

## Article

# Investigating the Broken Pipeline Phenomenon in Educational Programs: Realignment of Values for Sustainable Progress

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## Abstract

*The Philippine educational system has a rich and complex history, significantly influenced by the legacies of colonization. Following the country's independence in 1946, the government-initiated reforms to improve educational accessibility, which were firmly established in the 1987 Constitution, aimed to guarantee the right to quality education for all citizens. However, despite these efforts, the Philippine education system continues to encounter pressing challenges that undermine the equal opportunity for quality education, leading to limited access for many Filipinos. This issue is often referred to as the "broken pipeline" phenomenon. The "broken pipeline" phenomenon highlights a misalignment between educational programs and the socio-economic realities they aim to address, resulting in inefficiencies and inequities in societal development. Employing a textual analysis approach, this paper examines the root causes of this disconnect, including outdated curricula, unequal access to education, and inadequate preparation for contemporary labor markets. It proposes cultivating values like adaptability, equity, community engagement, and innovation to realign educational systems with socio-economic demands. These values not only address the gaps in the pipeline but also foster resilience and inclusivity, which are essential for sustainable progress.*

**Keywords:** broken pipeline phenomenon, curriculum realignment, educational programs, inclusivity, labor markets, resilience, socio-economics, sustainable progress, values

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## Introduction

The Philippine educational system has a rich and complex educational history shaped by the legacies of colonization. Under Spanish rule from 1521 to 1898, education was predominantly influenced by the Catholic Church and catered primarily to the Spanish elite, emphasizing religious instruction. Following the Spanish-American War, the Philippines became a U.S. colony. One of the institutions that was established was a public school system with an English-language curriculum aimed at workforce preparation and assimilation. After achieving independence in 1946, the government implemented reforms to enhance educational accessibility, a commitment enshrined in the 1987 Constitution, which guarantees every citizen's right to quality education. Despite these initiatives, the Philippine education system continues to face tremendous challenges that result in limited access for many Filipinos.<sup>1</sup>

The 'broken pipeline' phenomenon is one pressing issue the country's educational system faces. The metaphor of a 'pipeline' is often used to describe the flow of individuals from education to meaningful societal roles. A broken pipeline, however, reflects systemic failure where educational outputs do not match socio-economic needs. This misalignment exacerbates inequalities, leaving many unable to realize their potential while industries and communities face skill shortages. Job mismatch, a disconnect between job seekers' skills and qualifications and the requirements of available positions, may be one of the effects of this phenomenon. This phenomenon often leads to lower productivity and increased turnover and can negatively impact wages and competitiveness in the workforce. It is particularly prevalent among new hires who may not find the positions aligned with their skill sets, resulting in a lack of long-term retention. Another would be skill mismatch, which pertains to a difference between the skills that s/he should have to fit a role accordingly and the skills gained through education. A skills mismatch arises when a worker's abilities do not correspond with the demands of their role, whether by being inadequate or exceeding what is required to perform their responsibilities. This disconnect can foster feelings of job insecurity and impede career advancement and income potential, leading to reduced productivity, diminished work quality, and a decline in revenue. A skills mismatch in the workplace creates a skills gap that can significantly affect a business's overall performance.

This paper investigates the "broken pipeline phenomenon" (BPP hereafter), emphasizing the misalignment between educational programs and the socio-economic realities they seek to address. This disconnect leads to inefficiencies and inequities in societal development. Addressing this issue necessitates an interdisciplinary approach grounded in values that connect education to socio-economic contexts. Utilizing textual analysis, this paper delves into the root causes of this misalignment, including outdated curricula, unequal access to education, and inadequate preparation for

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<sup>1</sup> Bai, Niyang. (2023). "Educational Challenges in the Philippines." *Philippines Institute for Development Studies*. Accessed: <https://brokenchalk.org/educational-challenges-in-the-philippines/>

contemporary labor markets. It advocates for realigning educational systems by fostering values such as adaptability, equity, community engagement, and innovation. These values help bridge gaps in the pipeline and promote resilience and inclusivity, both of which are essential for sustainable progress.

## Discussions

### *Understanding the Broken Pipeline Phenomenon (BPP)*

Education empowers individuals and plays a vital role in the development of any nation, provided it is strategic and carefully designed to achieve specific, well-defined goals. A well-organized higher education system can enhance a nation's gross product and cultural richness, promote a positive outlook on leveraging technological advancements, and improve the efficiency and effectiveness of governance. Furthermore, it reinforces competencies and nurtures commitment.<sup>2</sup> To harness the demographic potential of our young population effectively, it is crucial to provide them with quality education and create suitable opportunities for gainful employment. The lack of quality educational institutions poses a significant challenge to equity and access to education, which could seriously affect the country's growth and development.<sup>3</sup>

To further situate our understanding of BPP, it is paramount to consider several interrelated factors that brought about the academic anomaly.

### *Outdated Curricula*

An educational curriculum is essential for improving the quality of education and shaping students for their future roles in society. It provides a structured framework for communicating knowledge, skills, and values while meeting specific learning objectives. A well-designed curriculum promotes coherence and progression across grade levels and supports students' social, emotional, physical, and moral development, preparing them to face various life challenges. The educational curriculum is essential for addressing societal needs by including relevant topics like justice and peace. It reflects labor market trends and technological advancements while incorporating ethical principles that empower students in their personal and professional growth.

Integrating skills into higher education at both undergraduate and postgraduate levels will better prepare students for the job market. This can be achieved by offering optional skill modules and updating the curriculum of specific subjects to include relevant skills. The additional subjects may focus on domain knowledge, soft skills, English communication, digital literacy, financial literacy, and employment readiness. Additionally, combining part-time study and part-time work could benefit various fields.

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<sup>2</sup> Ranjan Panigrahi, Manas. (2020). "Skills in Higher Education: A suggestive path." *Journal of Educational Reform*, 34(2), 1.

<sup>3</sup> Ranjan Panigrahi, Manas. "Skills in Higher Education: A suggestive path." 34(2), 1.

A significant number of educational programs still emphasize theoretical knowledge over practical skills. This leaves graduates ill-equipped for the demands of modern labor markets. Higher education institutions must acknowledge that transitioning from education to employment is not automatic for many students.

#### *Socio-Economic Disparities*

Unequal access to quality education perpetuates cycles of poverty, limiting opportunities for underprivileged groups.<sup>4</sup> Socio-economic disparities are a significant factor contributing to the broken pipeline phenomenon, as they create unequal opportunities for individuals to access, participate in, and advance through structured systems such as education, careers, and leadership pathways. These disparities disproportionately affect marginalized groups, perpetuating systemic inequities.

Students from low-income families often attend underfunded schools that lack the resources necessary to support advanced learning. These schools may have fewer qualified teachers, outdated facilities, and limited access to enrichment programs, such as advanced placement (AP) courses or extracurricular STEM activities. This disparity creates an initial gap in educational preparedness, particularly in competitive fields like STEM (science, technology, engineering, and mathematics), where early exposure and foundational skills are critical.<sup>5</sup>

The financial barriers to higher education further exacerbate the problem. While scholarships and financial aid programs exist, they often fail to cover the full tuition, fees, and living expenses, leaving students from low-income families struggling to afford college. Many students in this demographic are forced to work part-time jobs to fund their education, which can negatively impact academic performance and increase the likelihood of dropping out.<sup>6</sup> This financial strain disproportionately affects students from low socio-economic backgrounds, effectively “breaking” the pipeline for many talented individuals.

#### *Limited Engagement with Industry*

A lack of collaboration between educational institutions and industries results in programs that fail to reflect real-world needs.<sup>7</sup> A significant contributor to limited industry engagement is the gap between academic training and the demands of modern workplaces. Many educational programs prioritize theoretical knowledge over practical skills, leaving students unprepared for industry-specific challenges. For example, STEM curricula often lack opportunities for hands-on projects or

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<sup>4</sup> Brown, A., & Green, K. (2019). "Access to Education: The Equity Gap." *Education Policy Review*, 28(4), 45-60.

<sup>5</sup> Sean F. Reardon, "The Widening Academic Achievement Gap Between the Rich and the Poor: New Evidence and Possible Explanations," *Stanford University* (2011). 13.

<sup>6</sup> Sara Goldrick-Rab, *Paying the Price: College Costs, Financial Aid, and the Betrayal of the American Dream* (Harvard University Press, 2016). 7.

<sup>7</sup> Jones, P. (2021). "Industry Collaboration in Higher Education." *International Journal of Innovation in Education*, 15(1), 75-90.

collaboration with industry professionals, which is critical for building the technical and interpersonal skills required in professional environments.<sup>8</sup>

This disconnect is particularly acute in underfunded schools and universities, which may lack the resources to build partnerships with industry leaders or provide access to cutting-edge technologies. Students in these institutions are often disadvantaged compared to their peers in well-funded schools with robust internship and co-op programs. The absence of industry engagement results in a workforce pipeline that fails to equip students with the skills and experiences necessary to succeed, causing many to drop out of these career tracks.<sup>9</sup>

Geographic location also plays a significant role in limiting engagement with industry. Students in rural areas or economically disadvantaged regions may lack proximity to major industry hubs, making it challenging to access internships, networking events, or industry-sponsored training programs.<sup>10</sup> This geographic disparity is exacerbated by the rise of industries heavily concentrated in specific urban centers, such as technology in Silicon Valley or finance in New York City. Students and professionals outside these hubs are systematically excluded from critical industry exposure without remote or hybrid engagement opportunities.

Structural inequalities within industries themselves further compound the problem. Implicit biases in hiring, promotion, and mentorship practices often favor individuals from privileged backgrounds, perpetuating cycles of exclusion. As a result, underrepresented groups face greater challenges in finding mentors or sponsors who can help them navigate workplace dynamics and advance in their careers.<sup>11</sup>

Limited engagement with industry is a critical factor contributing to the broken pipeline phenomenon. The disconnect between academic training and workplace demands, barriers to internships and mentorship, and structural inequalities within industries create significant obstacles for students and professionals, particularly those from underrepresented groups. Addressing these challenges requires a collaborative effort between educational institutions, industries, and policymakers to create a more inclusive and equitable pipeline. By bridging the gap between academia and industry, society can unlock the potential of diverse talent and build a workforce that reflects the richness of its communities.

### *Rigid Educational Structures*

Systems not accommodating diverse learning styles or lifelong learning opportunities often exclude significant population segments.<sup>12</sup> The broken pipeline phenomenon, which describes the systematic attrition of individuals from

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<sup>8</sup> Cf. Andrew C. Campbell, "Closing the Gap Between Academia and Industry," *STEM Education Review* 25, no. 3 (2020): 123–130.

<sup>9</sup> Sean Gallagher, *The Future of University Credentials: New Developments at the Intersection of Higher Education and Hiring* (Harvard Education Press, 2016), 87–89.

<sup>10</sup> Cf. Patrick L. Mason and Rhonda Garrison, "Geographic Disparities in Access to STEM Careers," *Journal of Applied Economics* 47, no. 1 (2021): 56–73.

<sup>11</sup> Cf. Lauren A. Rivera, *Pedigree: How Elite Students Get Elite Jobs* (Princeton University Press, 2015), 101–105.

<sup>12</sup> Taylor, R. (2018). "Rigid Structures in Education Systems." *Educational Development Quarterly*, 22(3), 101-115.

underrepresented groups as they progress through educational and career pathways, is often exacerbated by rigid educational structures. These inflexible systems hinder students' ability to adapt to changing circumstances, prioritize uniformity over diversity, and fail to account for learners' varied needs and aspirations. As such, many students struggle to navigate these systems, leading to increased dropout rates and diminished career opportunities.

One major issue with rigid educational structures is their heavy reliance on standardized curricula that fail to accommodate diverse learning styles. Traditional "one-size-fits-all" approaches often neglect the unique needs of students from disadvantaged backgrounds, such as those requiring additional academic support or flexibility due to external responsibilities like work or caregiving.<sup>13</sup> Many students feel alienated without personalized pathways or alternative learning modes, reducing their likelihood of persisting through academic programs.

Additionally, rigid progression timelines in many educational systems limit opportunities for students to explore interdisciplinary interests or gain practical experience. For example, STEM programs often emphasize theoretical coursework at the expense of hands-on training or internships, which are critical for bridging the gap between education and industry.<sup>14</sup> This narrow focus leaves students underprepared for real-world applications, discouraging them from continuing in their chosen fields.

Moreover, rigid structures disproportionately impact students from marginalized communities, who may face systemic barriers such as a lack of access to advanced placement courses, extracurricular resources, or mentorship.<sup>15</sup> These barriers prevent students from fully engaging with their education and achieving their potential. The result is a self-perpetuating cycle in which only those who conform to rigid systems succeed, while others, particularly from underrepresented groups, fall out of the pipeline.

To address the role of rigid educational structures in the broken pipeline phenomenon, reforms are needed to make education more inclusive and adaptable. Strategies such as flexible curricula, competency-based learning models, and greater integration of experiential learning opportunities can help create a system that supports a broader range of learners. By embracing flexibility and inclusivity, educational institutions can help prevent the systematic exclusion of students and build a more equitable pipeline.

### ***Values Needed to Address the Problem***

Cultivating specific values is essential for transforming educational systems into equitable and effective contributors to societal well-being. Solving this issue

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<sup>13</sup> Cf. Gloria Ladson-Billings, *The Dreamkeepers: Successful Teachers of African American Children*, 2nd ed. (San Francisco: Jossey-Bass, 2009), 67–70.

<sup>14</sup> Cf. John H. Falk and Lynn D. Dierking, "Learning from Museums: An Integrative Approach," *Journal of Educational Change* 6, no. 3 (2005): 254–259.

<sup>15</sup> Cf. Sean F. Reardon, "The Widening Academic Achievement Gap Between the Rich and the Poor: New Evidence and Possible Explanations," *Educational Leadership* 70, no. 8 (2013): 10–15.

requires cultivating adaptability, equity, community engagement, and innovation. These values can collectively create a more inclusive and supportive environment, ensuring more individuals thrive within the pipeline.

### *Adaptability*

Adaptability is crucial in addressing the diverse needs of students and professionals navigating the pipeline. Adaptability is essential for creating flexible educational frameworks that cater to diverse learning needs. Rigid and standardized systems often fail to support students who require personalized learning experiences. By fostering adaptability, educational institutions can better respond to the evolving needs of students and the labor market. Academic and professional institutions must adopt flexible approaches, such as personalized learning pathways and competency-based assessments, to accommodate individuals with varying backgrounds, learning styles, and external responsibilities.<sup>16</sup> By valuing adaptability, institutions can better support those at risk of falling behind, fostering persistence and success.

Education must be dynamic, responding to the rapid evolution of technology, economies, and societal structures. Schools and universities should prioritize curriculum updates based on emerging trends. Likewise, they should highlight flexible learning pathways that accommodate changing career trajectories. They should also emphasize critical thinking and problem-solving over rote memorization.<sup>17</sup>

### *Equity*

Equity is another essential value, as systemic disparities often exacerbate the broken pipeline. Ensuring access to resources, mentorship, and opportunities for historically marginalized groups is critical for creating a level playing field.<sup>18</sup> Equity is vital to dismantling systemic barriers that disproportionately affect marginalized groups. By ensuring that all students have equal access to resources, opportunities, and mentorship, society can address the root causes of the broken pipeline.<sup>19</sup> Education systems should not only focus on academic performance but also ensure social and economic inclusivity to help all individuals succeed. Equity-oriented initiatives, such as scholarships, targeted outreach programs, and inclusive hiring practices, help dismantle barriers and promote representation across all stages of the pipeline.

Addressing disparities in access to education is critical to repairing the pipeline. Efforts must focus on providing resources to underserved communities, implementing

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<sup>16</sup> Cf. Lisa M. Meeks and Neera R. Jain, *Equity and Inclusion in Education and Practice: Embracing Diversity in the Learning Environment* (New York: Springer, 2020), 45–47.

<sup>17</sup> Cf. Walker, T. (2022). "Adapting Curriculum for the Future Workforce." *Workforce Development Journal*, 11(1), 25–40.

<sup>18</sup> Anthony P. Carnevale et al., "Balancing Work and Learning: Implications for Low-Income Students," *Georgetown University Center on Education and the Workforce* (2018).

<sup>19</sup> Cf. Anthony P. Carnevale et al., "Balancing Work and Learning: Implications for Low-Income Students," *Georgetown University Center on Education and the Workforce* (2018).

policies that ensure equal opportunities regardless of socio-economic background, and promoting inclusive practices that value diversity in educational settings.<sup>20</sup>

### *Community Engagement*

Community engagement is essential in bridging the gap between institutions and the individuals they serve. By fostering partnerships with families, local organizations, and industries, educational institutions can create a more holistic support system for students.<sup>21</sup> Programs that connect learners with mentors, internships, and real-world applications of their education help strengthen ties between individuals and their communities, ensuring a more resilient pipeline.

Educational systems must foster connections between students, educators, and the broader community to ensure relevance and impact. Community engagement emphasizes the role of families, local organizations, and industries in supporting educational outcomes. By actively involving communities, academic institutions can create a more holistic support network for students, enhancing their ability to persist and succeed. Key strategies include encouraging service-learning and internships, partnering with local businesses and organizations, and empowering communities to participate in shaping educational priorities.<sup>22</sup>

### *Innovation*

Innovation is essential for addressing the systemic and structural issues underlying the broken pipeline. This includes leveraging technology to expand access to education and professional development, reimagining curricula to emphasize interdisciplinary skills, and fostering creative solutions to persistent challenges. Institutions embracing innovative practices can better prepare individuals for evolving societal and workforce needs, ensuring long-term success. Innovation is needed to reimagine how education and industry can better align. This involves embracing new technologies, creating interdisciplinary curricula, and fostering entrepreneurial mindsets. Innovation helps ensure that students are prepared for the demands of the modern economy and equipped to contribute meaningfully to society.<sup>23</sup>

Innovation drives alignment by creating relevant, efficient, and sustainable solutions. As such, schools should integrate technology to enhance learning experiences, promote entrepreneurship and creative thinking, and develop interdisciplinary programs that mirror the interconnectedness of real-world challenges.<sup>24</sup>

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<sup>20</sup> Cf. Lopez, S., & Hernandez, M. (2020). "Equity in Education: Challenges and Opportunities." *Social Justice in Education*, 19(2), 78-93.

<sup>21</sup> Cf. Matthew T. Hora and Ross J. Benbow, *Reinventing the Internship: Integrating Work and Learning for a Changing World* (New York: Routledge, 2021), 112-115.

<sup>22</sup> Miller, D. (2019). "Community Engagement in Learning: A Case Study." *Community Education Review*, 14(3), 58-74.

<sup>23</sup> Tony Wagner, *Creating Innovators: The Making of Young People Who Will Change the World* (New York: Scribner, 2012), 89-92.

<sup>24</sup> Wilson, E. (2021). "The Role of Technology in Educational Innovation." *TechEd Journal*, 9(4), 89-102.



### *Values Realignment for Sustainable Progress: Case Studies in Finland and Singapore*

Given the characterization of the broken pipeline metaphor relative to the Philippine educational system, as well as the values needed to address the said phenomenon, it is significant to highlight two case studies as illustrations for a proposed realignment of values of resilience and inclusivity as viable alternatives for quality education in the Philippines towards sustainable progress. Indeed, the success in realigning the said values illustrates how it could yield positive outcomes:

#### *Finland*

By prioritizing equity and adaptability, Finland has developed an education system that prepares students for diverse roles while minimizing disparities.<sup>25</sup> Finland's model offers valuable insights into how an inclusive and flexible system can prepare students for diverse roles while reducing inequalities.

At the core of Finland's success is its commitment to equity. The Finnish education system ensures equal access to high-quality education for all students, regardless of socio-economic background. Public schools are well-funded and provide free meals, transportation, and learning materials, which help remove barriers to participation.<sup>26</sup> Additionally, there is minimal reliance on standardized testing, reducing pressure on students and allowing educators to focus on holistic development. This equitable approach ensures that no student is left behind, addressing one of the primary causes of the broken pipeline phenomenon—systemic inequality.

Adaptability is another hallmark of Finland's education system. Teachers are given significant autonomy to tailor their teaching methods to the needs of their students, fostering personalized learning experiences.<sup>27</sup> The system also emphasizes vocational education and training (VET) alongside traditional academic tracks, enabling students to choose paths aligned with their interests and strengths. Through strong partnerships between schools and industries, VET programs provide hands-on training and real-world experience, bridging the gap between education and employment.<sup>28</sup>

Finland's focus on equity and adaptability extends to fostering teacher excellence. Teachers in Finland are highly trained, with master's degrees being a minimum requirement, and are viewed as key contributors to educational success.<sup>29</sup> This professionalization ensures that educators are equipped to address the diverse needs of their students and adapt to changing circumstances.

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<sup>25</sup> Kaarina, L. (2020). "Educational Equity in Finland: Lessons for the World." *Nordic Educational Studies*, 17(2), 33-48.

<sup>26</sup> Cf. Pasi Sahlberg, *Finnish Lessons 2.0: What Can the World Learn from Educational Change in Finland?* (New York: Teachers College Press, 2015), 30–32.

<sup>27</sup> Cf. Kristiina Kumpulainen and Julian Sefton-Green, "What Is Finnish Schooling Doing Right?" *Educational Research* 62, no. 4 (2020): 405–408.

<sup>28</sup> Cf. Richard J. Murnane and Ludger Woessmann, "Skills for the 21st Century: Finland's Vocational Education Model," *OECD Education Working Papers* (2019): 15–18.

<sup>29</sup> Cf. Linda Darling-Hammond, *The Flat World and Education: How America's Commitment to Equity Will Determine Our Future* (New York: Teachers College Press, 2010), 140–142.

By prioritizing equity and adaptability, Finland has created an education system that prepares students for diverse roles and minimizes the systemic disparities contributing to the broken pipeline phenomenon. Its success demonstrates that investing in inclusive policies and flexible approaches can create a more resilient and equitable education-to-career pipeline.

### *Singapore*

A strong emphasis on innovation and industry collaboration has aligned education with economic needs, making Singapore a global hub for skilled labor.<sup>30</sup> In Singapore, the strategic alignment of education with financial demands, through a strong emphasis on **innovation** and **industry collaboration**, has created a dynamic system that minimizes the risk of this phenomenon. By fostering a close relationship between education and industry, Singapore has emerged as a global hub for skilled labor, addressing the pipeline issue and ensuring a steady flow of talent into the workforce.

A key aspect of Singapore's educational success is its focus on **innovation**. The government has consistently prioritized technology and research to drive economic growth. Initiatives such as the Smart Nation Program aim to harness the potential of digital technologies to meet future demands.<sup>31</sup> As a result, the education system emphasizes STEM (Science, Technology, Engineering, and Mathematics) fields, providing students with the necessary skills to excel in emerging industries. Moreover, Singapore's universities and technical institutes are renowned for their cutting-edge research and development programs, which ensure that graduates are well-prepared to meet the challenges of the modern economy.<sup>32</sup> This emphasis on innovation aligns education with future job markets and ensures that students can contribute to and benefit from a rapidly evolving technological landscape.

Industry collaboration is another cornerstone of Singapore's approach to education. The nation's educational institutions maintain close ties with industry leaders, ensuring curricula are tailored to meet real-world demands.<sup>33</sup> For instance, Singapore's polytechnics and vocational schools work directly with corporations to design programs that provide students with hands-on experience and training in areas with a high demand for talent. This collaboration also extends to internships, apprenticeships, and job placement programs that help students transition smoothly into the workforce. By bridging the gap between education and industry, Singapore has created a system where graduates are job-ready, and employers can find the skilled labor they need to fuel the economy.

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<sup>30</sup> Tan, C. (2021). "Singapore's Success in Education and Industry Alignment." *Asian Education Journal*, 12(3), 102-115.

<sup>31</sup> Cf. *Smart Nation and Digital Government Office*, "Smart Nation Vision," Government of Singapore, accessed December 15, 2024, <https://www.smartnation.gov.sg>.

<sup>32</sup> Cf. National University of Singapore, *Annual Report 2023*, National University of Singapore, 2023, 14–16.

<sup>33</sup> Tan Chuan-Jin, "Building Stronger Partnerships Between Education and Industry," *The Straits Times*, February 10, 2020, <https://www.straitstimes.com>.

Through innovation and industry collaboration, Singapore has developed a model that aligns education with the economy's needs and ensures the continuous flow of skilled professionals into the workforce. This alignment addresses the broken pipeline phenomenon by reducing disparities between what students are taught and what industries require, ensuring that education remains relevant, adaptive, and inclusive.

## Conclusions

Education remains a significant catalyst for actualizing man's rationality, especially in promoting a just and well-ordered society. As such, the state or government is mandated to promote this fundamental right of man to education to ensure the noble purpose of education.

Unfortunately, some instances undermine this fundamental right to education. A case in point is the broken pipeline phenomenon, as it were, a pressing issue that requires systemic transformation inspired by core values. Many community colleges have adopted flexible and inclusive practices, offering vocational training programs tailored to local labor markets.<sup>34</sup>

The broken pipeline phenomenon underlines the challenges that individuals, particularly from underrepresented groups, face as they progress through educational and career pathways. To address this issue, it is essential to prioritize the cultivation and formation of key values such as adaptability, equity, community engagement, and innovation. These values are integral to building systems that support sustained participation and success in education and the workforce.

By fostering adaptability, equity, community engagement, and innovation, educational systems can better align with socio-economic realities, paving the way for a more inclusive and sustainable future. Addressing this challenge is a matter of policy and a moral imperative to ensure that education serves as a pathway to opportunity and societal well-being.

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<sup>34</sup> Roberts, J. (2019). "Community Colleges as Engines of Workforce Development." *American Education Quarterly*, 27(1), 12-28.

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