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## Article

# The Future Is Now: How Colleges and Universities Can Prepare Students for the Jobs of 2030 and Beyond

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**Abstract:** The COVID-19 pandemic has brought about major changes in our world and has accelerated the progress of the job market. This presents both a challenging and exciting prospect for the workforce in the future, particularly in 2030 and beyond. Through thorough literature reviews, this paper navigates the constantly changing landscape of education and employment. It specifically focuses on the importance of preparing students for the jobs of the future by fostering skills such as adaptability, critical thinking, empathy, integrity, optimism, proactivity, and resilience. The pandemic has accelerated the need for online learning and remote work skills, which are now essential for future success. Through observations, the paper also examines the pulse of the situation in Iligan City, Philippines, where aligning educational institutions with the changing job market is crucial. Overall, this paper has significant implications for educational reforms and real-world challenges, creating a guide for institutions to empower students and contribute to the city's economic growth. Significant information suggests that in a constantly evolving world, those who are prepared, adaptable, and equipped with the skills to shape the future will succeed. Iligan City is well-aware that it needs to position itself to play a pivotal role in this journey.

**Keywords:** changing landscape; challenges in higher education; jobs of 2030; transforming education

## I. Introduction

*"The Transforming Education Summit will seek to renew our collective commitment to education and lifelong learning as a pre-eminent public good."* Antonio Guterres, U.N., Secretary-General.

As we stand on the threshold of 2030, the contours of the job market have undergone a profound metamorphosis. Technological leaps, automation, artificial intelligence, and global economic realignments have reshaped the world of work into an uncharted terrain, distinct from its predecessors (Fan, 2021; Selingo, 2021).

This profound transformation was catalyzed by the COVID-19 pandemic, an event that disrupted and expedited certain trends already in motion, both in the job market and in the realm of education (Selingo, 2021; Gallagher, 2020). Emerging from the pandemic, it is evident that the need for educational adaptation is now more pressing than ever before. The pandemic underscored the significance of resilience, adaptability, and digital prowess in the workforce (Gallagher, 2020). It has illuminated the vulnerabilities inherent in traditional employment models and underscored the sobering reality that jobs once considered secure can be rendered obsolete by unforeseen circumstances. In the workforce of 2030, the ability to pivot, relearn, and remain agile in the face of ambiguity has evolved from a desirable trait into an absolute necessity (Fan, 2021).

The researcher embarks on a journey to explore the paramount question: How can colleges and universities prepare students for the jobs of 2030 in a world forever altered by the events of the past decade? In addressing this query, the researcher draws upon a vast repository of knowledge accumulated through exhaustive literature reviews encompassing books, magazines, journals, and comprehensive research—resources found both within the venerable halls of libraries and across the limitless expanse of online sources (McKinsey & Company, 2021; Adobe Education Team, 2020).

In this quest, the researcher aims to offer valuable insights not only to school administrators, parents, teachers, students, and future researchers but also to future researchers who traverse similar pathways of inquiry. The findings' implications ripple through society, shaping the lives and livelihoods of individuals and the broader communities they serve. As the researcher embarks on this exploration of the future, he acknowledges its profound significance of this endeavor and the transformative potential it holds for education in the 21<sup>st</sup> century. It is within this context that the researcher heeds the call for educational adaptation and innovation, echoing the sentiments of global initiatives such as the United Nations Sustainable Development Goals (UN 2023 SDG Summit, 2023) and the United Nations Transforming Education Summit (Gateways to Public Digital Learning, 2022), reaffirm digital learning as a public good.

The purpose of this study is to bridge the divide between the educational paradigms of the past and the demands of the future, equipping students with the skills and knowledge necessary to thrive in an ever-evolving job market. In so doing, using an in-depth literature review (Snyder, 2019) as an approach to data gathering and the baseline for discussion and analysis, the researcher hopes to contribute to a discourse that transcends the boundaries of academia, offering actionable insights that resonate with individuals and institutions alike, as they navigate the complex terrain of education and employment in the era of 2030 and beyond.

## II. The Changing Landscape of Employment in 2030 and Beyond

The job market of 2030 and beyond is poised to undergo profound transformations, shaped by a multitude of factors. These predictions are substantiated by comprehensive research and analysis (PwC, 2018; BCG, 2021). The changing landscape of employment will be characterized by:

- (1). **Automation and AI Integration:** Automation and the widespread incorporation of artificial intelligence (AI) will redefine the job market. Routine and repetitive tasks will be automated, necessitating the acquisition of new skills (BCG, 2021; OpenAI, 2023).
- (2). **The Gig Economy's Ascendancy:** The gig economy, typified by short-term contracts and freelancing, is gaining prominence. Traditional employment models will increasingly yield to this more flexible approach, allowing individuals to access diverse income streams (McKinsey & Company, 2021).
- (3). **Demographic Shifts:** Changes in demographics and an aging population will influence job demand. Sectors such as healthcare and eldercare will see growth (PwC, 2018; OECD, 2018).
- (4). **Green Jobs:** The global focus on climate change and sustainability will give rise to green jobs. These encompass clean energy, environmental conservation, and eco-friendly technologies (PwC, 2018; United Nations Development Programme, 2016).
- (5). **Globalization and Remote Work:** Ongoing technological advancements will further facilitate remote work and globalization, diminishing the significance of geographical boundaries (PwC, 2018).
- (6). **E-commerce and Digitalization:** E-commerce's exponential growth and the pervasive digitalization of industries will spawn employment opportunities in e-commerce management, digital marketing, cybersecurity, and data analytics (McKinsey & Company, 2021; Pandya, Bharti & Patterson, Louise & Ruhi, Umar, 2021).
- (7). **Emphasis on Health and Wellness:** Heightened awareness of health and well-being will contribute to job growth in healthcare, mental health counseling, fitness training, and wellness coaching (PwC, 2018; Pandya, B., 2019).
- (8). **Intensified Nexus and Internationalization:** Connection and internationalization beckon learning institutions to embark on a synergizing transformative journey with other institutions abroad, nurturing an enlightened future where students are equipped with cross-cultural skills and competencies to navigate the complexities of the 21<sup>st</sup> century (Adeleye, et al., 2022; Eslit 2023c). This will become a necessity more than ever.

These conjectures are not isolated but rather interconnected facets of the shifting employment landscape. They demand adaptability, continuous learning, and proactive skill development from

individuals and institutions. As we navigate these anticipated changes, it becomes evident that higher education plays a pivotal role in preparing individuals for the challenges and opportunities that await in the employment terrain of 2030 and beyond. In the following sections, the researcher delves deeper into these transformations, exploring emerging trends and industries, the influence of technology, shifts in required skills, and the indispensable role of higher education in shaping the workforce of the future.

### III. Current Challenges in Higher Education

**Crossroads:** The higher education is at the crossroads. As we step into a new decade, it is essential to assess and address the pressing challenges that have surfaced within the realm of academia. Looking at these challenges, which extend far beyond the borders of Iligan City and the whole country of the Philippines, encompass a range of critical issues that demand attention and innovative solutions. In this article, we delve into the multifaceted landscape of higher education, analyzing existing shortcomings, outdated curricula and teaching methods, skill gaps, the imperative for lifelong learning, and the specific challenges brought about by the pandemic. Additionally, we identify gaps in the literature, emphasizing the need for comprehensive research and action-oriented approaches.

**Existing Limitations in Higher Education Analysis:** Higher education institutions worldwide grapple with a myriad of shortcomings, many of which are rooted in tradition and resistance to change. Among these challenges are:

- (1). **Accessibility and Equity:** A significant portion of the global population remains underserved by higher education due to financial constraints, limited infrastructure, and geographical barriers (UNESCO Global Independent Expert Group, 2022).
- (2). **Affordability:** The rising cost of higher education has made it increasingly inaccessible for many individuals, leading to substantial student loan debt burdens (Glass et al., 2022).
- (3). **Quality Assurance:** Ensuring consistently high-quality education across diverse institutions remains a challenge, impacting the perceived value of degrees (UNESCO Global Independent Expert Group, 2022).

**Outdated Curricula and Teaching Methods:** The pedagogical methods employed in higher education have not evolved at the same pace as the demands of the job market. Outdated curricula and teaching methods contribute to a growing gap between the skills graduates possess and those required by employers (Bernard, 2020).

**Skill Gaps and Their Consequences:** A noticeable discrepancy exists between the skills graduates bring to the job market and the skills employers seek. This skill gap often results in underemployment, where individuals are overqualified for the positions they occupy. This has broader economic implications, as underutilized human capital stifles productivity and innovation (Haleem et al., 2021).

**The Need for Lifelong Learning:** The concept of lifelong learning is more pertinent than ever. In a world marked by constant technological advancements and shifting industry landscapes, individuals must embrace continuous skill development and adaptability (Bernard, 2022). Traditional higher education models must evolve to accommodate lifelong learning needs (Adrian et al., 2022).

**The Pandemic's Disruptions to Higher Education:** The COVID-19 pandemic sent shockwaves through the higher education sector, causing widespread disruptions. Some campuses closed, and traditional teaching methods were upended as institutions grappled with transitioning to online learning. The pandemic exacerbated existing disparities in access to education, as not all students had equal access to digital resources and stable internet connections (Criollo-C et al., 2021).

**Adapting to the Pandemic and How Universities and Colleges Respond:** Higher education institutions had to swiftly adapt to the pandemic's challenges. This adaptation involved the rapid deployment of online learning platforms, investment in technology infrastructure, and reevaluation of curricula to meet the demands of remote education (Islam et al., 2022).

**Identification of Gaps in the Literature Regarding Specific Challenges:** While research on higher education challenges is extensive, there are still gaps in our understanding of specific challenges faced by institutions. Comprehensive studies and data on issues such as access to online education, student engagement, and the long-term impact of the pandemic on higher education in the region are needed to inform effective policy and institutional responses (Gromova, 2021).

Overall, higher education in the local context like Iligan City and the Philippines faces complex challenges that are both universal and unique to the region. Talking about these challenges require a multidimensional approach, comprising policy development, advanced teaching methods, and a commitment to lifelong learning. Responding to the gaps in the literature is essential for informed decision-making and the development of effective solutions tailored to the specific needs in the local context.

#### IV. Strategies for Educational Transformation

In an era marked by rapid technological advancements and evolving societal needs, educational institutions must continually adapt to ensure they remain relevant and effective. The landscape of education is undergoing a transformation that calls for innovative approaches and strategies to meet the challenges of the future (Microsoft Bing, 2023). In this article, we explore a range of strategies that have emerged from the literature, highlighting trends in educational transformation, addressing how institutions can adapt, and showcasing case studies of those that have successfully implemented innovative strategies.

**Innovative Approaches and Strategies:** Innovation in education is not merely a buzzword; it is an imperative. The literature is replete with innovative approaches and strategies that institutions can employ to enhance the learning experience. These include:

- (1). Blended Learning Models: Combining traditional in-person instruction with online learning, offering flexibility while maintaining engagement (Bates, 2019).
- (2). Personalized Learning: Tailoring educational experiences to individual student needs and preferences, facilitated by technology (Horn & Staker, 2015).
- (3). Competency-Based Learning: Focusing on the mastery of specific skills or competencies rather than traditional grades or time-based progression (Tucker, 2012).
- (4). Experiential Education: Emphasizing real-world, hands-on experiences to bridge the gap between theory and practice (Kolb, 2014).

**Current Educational Transformation:** The future of education is shaped by several key trends to include the following:

- (1). Technology Integration: The seamless integration of technology into the learning process, enabling personalized learning experiences (Papert, 1993; Gill 2023).
- (2). Globalization: Preparing students for a globalized world, with a focus on cultural competence and global perspectives (Marginson, 2016).
- (3). Lifelong Learning: The recognition that learning is a lifelong journey, requiring continuous upskilling and reskilling (Bagnall & Collett, 2020).

**Adapting to Future Challenges:** Educational institutions must be agile and adaptive to meet future challenges. Key strategies for adaptation include:

- (1). Flexibility: Designing curricula and programs that can pivot quickly in response to changing needs (EDUCAUSE, 2020).
- (2). Data-Driven Decision-Making: Utilizing data analytics to inform educational strategies and improve student outcomes (Siemens & Long, 2011).
- (3). Interdisciplinary Approaches: Fostering collaboration across disciplines to address complex real-world problems (Jacobs, 2016).



**Case Studies of Successful Strategies:** To illustrate the practical application of these strategies, the researcher examined a few case studies of institutions that have successfully transformed education:

- (1). MIT OpenCourseWare: MIT's initiative to provide free, open-access course materials online, democratizing access to high-quality education (Abelson et al., 2007).
- (2). Arizona State University's Online Programs: ASU's innovative online degree programs, combine technology and personalized support to improve retention and completion rates (Franz, 2015).
- (3). Singapore's SkillsFuture Initiative: A national program aimed at upskilling the workforce and promoting lifelong learning through a range of initiatives (SkillsFuture Singapore, 2023).

Overall, educational transformation is not an option; it is imperative for institutions seeking to prepare students for the challenges and opportunities of the future. Innovative approaches, awareness of key trends, adaptability, and a commitment to lifelong learning are the cornerstones of educational institutions that successfully navigate this transformative journey. By examining successful case studies, institutions can draw inspiration and practical insights as they embark on their path toward educational transformation.

## V. Preparing Students for the Future Workforce

In an era marked by rapid technological advancements and evolving societal needs, educational institutions must continually adapt to ensure they remain relevant and effective. This transformative landscape calls for practical methods and strategies drawn from the literature to prepare students effectively for the ever-changing job market (UNESCO's Action in Education, 2022). In this article, the researcher explores a range of strategies rooted in research and practice. The researcher delves into how colleges and universities can navigate the evolving demands of education and address gaps in the literature regarding the effectiveness of certain preparation methods. Moreover, the researcher examines the role of extracurricular activities and internships, the impact of the pandemic on the job market, the implications of remote learning, and the vital aspect of students' mental health and well-being in preparing them for future jobs.

**Applied Methods and Strategies for Preparation:** Drawing from the literature, the researcher uncovers practical methods and strategies to equip students with the skills they need for future jobs. These methods include fostering *adaptability, critical thinking, empathy, integrity, optimism, proactivity, and resilience* (Emma, 2019).

**Effective Preparation by Educational Institutions:** Colleges and universities play a pivotal role in shaping the preparedness of students for the evolving job market. The researcher explores how institutions can create effective educational strategies that align with the skills demanded by the job market (Guillen, 2020; Diamandis & Kotler, 2020).

**Addressing Gaps in the Literature:** While some research provides valuable insights into educational strategies, the researcher addresses the gaps in the literature regarding the effectiveness of certain preparation methods. It is essential to continually evaluate and refine these methods to meet the dynamic needs of students and employers (Chang & Huynh, 2016; Rostron, 2023).

**Extracurricular Activities and Internships:** Extracurricular activities and internships offer students invaluable opportunities to apply their knowledge in real-world settings. The researcher discusses how colleges and universities can maximize the impact of these experiences in preparing students for their future careers.

**The Pandemic's Reshaping of the Job Market:** The COVID-19 pandemic has profoundly reshaped the job market. The researcher explores how it has accelerated certain trends, creating new demands and skills that students must be prepared to meet (UN 2023 SDG Summit, 2023; Autor et al., 2020; Atkinson, 2029).

**Implications of Remote Learning:** The experience of remote learning during the pandemic has implications for future educational strategies. This paper considers how colleges and universities can leverage the lessons learned to enhance the quality and accessibility of education (West, 2018; World Economic Forum, 2018).

**Mental Health and Well-being:** Amid the pandemic, students' mental health and well-being have emerged as critical factors in preparing them for future jobs. The researcher delves into the profound impact of the pandemic on students' emotional and psychological resilience and the crucial role that educational institutions play in addressing these challenges. *"In times of adversity, we find the strength to endure and the wisdom to navigate life's trials. Resilience is a testament to an indomitable human spirit"* (Eslit, 2023b).

### **Prioritizing Student Mental Health After the Pandemic: A Critical Imperative**

The COVID-19 pandemic has left a profound impact on students, leading to heightened stress and an unpredictable learning environment. Factors like isolation, the shift to remote learning, and concerns about health have significantly affected their mental well-being (Guillen, 2020). These challenges extend beyond immediate concerns, as they also have far-reaching consequences for students' preparedness to face future job market demands.

In this regard, schools and colleges play a vital role in developing the emotional and mental strength of their students. The following are some tangible actions that schools can take to help the student's well-being:

- (1). **Holistic Mental Health Support:** Schools and colleges can take the initiative to provide a wide range of mental health services, such as counseling and therapy, to assist students in effectively dealing with stress and anxiety.
- (2). **Integrating Well-being into the Curriculum:** By seamlessly integrating well-being programs into the curriculum, institutions empower students with essential life skills. These capabilities support them in dealing with stress, strengthening resilience, and maintaining a healthy work-life alignment.
- (3). **Facilitating Peer Support Networks and Group Activities:** Establishing opportunities for peer support networks and organizing group activities can create a sense of community and belonging, fundamental for promoting mental well-being.
- (4). **Flexible Learning Platforms:** Recognizing the diverse needs of students, institutions can provide flexible learning options. This flexibility allows students to balance their academic responsibilities with self-care.
- (5). **Embedding Mental Health Awareness in Educational Syllabi:** Schools and colleges possess the unique potential to weave mental health awareness effortlessly into their syllabi. This method not only helps to lower the negative views related to mental health problems but also teaches students how to find help when necessary (Diamandis & Kotler, 2020).

Given this, it becomes essential for educational institutions to adopt a proactive approach in dealing with the mental health of students, especially in the wake of the pandemic. In so doing, they are promoting emotional and psychological strength in students, thereby enabling them to overcome challenges during their educational path and in their future professional lives (Eslit, 2023a).

## **VI. Recommendations and Future Directions**

Throughout this paper, the author explored the evolving landscape of education in preparing students for the jobs of the future. Key findings include the critical importance of fostering skills such as adaptability, critical thinking, empathy, integrity, optimism, proactivity, and resilience (Emma, 2019). The author identified trends such as the acceleration of certain job market changes due to the COVID-19 pandemic (Guillen, 2020) and the growing significance of online learning and remote work skills (World Economic Forum, 2018). The author also highlighted research gaps, particularly concerning the effectiveness of certain educational strategies in addressing the demands of the ever-changing job market (Bakhshi et al., 2017; Rainie & Anderson, 2017).

**Recommendations for Addressing Identified Gaps:** To bridge the gaps in research and practice, the author proposes several recommendations:

- (1). **Robust Research and Evaluation:** Educational institutions should prioritize rigorous research and evaluation of their programs and strategies (Bakhshi et al., 2017). This includes assessing

the effectiveness of preparation methods and continuously refining them based on empirical evidence.

- (2). **Integration of Future Skills:** Curricula should be updated to systematically integrate future skills such as digital literacy, problem-solving, and emotional intelligence (Marr, n.d.). These skills should be embedded throughout the educational journey.
- (3). **Emphasis on Online Learning:** Educational institutions should enhance their capacity for online learning, not only as a response to crises but as a valuable tool for expanding access and flexibility in education (Microsoft Education Team, 2023).
- (4). **Mental Health Support:** Mental health and well-being services should be readily available to students, both in-person and online (Marr, n.d.). These services should be destigmatized and integrated into the educational experience.

**Challenges and Barriers to Implementation:** Implementing these recommendations may face challenges, including financial constraints, resistance to change, and the need for faculty development to adapt to new teaching methodologies (Philippine Development Plan 2023-2028, n.d.). Additionally, ensuring equitable access to online resources and mental health support can be challenging in some contexts (International Labour Organization, 2020; Navarro, 2022).

**Avenues for Future Research:** Future research should explore the long-term effects of the COVID-19 pandemic on education and the job market (Rainie & Anderson, 2017). It should delve into the efficacy of various online learning models and their impact on skill development (Holzapfel, n.d.). Research should also examine the role of emerging technologies, including artificial intelligence and automation, in shaping job market demands and educational strategies (Gill, 2020).

**Taking Lessons from the Pandemic:** Lessons learned during the pandemic, such as the importance of online learning and remote work skills, should inform future educational strategies (World Economic Forum, 2018). Institutions should prioritize digital literacy and remote collaboration skills, recognizing that these competencies are essential for students' future success (Ordoñez, 2023).

**Resilience-Building in Curricula:** Resilience-building should be integrated into curricula, equipping students with the capacity to adapt to unforeseen disruptions (The Education Reform Movement, 2021). This involves teaching stress management, problem-solving under pressure, and the cultivation of a growth mindset.

**Preparedness for Future Disruptions:** Educational institutions must remain prepared for potential future disruptions (Mulrean, 2023). This involves developing contingency plans, ensuring technological readiness, and fostering a culture of adaptability among both students and faculty (CHED, CITIZEN'S CHARTER 3rd ed., 2022).

Overall, the evolving job market and educational landscape require a *proactive approach* from educational institutions. By implementing these recommendations and embracing future research, institutions can better prepare students for the challenges and opportunities of the jobs of the future, equipping them with the skills and resilience needed to thrive in an ever-changing world.

## VII. Conclusion

The COVID-19 pandemic has ushered in a profound transformation of the job market, accelerating certain trends and amplifying the demand for specific skills. In this paper, the author explores how the pandemic has reshaped the employment landscape and delves into the implications for education. However, it is imperative to recap the main findings and insights from this paper, underscore the critical importance of preparing students for the jobs of 2030, and connect these insights to the specific context, especially in Iligan City, Philippines. Throughout this paper, the author has navigated the evolving terrain of education, recognizing the fundamental role of colleges and universities in equipping students with the skills needed for a rapidly changing job market. Key findings emphasize the significance of fostering adaptability, critical thinking, empathy, integrity, optimism, proactivity, and resilience (Emma, 2019). These skills serve as the foundation upon which students can survive and thrive in the face of uncertainty and emerging challenges. The COVID-19 pandemic, a disruptive force of unparalleled magnitude, has underscored the need for adaptability



and digital proficiency (World Economic Forum, 2018). It has accelerated the adoption of remote work and online learning, making these competencies not only advantageous but imperative for future success (Ordoñez, 2023). In the context of Iligan City, Philippines, these insights carry specific implications. As a region with its unique economic and educational landscape, Iligan City stands to benefit from aligning its educational institutions with the demands of the future job market. By integrating future skills into its curricula, providing robust mental health support to students, and embracing technological advancements (Microsoft Education Team, 2023; International Labour Organization, 2020), Iligan City can empower its students to thrive in the ever-evolving world of work. This paper carries significant implications for educational reforms and real-world challenges in Iligan City, Philippines. It serves as a compass guiding Institutions towards effective strategies that empower students thrive in the global job market while contributing to the economic growth of the city and the nation. As we all move forward, let us remember that the future belongs to those who are prepared, adaptable, and equipped with the skills to shape the world of tomorrow, colleges and universities have a crucial role to play in this journey.

## References

- Abelson, H. (2007). The Creation of OpenCourseWare at MIT. Massachusetts Institute of Technology. <https://dspace.mit.edu/bitstream/handle/1721.1/37585/ocw-creation-preprint.pdf>
- Adeleye, B. N., Sankaran, A., Jamal, A., & K, A. (2022). Internationalization–Industrial output nexus: Evidence from 15 late-industrialized economies. *Journal of Public Affairs*, 22(4), e2658. <https://doi.org/10.1002/pa.2658>
- Adobe Education Team. (2020). *The Future of Work: How Colleges Are Preparing Students for the Jobs of Tomorrow*. Adobe Press.
- Adrian, P. et al. (2022). Knowledge-driven actions: transforming higher education for global sustainability Corporate author: UNESCO [6235], UNESCO Global Independent Expert Group on the Universities and the 2030 Agenda
- Atkinson, R. (2029). Robotics and the Future of Production and Work. ITIF <https://itif.org/publications/2019/10/15/robotics-and-future-production-and-work/>
- Autor, D. et al. (2020). The Work of the Future: Building Better Jobs in an Age of Intelligent Machine. <https://workofthefuture.mit.edu/wp-content/uploads/2021/01/2020-Final-Report4.pdf>
- Bakhshi, H. et al. (2017). THE FUTURE OF SKILLS EMPLOYMENT IN 2030. Research partners FUTURE SKILLS.PEARSON. <https://futureskills.pearson.com/research/assets/pdfs/technical-report.pdf>
- BCG. (2021). The impact of new technologies on jobs in the US, Germany, and Australia
- Bernard, M. (2020). *Tech Trends in Practice: The 25 Technologies that are Driving the 4th Industrial Revolution* (Wiley 1st edition June 2020)
- Bernard, M. (2022). *Future Skills: The 20 Skills and Competencies Everyone Needs to Succeed in a Digital World* (Wiley, 1st edition August 2022)
- Chang, J. and Huynh, P. (2016). ASEAN in Transformation (The Future of Jobs at Risk of Automation). [https://www.ilo.org/wcmsp5/groups/public/---ed\\_dialogue/---act\\_emp/documents/publication/wcms\\_579554.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---act_emp/documents/publication/wcms_579554.pdf)
- CHED, CITIZEN'S CHARTER 3<sup>rd</sup> ed. (2022). [https://chedro3.ched.gov.ph/wp-content/uploads/2022/06/CHED-Citizen\\_s-Charter\\_Brochure.pdf](https://chedro3.ched.gov.ph/wp-content/uploads/2022/06/CHED-Citizen_s-Charter_Brochure.pdf)
- Criollo-C, S., Guerrero-Arias, A., Jaramillo-Alcázar, Á., & Luján-Mora, S. (2021). Mobile learning technologies for education: Benefits and pending issues. *Applied Sciences*, 11(9), 4111.
- Diamandis, P. and Kotler, S. (2020). *The Future Is Faster Than You Think, How Converging Technologies Are Transforming Business, Industries, and Our Lives* (Simon & Schuster, 2020)
- Emerging Enabling Technologies for Industry 4.0 and Beyond by Alexander Sigov, Leonid Ratkin, Leonid A. Ivanov & Li Da Xu (2022) 4.
- Emma, S. (2019). *7 Skills for the Future: Adaptability, Critical Thinking, Empathy, Integrity, Optimism, Being Proactive, Resilience* (Pearson Business; 2nd edition, 15 Feb. 2019)
- Esliit, E.R. (2023a). Surviving and Thriving: Empowering Student-Centered Solutions for Post-Pandemic Mental Health, Time Management, and Stress Reduction. Preprints 2023, 2023090777. <https://doi.org/10.20944/preprints202309.0777.v1>

- Eslit, E. (2023b). *"In times of adversity, we find the strength to endure and the wisdom to navigate life's trials. Our resilience is a testament to the indomitable human spirit."*
- Eslit, E. (2023c). Exploring the Nexus: Blended Learning, Language and Literature, Internationalization, and 21st Century Skills in Higher Education. *Preprints* 2023, 2023070024. <https://doi.org/10.20944/preprints202307.0024.v1>
- Fan, Z. (2021). How to prepare students for the jobs of 2030. Routledge.
- Franz, J. (2015). ASU study shows online education to be key driver in university sustainability strategies. <https://news.asu.edu/content/asu-study-shows-online-education-be-key-driver-university-sustainability-strategies>
- Gallagher, S. (2020). What the Shift to Virtual Learning Could Mean for the Future of Higher Ed. Harvard Business Review Press.
- Gateways to Public Digital Learning: A multi-partner initiative to create and strengthen inclusive digital learning platforms and content (Reaffirming digital learning as a public good). United Nations Transforming Education Summit TES Leaders Day: Spotlight Sessions (19 September 2022) [https://www.un.org/sites/un2.un.org/files/2022/09/gateways\\_to\\_public\\_digital\\_learning\\_long.pdf](https://www.un.org/sites/un2.un.org/files/2022/09/gateways_to_public_digital_learning_long.pdf)
- Gill, I. (2020). Whoever Leads in Artificial Intelligence in 2030 will rule the world until 2100. West, D.M. (2018), The Automated Society: Robots, AI, and the Future of Work, Brookings Institution Press World Economic Forum (WEF) (2018), Towards a Reskilling Revolution: A future of jobs for all. Retrieved from <https://www.weforum.org/reports/towards-a-reskilling-revolution>
- Glass, C. et al. (2022). Toward Greater Inclusion and Success A NEW COMPACT FOR INTERNATIONAL STUDENTS. <https://www.acenet.edu/Documents/Intl-Students-Monograph.pdf>
- Gromova, T. V. (2021). Information technology's significance in higher education in the context of its digitalization. Current Achievements, Challenges and Digital Chances of Knowledge-Based Economy, 19-26.
- Guillen, M. (2020). 2030: How Today's Biggest Trends Will Collide and Reshape the Future of Everything (St. Martin's Press August 2020)
- Guterres, A. (2022). UN Secretary-General. Transforming Education Summit. United Nations, New York, 16, 17 & 19 September 2022. <https://www.un.org/en/transforming-education-summit>
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2021). Understanding the role of digital technologies in education: A review. Sustainable Operations and Computers, 3, 275-285. <https://doi.org/10.1016/j.susoc.2022.05.004>
- Holzapfel, B. (n.d). The class of 2030 and life-ready learning: The technology imperative. A summary report. [https://education.minecraft.net/wp-content/uploads/13679\\_EDU\\_Thought\\_Leadership\\_Summary\\_revisions\\_5.10.18.pdf](https://education.minecraft.net/wp-content/uploads/13679_EDU_Thought_Leadership_Summary_revisions_5.10.18.pdf)
- International Labour Organization Country Office for the Philippines (2020). The Future of Work in the Philippines: Assessing the impact of technological changes on occupations and sectors. ISBN: 9789220336120 (Web PDF. [https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-manila/documents/publication/wcms\\_762207.pdf](https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-manila/documents/publication/wcms_762207.pdf)
- Islam, M. K., Sarker, M. F. H., & Islam, M. S. (2022). Promoting student-centered blended learning in higher education: A model. E-Learning and Digital Media, 19(1), 36-54.
- Li, Y., Froyd, J. E., & Wang, S. (2020). Research and trends in STEM education: a systematic review of journal publications International Journal of STEM Education, 7(1), 1-19 1.
- Marr, B. (n.d). The Top 10 In-Demand Skills For 2030. <https://www.forbes.com/sites/bernardmarr/2023/02/14/the-top-10-in-demand-skills-for-2030/?sh=3a84ac6c2fb9>
- McKinsey & Company. (2021). How technology is shaping learning in higher education McKinsey
- McKinsey & Company. (2021). How technology is shaping learning in higher education 2.
- Microsoft Education Team (2023). Preparing students for the future. <https://educationblog.microsoft.com/en-us/2023/04/preparing-students-for-the-future>
- Microsoft Bing. (2023). Chat mode [Chatbot-SDG 4]. <https://www.bing.com/chat>
- Mulrean, C. (2023). THE WORLD BANK'S HISTORIC OPPORTUNITY TO CHAMPION PEOPLE AND PLANET. <https://www.globalgoals.org/news/the-world-banks-historic-opportunity-to-champion-people-and-planet/>
- Navarro, A. (2022). School Infrastructure in the Philippines: Where Are We Now and Where Should We Be Heading? <https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps2210.pdf>

- OECD (2018) *The Future of Education and Skills: Education 2030*, pp.1–23, OECD, Paris, France.
- Ordoñez, J.V. (2023). Philippine schools level up with new tech. <https://www.bworldonline.com/special-reports/2023/09/04/543017/philippine-schools-level-up-with-new-tech/>
- OpenAI. (2023, September 18). ChatGPT by OpenAI. <https://www.openai.com/chatgpt>
- Pandya, B. (2019) *A Competency Framework for Virtual HR Professionals in an Artificial Intelligence Age*, pp.27–48, Mokslinės Leidybos Deimantas – Diamond Scientific Publication [online] <http://www.dpublication.com/abstract-of-the-icarbme/icarbme-9-119/> (accessed 1 March 2020).
- Pandya, Bharti & Patterson, Louise & Ruhi, Umar. (2021). The readiness of workforce for the world of work in 2030: Perceptions of University students. *International Journal of Business Performance Management*. 1. 10.1504/IJBPM.2021.10036854.
- Philippine Development Plan 2023–2028 (n.d). <https://pdp.neda.gov.ph/wp-content/uploads/2023/01/PDP-2023-2028.pdf>
- PwC (2018) *Workforce of the Future – The Competing Forces Shaping 2030*, pp.1–42, PwC [online] <https://www.pwc.com/gx/en/services/people-organisation/publications/workforce-of-the-future.html> (accessed 1 March 2020).
- Rainie, L. and Anderson, J. (2017). *The Future of Jobs and Jobs Training*. Pew Research Center. <https://www.pewresearch.org/internet/2017/05/03/the-future-of-jobs-and-jobs-training/>
- Rostron, M. (2023). *How Will Artificial Intelligence Affect Jobs 2023–2030*. Nexford University. <https://www.nexford.edu/insights/how-will-ai-affect-jobs>
- Selingo, J. J. (2021). *The Future of Higher Education: How Emerging Technologies Will Change Education Forever*. Johns Hopkins University Press.
- Singh, R. (2023). *International Students in 2030*. <https://www.aecglobal.com.ph/blog/exploring-the-future-of-work-top-careers-for-international-students-in-2030>
- SkillsFuture Singapore (2023). *National movement to provide Singaporeans with the opportunities to develop their fullest potential throughout life*. <https://www.skillsfuture.gov.sg/aboutskillsfuture>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines, *Journal of Business Research*, Volume 104, 2019. <https://www.sciencedirect.com/science/article/pii/S0148296319304564>
- The Education Reform Movement (2021). *Encyclopedia.com*. [www.encyclopedia.com](http://www.encyclopedia.com). Retrieved 2021-04-11.
- The Five Biggest Education And Training Technology Trends In 2022 by Bernard Marr (2022)
- Transforming Education Summit (2022). United Nations, New York, 16, 17 & 19 September 2022. <https://www.un.org/en/transforming-education-summit>
- UN 2023 SDG Summit (2023). *Sustainable Development Goals*. <https://www.un.org/sustainable-development/>
- UNESCO's action in education (2022). <https://www.unesco.org/en/education/action>
- United Nations Development Programme (UNDP) (2016) *Arab Human Development Report: Youth and the Prospects for Human Development in a Changing Reality*, New York, NY.
- West, D.M. (2018), *The Automated Society: Robots, AI, and the Future of Work*, Brookings Institution Press
- World Economic Forum (2016) *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*, Geneva.
- World Economic Forum (WEF) (2018), *Towards a Reskilling Revolution: A future of jobs for all*. Retrieved from <https://www.weforum.org/reports/towards-a-reskilling-revolution>

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