting away from a traditional lecture-based approach to a more experiential and practical model

There is now a need to reform the delivery of instruction in an education system to better prepare individuals for the demands of the modern workplace. Focusing on the development of skills over mere knowledge acquisition since traditional education systems often prioritize theoretical knowledge over practical skills, leading to graduates lacking the competencies needed in the workplace. This suggests a need to move away from passive learning environments, such as those dominated by lectures, towards active learning that allows individuals to apply knowledge and develop practical skills. Aligning education and training programs with industry demands should also be considered by aligning the business curricula that reflect the skills needed in the real world especially shifting towards practical, hands-on learning experiences. This could involve incorporating internships, apprenticeships, project-based learning, and simulations into education programs to provide students with opportunities to develop and apply skills in real-world contexts. The college students should embrace the importance of lifelong learning and adaptability in a rapidly changing job market by exposing them on experiential learning and encouraging college students to be active learners, problem-solvers, and critical thinkers. Experiential learning methods, such as problem-based learning and hands-on projects, can better equip students to new technologies and evolving job demands. Stronger collaboration between educational institutions and businesses to ensure education outputs align with workforce inputs is paramount and this collaboration could involve businesses providing input on curricula, offering practical training opportunities, and participating in mentorship programs.

Introducing New Concentrations in High-Demand Fields

Anticipating future skills demands there is a need of a robust labor market information systems (LMIS) that can provide insights into emerging industries, key employment-generating sectors, and in-demand occupations, enabling educational institutions to develop programs that cater to these evolving needs. The Technical Education and Skills Development Authority (TESDA) in the Philippines has developed a Skills Anticipation and Prioritization of Skills Requirements (SAPSR) Framework that can guide business schools on the development of curricula aligned with industry demands. The newly signed Enterprise-Based Education and Training (EBET) Framework Act which aims to address the skills gap in the country's labor force and cultivate a more adaptable workforce can help identify high-demand fields with the real needs of industries and the labor market. There are several high-growth sectors experiencing significant talent shortages. These include data analysis , Artificial Intelligence (AI), digital forensics and Cybersecurity. Educational institutions should consider developing specialized concentrations within existing degree programs or creating new programs altogether to address the specific skills requirements of these high-demand fields.

Partnerships Between Education and Industry

The need for strong partnerships between industry and educational institutions is a vital strategy to address the pervasive skills mismatch in today's rapidly changing labor market. This collaborative approach helps to ensure college graduates are equipped with the skills and knowledge needed to succeed in a technologically advanced and globally connected work environment. By collaborating with industries, educational institutions gain insights into the specific skills, knowledge, and competencies employers seek. This direct connection to industry needs allows educators to tailor curricula, develop relevant programs, and offer training that directly addresses skills gaps. Internships and apprenticeships are effective mechanisms to bridge the gap between theory and practice. These experiences allow students to develop practical skills, gain industry exposure, and build professional networks, making them more competitive in the job market. There is also a need to integrate project-based learning into curricula, where students work on real-world projects in collaboration with industry partners, provides practical experience and fosters problem-solving and teamwork skills. Colleges and Universities with strong industry partners benefited on the valuable input on curriculum development and program design to ensure alignment with industry standards and evolving technological advancements. It can also create a pipeline of skilled talent for businesses while providing students with a pathway to meaningful employment. The November 7, 2024 law signed by the Philippines President on Enterprise-Based Education and Training (EBET) Framework Act can help address the skills gap in the country's labor force and cultivate a more adaptable workforce. The act aims to bridges the gap between Education and Industry by having closer collaboration between educational institutions and the private sector to ensure that training programs align with industry needs. EBET, with its focus on private-sector partnerships, directly addresses this gap by involving businesses in the design and delivery of training programs. This ensures that the skills taught are relevant to current industry demands, reducing the likelihood of horizontal mismatch where graduates find themselves in jobs that don't utilize their education. EBET programs, such as apprenticeship and dual training systems, offer hands-on training that equips participants with the specific skills required by employers. This practical approach not only enhances employability but also addresses the issue of vertical mismatch by ensuring that trainees have the necessary skill level for the jobs they seek.

Level 3. Business school implications

Key Priorities for Business Schools and Necessary Skills for Students

To address this, business schools should continuously review and revise their curricula in partnership with businesses to ensure that the skills taught align with the needs of the evolving business world. Practical work experience, such as internships and consulting projects, should be integrated into academic programs to provide students with hands-on experience and to help them develop crucial workplace skills.

One potential solution to address this challenge involves transforming traditional business programs to better meet the needs of the modern business world. This transformation could involve shifting away from a traditional, lecture-based approach to a more experiential and practical model. Institutions could achieve this by introducing new concentrations in high-demand fields, such as

data analytics, digital marketing, and sustainable business practices. They could also offer courses that develop crucial soft skills, such as critical thinking, problem-solving, communication, and teamwork6.

Another important aspect is equipping students with the skills to navigate the rapid evolution of technologies, such as AI and automation. Business programs could incorporate data analytics and coding courses, teach students how to leverage AI tools for business applications, and emphasize the ethical considerations of using AI in business.

Business schools can collaborate with companies to develop relevant curricula, offer guest lectures and workshops, and create internship and job placement opportunities. For instance, a business school could partner with a technology company to develop a curriculum on data analytics or with a consulting firm to offer a course on strategic management. Additionally, universities can encourage faculty to engage in research and consulting projects with industry to stay up-to-date with the latest trends and bring practical insights into the classroom10. These partnerships can also help students build professional networks and gain valuable industry experience, enhancing their employability upon graduation.

Business schools can redesign their curricula to address the skills mismatch and prepare graduates for the evolving demands of the business world by transforming traditional lecture-based programs to a more experiential and practical model that emphasizes hands-on learning and the development of essential skills. Institutions could introduce new concentrations in areas like data analytics, digital marketing, and sustainable business practices to equip students with specialized knowledge in high-demand fields. Additionally, integrating practical experiences, such as internships, apprenticeships, simulations, and real-world projects, allows students to apply theoretical knowledge and develop crucial workplace skills. For example, business plan competitions, consulting projects, and case study analyses can foster critical thinking and problem-solving abilities.

Another critical aspect is ensuring that the curriculum equips students with future-proof skills, such as critical thinking, problem-solving, adaptability, digital literacy, and complex communication. As the business world increasingly relies on data and technology, incorporating data analytics, coding, and AI applications into the curriculum becomes crucial. Source1 states that these skills are essential for success in the evolving business world. Additionally, emphasizing ethical considerations related to AI and technology in business contexts will prepare students to navigate the evolving landscape responsibly.

Building strong industry partnerships by collaborating with businesses provides invaluable insights into industry trends and demands, enabling institutions to develop relevant curricula. These partnerships can also facilitate mentorship programs, guest lectures, workshops, and internship and job placement opportunities. This highlights the need for business schools to actively engage with companies to demonstrate the value and relevance of their redesigned curricula. For instance, partnerships with technology companies can lead to the development of data analytics curricula, while collaborations with consulting firms can create opportunities for students to engage in strategic management projects.

Furthermore, investing in faculty development programs is essential to ensure instructors possess the most up-to-date knowledge and skills to deliver a future-oriented business education. Faculty should be encouraged to engage in industry collaborations, research projects, and continuing education programs to stay abreast of the latest industry trends and bring practical insights into the classroom. This emphasizes the need for continuous professional development for educators, particularly in fields experiencing rapid technological advancements like the business sector.

Finally, leveraging labor market information systems can provide institutions with data-driven insights into skills demand, industry trends, and emerging occupations. Utilizing this information can help business schools make informed decisions about curriculum design and ensure alignment with labor market needs.

Conclusion

The significance of tackling the skills mismatch cannot be overstated because it poses a significant obstacle to economic growth and individual success. When individuals possess skills that align with labor market needs, they are better positioned to secure fulfilling and well-compensated employment, leading to increased productivity, innovation, and overall economic prosperity. Conversely, a persistent skills mismatch results in underemployment, reduced job satisfaction, and a loss of human potential, ultimately hindering a nation's economic competitiveness and progress. The heavy toll the skills mismatch takes on productivity, innovation, and even sustainable development. This underscores the urgency of bridging the gap between education and employment to unlock the full potential of human capital and create a more prosperous and equitable society.

The call to action urging stakeholders, including educational institutions, policymakers, and industry leaders, to collaborate on developing and implementing effective solutions. EBET implementation plays a crucial role in fostering an enabling environment for skills development by investing in education and training programs that are responsive to labor market demands, promoting lifelong learning opportunities, and creating policies that encourage businesses to invest in workforce development.

Educational institutions must take a proactive approach to curriculum design, ensuring that programs align with industry needs and equip students with the skills and knowledge required to thrive in the evolving workplace. This further emphasizes the need for educational institutions to adapt and adjust their teaching methods to ensure that students are adequately prepared for the workforce. This involves integrating practical work experience into academic programs, promoting interdisciplinary learning, and fostering partnerships with industry to provide students with real-world exposure and mentorship opportunities.

Industry leaders also bear a responsibility to engage in this collaborative effort. They can actively participate in shaping curricula, offering internship and apprenticeship opportunities, and providing mentorship to students, helping to bridge the gap between academia and the workplace.

Ultimately, a more aligned educational system that effectively meets both student aspirations and labor market needs. This vision necessitates a shift away from traditional, standardized education

models towards a more personalized and dynamic approach that emphasizes adaptability, critical thinking, and lifelong learning. In such a system, individuals would be empowered to pursue their passions and interests while simultaneously acquiring the skills and knowledge necessary to contribute meaningfully to the workforce. Achieving this vision demands sustained commitment and collaboration from all stakeholders. By working together, it can create a future where education and employment are seamlessly interconnected, fostering a thriving economy and empowering individuals to reach their full potential.

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