

Critical success factors of Public-Private Partnerships in the education sector

Public-private
partnerships

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Sajida

*Department of Public Administration, University of Merdeka Malang,
Malang, Indonesia, and*

Bevaola Kusumasari

*Department of Public Policy and Management, Universitas Gadjah Mada,
Yogyakarta, Indonesia*

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Abstract

Purpose – This paper aims to identify the factors affecting the implementation of Public-Private Partnerships (PPPs) in the education sector.

Design/methodology/approach – Based on Scopus and adopting the protocol of Staples and Niazi (2007), this systematic literature review examined 21 articles on PPPs in the education sector. Content analysis is adopted to identify research gaps and provide information on critical issues in the cases.

Findings – The findings have identified the critical success factors of PPPs in the education sector in 12 countries, revealing varying degrees of success and implementation challenges. They reflect the importance of clear objectives, effective communication, and robust partnerships between the public and private sectors to achieve success. These insights contribute to an in-depth understanding of PPP implementation in education, which can guide future projects.

Originality/value – The critical success factors identified in PPPs implementation in education across various countries may provide a comprehensive worldwide perspective for researchers, practitioners and policymakers.

Keywords Public-Private Partnerships, Critical success factors, PPP in education, Education policy, Content analysis

Paper type Research paper

Introduction

Over the past decade, the significance of Public-Private Partnerships (PPPs) in social policy areas such as education have increased in terms of public financing. The private sector enhances efficiency, productivity, and results, whereas the public sector manages finances, policy changes, quality assurance, and public mandates in the public interest. Larocque (2008) classified education PPP programs as private sector initiatives to assist public schools in acquiring resources. Government voucher initiatives can assist students in attending private schools, and school management initiatives may enhance teacher resources and curriculum. The PPPs manage, maintain, and support teacher training, curriculum design, and operational services such as vouchers, subsidies, grants, allowances, as well as infrastructure, such as school construction (Robertson *et al.*, 2012). Typically, the voucher system is a prevalent PPP model (Ansari, 2021; Barrera-Osorio *et al.*, 2012) in which students



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receive state-issued vouchers to pay for tuition and other expenses at private (or public) schools.

Extant research has addressed the expansion of PPP in the educational sector from various perspectives. During the pandemic, education was supported by the successful implementation of PPP (Walsh *et al.*, 2020). Several studies have examined one model of PPP education implementation (Chattopadhyay and Nogueira, 2014) and student contentment as facility recipients (Babatunde and Perera, 2017). Other studies have addressed the failure of educational PPP implementation, including party cooperation mechanisms and indicators of imprecision in policy implementation (Cancedda *et al.*, 2014; Wokadala and Barungi, 2015). On the other hand, international organizations that support PPPs in education, such as the World Bank, Education Development Trust, and Asian Development Bank, have also published several studies and books examining the specifics of PPP procedures and progress toward better education (Kim *et al.*, 2011; Larocque, 2008).

The success of PPPs in infrastructure and social sectors has been studied extensively in many nations (Amović *et al.*, 2020; Babatunde *et al.*, 2012; Osei-Kyei *et al.*, 2017). However, research on the factors that affect the implementation of worldwide educational PPPs is limited. Helmy *et al.* (2020) interviewed project participants in Egypt to investigate this topic. Twinomuhwezi and Herman (2020) investigated how stakeholders perceive the success or failure of universal secondary education to determine the success of PPPs in other education sectors. However, it focused on Uganda. Hence, a systematic literature review of international studies was performed to identify the factors influencing the implementation of PPPs in education. Content analysis was then used to investigate the factors of PPP implementation by examining programs from various countries.

Methodology

Under the protocol of Staples and Niazi (2007), a systematic literature review was conducted to identify, evaluate, and analyze published studies on PPP education. This analysis was limited to the successes and failures of PPP practitioners. The data mining procedure began with a Scopus database search for “Public-Private Partnership” and education-related terms, such as education, learning, and students. The initial data search yielded 11,670 diverse publications, including books, articles, and reports. Subsequent screening of this study was restricted to English-language articles and articles with PPP-related keywords, yielding a total of 218 documents. This screening and filtration procedure utilized Scopus filter functionality. Subsequently, the authors examined the documents for completeness, and discovered 53 documents. Owing to the vast extent of the implementation of PPP education programs, only 21 articles were eligible for analysis, as determined by a thorough review of the entire publication. Content analysis concludes the message data objectively and methodically (Holsti, 1969) and does not employ standard measures (Chua and Zhang, 2020). This analysis was performed by compiling a data table from the 21 articles discovered. This table depicts the data findings beginning with the countries that implement PPP projects, the programs conducted, the success or failure of project implementation, and the factors that affect the practice of PPP projects. Based on the results, the PPP project practices of the 12 nations are analysed.

Findings

The success of a project is multidimensional, and its implementation can be evaluated based on whether it meets the set time, cost, target, objectives, or whether the outputs function as expected and provide the intended benefits. Therefore, the evaluation of success or failure is based on the achievement of the PPP program’s goals and objectives. Research-based data

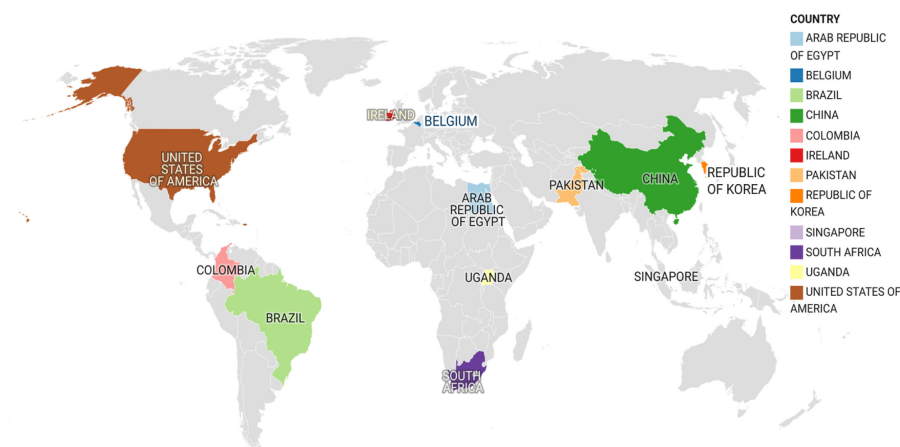
were used to investigate the 12 countries in this study. The World Bank (2019) reported that six countries spent more than 4 per cent of their GDP on education: Belgium (6.3 per cent), Brazil (6 per cent), South Africa (5.9 per cent), the United States (5 per cent), South Korea (4.7 per cent), and Colombia (4.5 per cent). The other six with education expenditure below 4 per cent include China (3.5 per cent), Ireland (3.3 per cent), Singapore (2.7 per cent), Egypt (2.6 per cent), Pakistan (2.5 per cent), and Uganda (1.5 per cent). The following section discusses the PPPs in each country's education sector. See Figure 1.

1. Belgium

The “Scholen van Morgen” (Schools of the Future) project in Belgium is a 1.5 billion Euro education PPP managed by DBFM, Agency for School Infrastructure (AGION), and regular public agency subsidies (Willems, 2014). Under this policy, the private sector will construct and maintain modern, sustainable school buildings owned by school boards for 30 years (Van Gestel *et al.*, 2014). School boards pay performance-based availability fees for the duration of an agreement. However, they acquired the building for nothing from their conclusions. A total of 167 initiatives are managed by the public sector and school board (Willems, 2014). The PPP program's accountability requirements also aided this endeavor. The investment company of the Flemish government, AGION, and the private corporations AG Real Estate and BNP Paribas Fortis contributed to the program's success.

2. Ireland

The Irish Pilot Schools Program utilized PPPs to construct schools in 2002 (O'Shea *et al.*, 2020). Five schools were constructed using a design, build, finance, and maintain (DBFM) system that spanned 25 years and cost €63 million. However, school construction and PPP initiatives have continued. The Comptroller and Auditor General (C&AG) determined that the initiative failed to assess the value for money (VFM), an essential step in PPP governance (O'Shea *et al.*, 2020). After the opening of the coordinated schools, C&AG evaluated VFM. Reeves and Ryan (2007) state that PPP procurement with Jarvis Project Ltd. costs 8-13 per cent more than conventional procurement. A strong VFM requires institutional support. The PPP guidelines require a cost-benefit analysis, VFM assessment, and post-project review to ensure long-term viability and accountability of PPP programs. In 2006, Ireland adopted



Source: By authors

Figure 1.
Country Map: Analysis
of PPP Implementation
in the Education Sector

VFM standards for PPP procurement to manage evaluation, procurement, and post-contract management based on the lessons learned. Subsequently, the National Development Finance Agency (NDFA) was established. The 2010 NDFA education “package” was completed in 2010, 2011, 2013, 2014, and 2019.

3. United States

In the United States, PPP schemes are popular in education sector, including boarding schools. Between 1995 and 2014, PPPs were utilized in 332 student dormitory initiatives in all 50 states (Levey *et al.*, 2020). PPPs established social infrastructure in Florida, Georgia, California, and Virginia. These laws facilitated this scheme for student housing. Each state restricts PPPs to administrative issues in social infrastructure.

4. Colombia

The School Concession (CEC) utilized PPPs to construct schools in Bogota, Colombia. The establishment of 25 concession schools for 40,000 students were established between 1999 and 2003 (Edwards Jr *et al.*, 2017). CECs educate underprivileged children in underserved communities. The program was successful due to performance-based contracts, evaluations, audits, and bureaucratic accountability.

5. South Korea

H-JUMP School is a partnership program for developing education in South Korea. Since 2011, it has educated low-income South Korean children in local learning centers. The participating partners have well-defined responsibilities. “Joining Us to Maximize our Potential” (JUMP) as an NGO provides quality mentors. The public sector employs and supervises instructors, while Hyundai funds up to 75 per cent of the program (Hong and Kim, 2018). All stakeholders believe that trust is necessary for the sustainability and partnership of the program.

6. China

In China, PPPs in the education sector rely on market mechanisms and governmental support. Individuals, governments, and private businesses finance their administration (Pillay *et al.*, 2013). In the 1996 Vocational Education Act, China emphasizes the link between vocational education and industry (Remington and Yang, 2020). Effective partnerships begin with this framework and high-level calls for modern vocational education. The integration of education and industry is improved by flexibility, shared responsibilities, and vocational training recognition, giving graduates meaningful career prospects. One example is the partnership between the Quanzhou Institute of Technology in Fujian Province and the Hengan Corporation. This specialized school providing training in automated production techniques for its suppliers and servicing online sales for sanitary products (Remington and Yang, 2020). The specialized school provides training for industry-wide skills and distributes graduates to its 40 board member enterprises. In 2009, Zhongshan Polytechnic opened a lighting industry school in Gu Zhen township, Zhongshan city, with support from the township government and the lighting industry association (Remington and Yang, 2020). This PPP in China’s skill development landscape shows how to succeed by providing industry-relevant skills training and distributing graduates to member enterprises.

7. Singapore

The University Town-Warren in the dormitories of Singapore Management University (SMU) and the National University of Singapore (NUS) are education-related PPP initiatives (Kim and Kwa, 2020). In 2007 and 2008, the university town initiative expanded and managed

student housing. The enterprise needed to move forward while major pipelines and several large structures were being constructed. The NUS and SMU abandoned this PPP-based initiative to build new student housing and expand government-funded services. Due to pricing policies and student debt reduction, PPPs were impossible. The lack of opportunities for business profits, strict pricing, and desire to reduce the financial burden on students hindered the private sector's willingness to collaborate with the public sector. Social infrastructure PPP failed because of opposition from the public sector and withdrawal pressure. This case demonstrates how regulation and public support can influence the success or failure of PPP initiatives in education.

8. Pakistan

The objective is to use PPP initiatives to provide access to education to disadvantaged students and areas (Ansari, 2020). The Punjab Education Foundation (PEF) promotes PPP education for low-income individuals. More than 2.6 million students are enrolled in partner institutions. Some programs provide education vouchers and grants, such as The Education Voucher Scheme in 2005, which provided \$3.5-7 per student in 1650 schools (Ansari, 2020). Then, Foundation Assisted Schools in 2006, subsidized monthly for students ranging from US\$3.5 to US\$9.6 in 3700 institutions. Others, the New Schools Program built 2404 schools in areas of poverty and provided student aid of \$3.5 to \$9.6 (Ansari, 2021). Through the Public Schools Support Programme in 2016, the PEF privatized education in failing public institutions. Sindh subsequently adopted the Punjab program. With student subsidies and teacher training from the Sindh Education Foundation (SEF), local entrepreneurs can create and manage private schools. One hundred thousand students with higher test scores were enrolled in the program's 2,000 institutions after 1.5 years (Barrera-Osorio *et al.*, 2022). These successful programs utilize PEF and SEF funds. All ongoing programs were monitored attentively.

9. South Africa

The Collaborative Schools Pilot Project manages nonprofit, fee-free, and nonselective schools for disadvantaged students in the Western Cape of South Africa (Feldman, 2020). In 2016, five schools adopted this policy, and PPP legislation legitimized it. However, this was delayed due to opposition from Equal Education, the Progressive Professional Forum, the South African Communist Party, the African National Congress, and the South African Democratic Teachers' Union (SADTU). SADTU argued that the Join Education Trust, the third party that monitored and evaluated the pilot program, should have reported on student progress, and that the lack of interest from the private sector could have improved the program's sustainability. There is a need to explain how the Western Cape Department of Education (WCED) would innovate and enhance school development in this project, or how the funder, schools, and WCED would share responsibility (Feldman, 2020).

10. Brazil

Similar to China, the Brazilian government and two private corporations are constructing technical schools. Two public high schools in Rio de Janeiro, NAVE and NATA, are financed by the State Secretariat of Education (SEEDUC) and two large Brazilian corporations, Oi Telecom for NAVE and Grupo Po de Acucar for NATA (Chattopadhyay and Nogueira, 2014). In Brazil, public schools are distinct from NAVE/NATA schools as both are innovative in terms of subject delivery. Both of them adhere to the standard curriculum and include teaching in their private partner industries. Graduates had more options available to them. Collaborative management supported the success of the program. In Rio de Janeiro, the private sector is responsible for technical education, whereas SEEDUC oversees the

traditional curriculum. Constant communication and decision making exist between partners. NATA and NAVE co-management models rely on extensive teacher interactions (Chattopadhyay and Nogueira, 2014).

11. Egypt

Egypt's education reform incorporates PPPs to increase its competitiveness in the global labor market. Through the Egyptian Education Initiative, multinational corporations can participate in the Egyptian education sector (Helmy *et al.*, 2020). In 2016, the central PPP unit of the Ministry of Finance initiated a private language school. In 2019, 910 classrooms, worth 500 million LE, were purchased. The American Group and the Ministry of Education and Technical Education provided market-relevant specialized education. Vocational training at the University of Egypt meets industry standards. Many factors contribute to the success of PPP education programs (Helmy *et al.*, 2020). First, a transparent PPP plan attracted private investment in Egypt's education sector. These initiatives will be executed by satellite PPP units within the Ministry. Furthermore, economic support, regulations, and laws promote PPPs.

12. Uganda

Improving educational quality is one of Uganda's development objectives. In 2007, PPP implemented universal secondary education in most public institutions in Uganda (Wokadala and Barungi, 2015). This policy offers secondary education vouchers/subsidies to all poor students (Barrera-Osorio *et al.*, 2020). Participating institutions included 11,007 public and 1,785 private secondary schools (Crawford, 2017). From 2007 to 2014, 873,476 students participated in the program. The program increased school administration efficiency. This was influenced by the public sector's clear agreements, goals, and objectives to reduce the cost of access to education (Wokadala and Barungi, 2015). However, the effectiveness of PPPs in Uganda did not increase student enrollment.

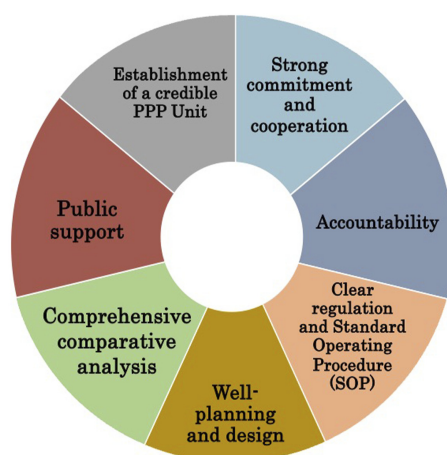
Discussion

Critical success factors of PPP implementation in the education sector

The descriptions of PPP implementation in various nations highlight several crucial program success factors. Goals and objectives can be accomplished only if these conditions are fulfilled. The critical success factors outlined below are derived from previous PPP education programs in various nations. This analysis identifies seven crucial factors that impact the implementation of PPPs in the education sector. See Figure 2.

a) Strong commitment and cooperation

The success of the Universal Secondary Education (PMU) program in Uganda (Wokadala and Barungi, 2015) and H-JUMP Schools in South Korea (Hong and Kim, 2018) were influenced by a strong commitment. Public, private, and political commitment affects the success of a program (Amović *et al.*, 2020; Babatunde *et al.*, 2012; Osei-Kyei *et al.*, 2017; Twinomuhwezi and Herman, 2020). Regular communication develops trust, clarifies policies, and reduces information asymmetry. To be successful, all project participants must work diligently (Chan *et al.*, 2004; Li *et al.*, 2005; Mannan, 2014), establish cooperative conduct, which is obligatory and essential in partnership settings (Dalcher and Lebel, 2010), and accomplish shared objectives (Brito *et al.*, 2014). This collaboration aided PPP education service programs in Belgium, South Korea, and Brazil. The PPP process map should divide tasks, competencies, and agreements through collaboration (Amović *et al.*, 2020). A lack of vision and commitment can delay the completion of the undertaking. Governments, businesses, and civil society must work together to accomplish these objectives. A solid public-private partnership can enhance educational outcomes, accessibility, and costs.



Source: By authors

Figure 2.
Critical Success
Factors Component of
PPP Implementation in
the Education Sector

b) Accountability

Partners in PPPs must be held accountable through transparent mechanisms (Twinomuhwezi and Herman, 2020). PPP programs in education place a heavy emphasis on financial accountability (Osei-Kyei *et al.*, 2017). Schools of the Future in Belgium were successful because of a three-pronged accountability system: reporting to parliament, parliamentary approval of specific rules for major initiatives, and information sharing and discussion (Willems, 2014). Accountability is closely related to the government's duty to establish policies and practices that safeguard against injustice and abuse of power as well as the performance of a program for the benefit of society (Willems, 2014). Good governance requires accountability for PPP initiatives (Helmy *et al.*, 2020). A lack of accountability can result in poor education quality, inefficient resource utilization, and stakeholder mistrust. Therefore, transparency and proactive public disclosure are required to prevent misuse of project funds and corruption (Chang *et al.*, 2021).

c) Clear regulation and Standard Operating Procedure (SOP)

Similar to other PPPs, formal laws and regulations are necessary. Governments or ministerial regulations may impede PPP implementation in nations without PPP legislation. Successful PPPs require investors to develop long-term projects under applicable laws and regulations (Amović *et al.*, 2020). Investors may need to help comprehend the various regulations and develop successful PPPs. China's 1996 Vocational Education Act (Remington and Yang, 2020) and US state laws enacted under the agreement and their legislatures support PPP education programs (Levey *et al.*, 2020). Singapore banned university housing fees for public goods (Kim and Kwa, 2020). The constitution and laws of a country determine its national or regional regulations. Center-local relationships are crucial for PPP development (Mao, 2023).

Local governments may deviate from these regulations if they impose restrictions that are difficult to implement at the local level or do not meet local requirements. Therefore, central and local governments should establish explicit, objective, and practical regulations, including risk matrices in solicitation documents (Da Cruz and Marques, 2012). PPP education can fail because of ambiguous regulations (Petersen, 2010). These regulations should also address how the government handles competitive tendering and unsolicited proposals (USPs). USPs have been developed by private companies that pursue business opportunities (Yun *et al.*, 2015). As the sector provides social services, accepting or rejecting unsolicited proposals must be carefully

considered. Some nations have successfully responded to PPP and USP infrastructure, while others are yet to respond (Marques, 2018). USPs continue to be susceptible to transparency, accountability, and collusion, and have higher costs or favoritism because of less competitive oversight. Because improving education should be a priority for the government, laws and regulations should resolve these issues. Poor regulation results in ambiguous partner responsibilities, potential disputes, delays, and additional costs.

Meanwhile, SOPs for education become performance benchmarks if they guarantee PPPs. Standardization and transparency define procedures, responsibilities, and competencies, reassuring investors and eliminating ambiguity (Amović *et al.*, 2020). This supports PPP initiatives in a favorable business climate. The Irish society values SOP education. Without SOPs, VFM assessments reduce budget efficiency (O'Shea *et al.*, 2020; Reeves and Ryan, 2007). This case study accentuates output standardization. Standard operating procedures ensure efficient communication and cooperation, wasting resources.

d) Well-planning and design

The structure, mechanism, and model of PPP education must be carefully planned and agreed upon. A simple design has attracted investment in the construction of private schools in Egypt (Helmy *et al.*, 2020). Good design influences the success of PPPs (Osei-Kyei *et al.*, 2017). The design incorporates mechanisms (Roehrich *et al.*, 2014) and risk sharing (OECD, 2012) to allow the government and private sector to implement the agreed-upon program. The WCED lost private funding because of the ambiguous project details. Successful PPPs consider the context of implementation. Therefore, a PPP-friendly operating environment is required. The PPP design has to be modified if the operating environment cannot be changed. PPP initiatives may fail due to poor planning and design, especially those disregard community requirements, budget constraints, timelines, and stakeholder participation. Communication, teamwork, and a firm's legal framework are crucial for its successful implementation.

e) Comprehensive comparative analysis

The early failure of a PPP education initiative in Singapore demonstrates the significance of an early cost-benefit analysis. This comparative analysis was included in the project's technical feasibility assessment (Babatunde *et al.*, 2012) and cost-effectiveness comparisons of development costs with other schemes. Technical feasibility is affected by the availability of technology, materials, and labor (Helmy *et al.*, 2020). Technical feasibility must consider the adaptability of requirements. The technical specifications of a long-term PPP contract should evolve while maintaining its original objective. Changes in requirements may delay project development (Klijn, 2010). In addition to technical feasibility, a comparative analysis should consider project viability and monetary value (Cruz and Marques, 2014). If this can reduce the cost and quality of private sector projects, the public sector can attain VFM (Rakić and Radenović, 2011). The public sector should compare these procurements to conventional PPPs and other public-focused and efficient models. Technical evaluations must incorporate the project feasibility. The opportunities and threats that could transform the undertaking are anticipated by sustainability. The absence of a comprehensive investigation comparing the PPP model to other traditional models to determine its efficacy, efficiency, and sustainability can result in ineffective partnerships.

f) Public support

PPP's require support from trade unions, civil society, non-governmental organizations, and the media (Osei-Kyei and Chan, 2015). As education is a public benefit, PPP education prioritizes general objectives. Their implementation was complex in the Western Cape of South Africa, where many communities opposed PPPs (Feldman, 2020). This highlights the need to enhance public criticism in other areas. Community participation helps them comprehend the impacts and

benefits of PPP initiatives, allowing for honest evaluation (Helmy *et al.*, 2020). Program planners can garner support through effective communication. Corruption and lack of transparency in government make PPP schemes undesirable (Osei-Kyei *et al.*, 2017). Therefore, it is necessary to communicate the objectives of the construction of public facilities and services. Education and awareness can increase the program support. The failure of PPPs in education may result from a lack of public support. In the meantime, support for PPPs stems from economic concerns and trust in government, not a preference for business over government (Boyer and Van Slyke, 2019). Therefore, increasing public awareness, sensitivity, and capacity can aid PPP initiatives.

g) Establishment of a credible PPP Unit

Establishing a PPP unit demonstrates a private partner's PPP expertise and commitment (Amović *et al.*, 2020; Farquharson and Yescombe, 2011). According to the Economic and Social Council of the United Nations, successful PPPs require national governmental support. PPP units should be established to illustrate this commitment, improve government capacity and project quality (Helmy *et al.*, 2020), and foster public-private communication. The unit should have clear direction and decision-making authority, not just an advisory function (Sanghi *et al.*, 2007). In addition to contacting potential bidders, maintaining in-country PPP information for projects, and creating, managing, and evaluating PPPs, the entity must also contact potential bidders (Amović *et al.*, 2020). The unit should assist in launching, defining, and implementing PPP policies and recruiting private partners, banks, and financial institutions. An efficient PPP unit can develop and implement guidelines, monitor and evaluate performance, and assist stakeholders including the education sector. Educational PPPs may succeed only with a genuine PPP unit.

Conclusion

There are learning values in the critical success factors of successful and unsuccessful educational PPP projects in various countries. Researchers can identify project success factors by analyzing a variety of context-specific experiences. This information assisted in enhancing education on PPP project strategies and preventing errors. Examining successful and unsuccessful PPPs in education is essential. Failed projects can disclose errors, problems, and pitfalls when implementing educational PPPs. An analysis of these PPP projects can reveal risk factors that were missed during the planning or implementation process. Belgian, South Korean, Brazilian, Egyptian, and Ugandan cases of success can be studied for lessons. In addition, lessons could be learned from Singapore and South Africa regarding the project's failure. On the other hand, Ireland's PPP only succeeded after learning from its errors. Implementing PPPs in various countries can reveal the factors that contribute to the success of education PPPs.

This study has several implications for policy. Policymakers should prioritize institutional infrastructure and the capacity to establish a credible and effective PPP unit. This unit requires the necessary resources, personnel, and authority to implement educational PPP initiatives. Second, education PPP programs require clear regulations and standard operating procedures to reduce abuse, mismanagement, and inefficiency. Third, policymakers should invest in planning, design, and performance evaluation to ensure that PPP programs are accountable and efficient. This study excluded development theory, sociocultural context, and school-level observations as it began with an empirical investigation of alternative methodologies. Each country's sociopolitical and economic contexts can subsequently be compared.

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About the authors

Sajida is a Junior Lecturer in the Department of Public Administration at Universitas Merdeka Malang, Indonesia. She completed her master's degree at the Department of Public Policy and Management, Faculty of Social and Political Sciences, Universitas Gadjah Mada, Indonesia. Her research interests include public policy, education, public services and literature reviews in social fields. Sajida is the corresponding author and can be contacted at: sajida@unmer.ac.id

Bevaola Kusumasari is a Senior Lecturer in the Department of Public Policy and Management, Faculty of Social and Political Sciences, Universitas Gadjah Mada, Indonesia. She earned her PhD degree at Monash University, Australia. Her research interests are disaster management, public policy and big data.

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