

# A Systematic Review of Digital Transformation and Organizational Agility in Private Schools in Guyana (2015–2025)

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## Abstract

This study analyses the effect that digital transformation has had on organizational agility in private schools in Guyana from the years 2015–2025. As education systems globally adopt technologies like Learning Management Systems (LMS), data analytics and online collaboration tools, private schools have had to follow suit, and in some cases, have taken the lead. However, most private schools have had to deal with unique challenges in digital adoption, including financial constraints, infrastructure gaps and teacher readiness. This research will aim to assess how digital tools strengthen institutional agility and enable private schools to adapt to technological changes, respond to disruptions and improve academic results of students. The study makes use of a systematic review methodology that is guided by PRISMA guidelines in order to thoroughly synthesize existing literature. This process will help identify the best practices, challenges and strategies that will be particularly relevant to Guyana’s educational context. The study is supported by the Dynamic Capabilities Theory and the Resource-Based View. Both theorize on how organizations, including schools, build up technological competencies to strengthen agility. The findings of this study will provide insights that are actionable for educators, policymakers and school administrators. The subsequent implementation of these lessons will result in effective digital strategies in private education. Since this is a very critical research gap, this study offers practical recommendations that will strengthen digital integration in private schools and guarantee that they remain adaptive, competitive and future-ready in a world where education is increasingly succumbing to the prevalence of technology.

## Keywords

Digital Transformation; Organizational Agility; Private Schools; Guyana; Education Technology

## 1. Introduction

### 1.1. Overview and Rationale

The evolution of digital technologies has significantly changed the way education is approached worldwide. In many countries, especially following the COVID-19 pandemic, digital transformation was embraced to strengthen teaching, learning and administration (Anthony Jnr & Noel, 2021). Digital tools like Learning Management Systems (LMS), online collaboration platforms and data analytics are being used by schools to improve how efficient, accessible and agile educational systems are. In Guyana in particular, private schools have ramped up investments in digital infrastructure to maintain competitiveness and educational quality (Ministry of Education, Guyana, 2021).

Even with these efforts, several challenges block full-scale digital transformation in private schools. Factors including limited financial resources, inadequate technological infrastructure and low digital literacy among teachers and students have slowed the adoption of digital tools (Brown et al., 2020). Furthermore, while there is extensive research on digital transformation in higher education and developed countries, there is a total lack of empirical studies that analyse its effect on primary and secondary schools in developing nations like Guyana (Selwyn, 2021).

It is the ability of private schools to respond quickly and effectively to disruptions, technological changes and evolving educational demands that is a majorly important aspect of organizational agility of schools. This study looks to analyze how digital transformation strengthens organizational agility in private schools in Guyana by making an examination of digital initiatives, challenges and their effects on school operations.

### 1.2. Potential for Insightful Outcomes

This study is significant for several reasons. First is the scholarly reason: to fill a research gap. While digital transformation in education has been thoroughly studied in higher education and developed nations, there is only limited research on its effect on private schools in Guyana (Selwyn, 2022). Therefore, this study will provide substantial empirical evidence on how digital tools can affect organizational agility in a developing country's private education sector.

Apart from that, this study's findings will help policymakers, school administrators and educators understand which digital strategies work best in private schools and how to get over or around implementation barriers. This study will identify best practices for digital transformation which would help schools to remain resilient and responsive to change.

It should be noted that since Guyana shares similarities with other Caribbean nations, the study's insights can be applied to educational institutions across the region and this makes it an important reference for broader policy discussions.

### 1.3. Scope

This study focused on private schools in Guyana within a particular timeframe: 2015 to 2025. It analysed the role of digital technologies (LMS, collaboration tools, data analytics) in the strengthening of organizational agility.

It examined the effect of digital transformation on the three pillars of formal education: teaching, learning and administration. It points out challenges and corresponding coping mechanisms in private schools that are undergoing digital change.

The study took insights from Caribbean case studies where Guyana-specific data was limited. This focus on private schools enabled this study to provide a detailed examination of how these institutions, which rely on tuition fees and private funding, implement digital transformation when compared to publicly funded schools.

The aim of this study was to establish an understanding of how digital transformation has influenced, or is trying to influence, organizational agility in private schools in Georgetown, Guyana, between 2015 and 2025.

### 1.4. Aims & Objectives

The specific objectives of the research are:

- To define the concepts of digital transformation and organizational agility in the context of private schools in Guyana.
- To analyse the specific digital technologies and strategies that have been adopted by private schools to strengthen the organizational agility.
- To identify the challenges that confront private schools in their efforts to implement digital transformation and view how they cope with these challenges.
- To synthesize lessons that have been learned and best practices so that other educational institutions can use them to their benefit to improve agility through digital transformation.

### 1.5. Theory Overview (Application of Theory and Practice)

This research is firmly rooted in two major theories:

Dynamic Capabilities Theory (DCT), Teece et al. (1997) theory explains how organizations can develop, adapt and then reconfigure resources in response to changes. Digital transformation in Guyanese private schools represents a capability that strengthens institutional agility and gives schools the ability to adapt to technological and educational shifts.

Resource-Based View (RBV): popularized by Barney (1991). RBV makes the argument that an organization's success is dependent upon its unique, valuable and difficult-to-imitate resources. In private schools, these resources would typically include technology infrastructure, teacher expertise and leadership strategies. This study analyses how these resources contribute to organizational agility in response to digital transformation.

These theories are the foundational basis upon which the study analyzed how

private schools leveraged upon technology, leadership and institutional resources to strengthen agility.

### **1.6. Integration of Areas of MBA Components:**

This study can be linked to the following MBA disciplines: Strategic Management, which in this case is the study of the responsiveness of private schools in Guyana to digital transformation and their strategic objectives, and Leading and Managing Organizational Resources which explains how leadership and culture can define the digital transformation of schools.

### **1.7. Method of Analysis**

This research adopted a systematic review methodology making use of PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (Page et al., 2021). The methodology involved the following steps:

**Identification:** The study searched academic databases (e.g., JSTOR, ScienceDirect, Google Scholar) and institutional repositories for relevant studies and reports.

**Screening:** Inclusion and exclusion were applied to select studies that put focus on digital transformation and organizational agility in educational institutions with those that are related to Guyana or similar contexts as a priority.

**Data Extraction:** Data was extracted from major findings, methodologies and insights from selected studies, with particular attention given to private schools in Guyana.

**Synthesis:** Patterns, trends and gaps in the literature, were identified with the aim of drawing comparisons with international (mainly Caribbean) case studies where Guyana-specific data was limited.

**Interpretation:** Conclusions were drawn and recommendations that are actionable and are based on the synthesized data was made.

#### **1.7.1. Why a Systematic Review was the Best Approach for This Study**

A systematic review methodology was the most suitable research approach for this study. This method opened the door for a thorough, structured and objective analysis of existing literature (Pati & Lorusso, 2018) on digital transformation and organizational agility in private schools. Traditional literature reviews may be selective or narrative in nature but a systematic review follows a rigorous, replicable and transparent process to make sure that the credibility and reliability of findings are not tarnished.

Traditional reviews are susceptible to be influenced by subjective preferences but a systematic review follows a structured process that minimizes bias as much as possible (Haddaway et al, 2015). In this case, that structured process is the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework which advocates for transparency in

study selection and prevents cherry-picking of sources. The definition of clear inclusion and exclusion criteria in the methodology also helps to guarantee that only high-quality and relevant studies are considered. Data was collected through the use of keywords related to the topic and gotten from reputable databases (Siddaway et al, 2019).

### **1.8. Evidence/Data**

The study relied upon secondary data that comes from various sources: such as peer-reviewed academic journals which were inclusive of articles that are about digital transformation and organizational agility in education especially in developing countries. Other sources consulted were Government-Issued Reports, such as documents published by the Ministry of Education and other relevant agencies in Guyana, annual reports and strategic plans and newsletters from private schools in Georgetown and existing case studies on digital transformation in private schools in Guyana and similar contexts (e.g., other Caribbean nations) These offered firsthand accounts of digital transformation efforts.

## **2. Literature Review**

### **2.1. Introduction**

Modern schools have adopted the new digital technologies into their systems in increasing numbers (West, 2012). The prominent shift from analog to digital over the last decade has necessitated changes in strategies that are aimed at efficiency improvement, outcome-based learning, and flexibility within an active learning organization. In Guyana, schools are beginning to use digital instruments such as Learning Management Systems (LMS), online collaborative tools, and data mining to keep up with evolving educational markets and to maintain their competitiveness (Abdool and Governane, 2019). These technologies, however, remain largely unexplored in their impact for organizational agility – that is, the ability of institutions to respond to shocks and changing requirements.

With the advent of technology in schools around the world, the pandemic influenced how much these institutions could adopt or further ignore their existing digital transformations (Anthony Jnr & Noel, 2021). In Guyana, some private institutions were able to mobilize in a timely manner and while others did not have the right infrastructure, finances, or the necessary skills for employees and learners (Ministry of Education, Guyana, 2021). The gaps between institutions begs research to understand the impact of these changes and how they occur.

This chapter will provide, a systematic review of literature that focuses on digital transformation and organizational agility within education. The review will:

- Make an analysis of the contribution digital technologies make towards the attainment of agility in private schools.

- Make an assessment of the extent to which digital transformation affects teaching, learning, and administration.
- Determine major obstacles related to digital transformation in private schools.
- Address some components of Dynamic Capabilities Theory and Resource-Based View (RBV) focusing on how schools use technology to become more agile.

This review will, by integrating worldwide and local research, recognize gaps in existing research, as well as set up a framework for assessing the consequences of digital transformation on private schools in Guyana. These results will help provide more foundational basis to the debate on innovation in education, infrastructure and strategic development planning for private schools to be more agile in a digitally transformed environment.

## **2.2. Conceptualizing Digital Transformation in Education**

### **2.2.1. Definition and Scope of Digital Transformation**

In a contemporary context, digital transformation in education means the purposeful use of innovation in digital technologies for teaching, learning, and administrative functions to achieve results that are improved, efficient and more convenient (Gong & Ribiere, 2025). This involves more than just the digitization of current approaches; rather, entire systems of educational institutions, their stakeholders, and their responses to various challenges will have to change completely. This is the case in the context of private schools, which, in contrast with public institutions, depend on institutional competitiveness, innovation, and service quality for their survival.

Some of the features of this transformation include:

- The implementation of artificial intelligence (AI), data analytics, Learning Management Systems (LMS), and virtual classrooms for enhancing student and teacher productivity.
- The operational shift in administration to include cloud-based management systems, digital attendance and grading systems, and other automated processes to improve workflow efficiency.
- The utilization of real time data by schools to make critical decisions such as estimating achievement levels of learners, budget distribution, and resources for optimal educational outcomes.
- Although transforming the digital environment with the academic industry has been done in most developed countries and at the more advanced levels of non-tertiary education, primary and secondary education in developing countries such as Guyana are still behind.

### **2.2.2. Digital Transformation in Private Schools**

In contrast to public schools, private schools have more freedom when it comes to making decisions, both in the adoption of new technology and other aspects of management (Chubb and Moe, 1988). Still, they have to deal with other challenges like funding, illiteracy in technology, and even reluctance to change

(Brown et al, 2020). In Guyana, according to Dodson and Da Silva (2011), investments by private schools into digital technologies is on the rise for the following reasons:

- To improve the teaching and learning processes through hybrid models that use both in-person and online resources.
- To promote effective communication and collaboration with the continuous usage of virtual classroom like Zoom, Microsoft Teams, and Google Classroom for seamless and swift interaction between teachers, parents and students.

In order to improve the pace at which private schools can respond to changes such as the COVID-19 pandemic school closures. Many schools do face some limitations in terms of their infrastructure, such as a lack of reliable internet, the availability of devices, and the needed level of training for teachers (Ministry of Education Guyana, 2021). These conditions affect the rate of, and qualitatively define digital transformation in the system.

### **2.2.3. Global and Regional Perspectives on Digital Transformation in Schools**

Research from developed countries have shown that for there to be a positive digital transformative change in education, there has to be several important factors. One of them is that there has to be strong institutional leadership that will inspire technology adoption. Without proper leadership, the rank and file will lack the desire to adopt technology in the classrooms. Also, there has to be continuous professional development for teachers to effectively integrate digital tools. As digital technology evolves rapidly, teachers and users of it must make sure that they keep up, and adequate and continuous training is what will be required.

However, studies from developing nations, which have included Caribbean countries, have shown that there are challenges like cost barriers, policy gaps and socio-economic inequalities that impede students' access to technology (Gong & Ribiere, 2025). These regional factors must be understood if an assessment of the feasibility of digital transformation in Guyana's private school system is to be possible.

## **2.3. Understanding Organizational Agility in the Education Sector**

Organizational agility means how an institution is able to sense, respond to, and to adapt to changes in its environment (Zhang et al., 2023). In education, agility is very necessary for private schools to ride the waves of disruptions like policy shifts, technological advancements and global crises like the case of COVID-19.

### **2.3.1. Dimensions of Organizational Agility**

Schools achieve organizational agility by changing administrative processes, such as changing to digital record-keeping and cloud-based management, in order to improve the efficiency of the school's operations (Meehan &

Thunwarin, 2024). Another dimension of this is educational agility which institutions get by adopting flexible learning models (blended learning, e-learning) to accommodate diverse student needs (Boisselle, 2024).

Finally, schools can get technological agility by integrating data analytics, AI, and automation in order to optimize decision-making and resource management (Okokoyo et al, 2024).

### **2.3.2. Measuring Organizational Agility**

According to Wahyunia et al (2020), there are important indicators of agility in private schools:

- How rapid the school responds to disruptions (e.g., transition to online learning).
- How flexible the curriculum design and delivery is (e.g., adaptive learning tools).
- What the technology adoption rates are (e.g., use of LMS and online collaboration platforms).

While agility is widely studied in business contexts, its application in primary and secondary education remains understudied, especially in developing countries like Guyana. Understanding how private schools will leverage upon digital transformation to strengthen agility is very important for future-proofing education systems.

## **2.4. The Role of Digital Technologies in Strengthening Organizational Agility**

The use of digital technologies is very important if private schools will become more agile by making it more possible for faster decision-making, adaptive learning models and efficient administrative processes but the effectiveness of this is helped if implementation challenges are resolved (Gong & Ribiere, 2025). These challenges include infrastructural gaps and technological literacy. If these challenges are resolved, these technologies will help schools to respond swiftly to disruptions which would make sure that there is continuity in education.

### **2.4.1. Learning Management Systems (LMS) and Digital Classrooms**

The use of LMS platforms like Google Classroom and Moodle have been touted as effective at making remote learning better, creating better content management, and bring about real-time student engagement (Messias et al, 2015). They provide schools with the flexibility to be able to transition between in-person and online learning. This would mean uninterrupted education even during crises. However, the problem with remote learning and these platforms, according to Messias et al (2015), is that the implementation of these platforms has been limited by various concerns like data privacy and security. There is also a need for both teachers and students to have special digital skills to implementing them.

### 2.4.2. Data Analytics for Decision-Making

Schools use data analytics to track student performance, predict learning trends and to personalize instruction (Agasisti & Bowers, 2017). Predictive analytics help administrators to allocate resources in an effective manner and this effectively bring about an improvement in how students learn. However, even with these benefits, the challenges of predictive analytics in making decisions are that data quality might be biased and not entirely trusted.

### 2.4.3. Cloud Computing and Online Collaboration Tools

Cloud-based platforms are used to securely store data, resulting in streamlined administration and making remote access to academic resources available (Gautam & Kotiyal, 2025). Online collaboration tools like Zoom and Microsoft Teams can be used to strengthen teacher-student interactions and professional development even remotely.

In Guyana, private schools adoption of these technologies is growing, but infrastructure gaps and digital literacy challenges, impede full implementation of these technologies.

## 2.5. Impact of Digital on Teaching, Learning and Administration

Digital transformation has changed what we understood as teaching pedagogy, student learning and school administration as it has introduced more flexibility and efficiency. (Selwyn, 2022). There is now a wider acceptance of mixing of online and in-class teaching as it has proven that doing so provides more flexibility and access (Wallace et al, 2021). AI is used now to create personalized learning paths that will help teachers to meet individual student requirements.

In administration too, digital technology has made its impact. Grading and record-keeping are now automated, thus freeing up instructors' time to do more with the students (Garland & Tadeja, 2013). Also, cloud-based management software makes communication and resource allocation easier. Both teachers and students have had to adapt, with literacy training being required for teachers to be able to use technology successfully.

## 2.6. Challenges of Digital Transformation in Private Schools in Guyana

Despite its benefits, digitalization in Guyanese private schools is also bogged down with several issues that hamper full implementation. These are financial, infrastructural, technological and cultural issues (Brown et al., 2020).

Financially, there are limited funds (Latham, 2001) which have placed constraints on EdTech investment, connectivity and computer technology; added to this is the unreliability of internet and power supply, which disruption online learning and administrative activities.

Additionally, teachers and students do not have proper training to make use of computer tools effectively and traditional teaching tendencies have made some teachers rather reluctant to adopt computer methods. The school

administration might also have standard models more in mind than computer conversions. It is this resistance to change that has made adoption more difficult.

Although some institutions have been able to integrate digital tools, most grapple with a lack of resources because there is a wide divide among students, especially in rural communities. The following section will discuss theoretical frameworks that explain the way institutions deal with these challenges.

## **2.7. Theoretical Frameworks Supporting the Study**

This study analyses two main theoretical frameworks in order to understand how digital transformation influences organizational agility in private schools. These are the Dynamic Capabilities Theory (DCT) and the Resource-Based View (RBV). These theories explain how institutions develop, manage and deploy resources to adapt to digital changes and bring about strengthened agility.

### **2.7.1. Dynamic Capabilities Theory (DCT)**

DCT is a theory that suggests that organizations gain competitive advantage by continuously building, adapting and reconfiguring their internal and external resources as environmental changes happen (Adim & Unaam, 2022). In the context of private schools, digital transformation is a dynamic capability which allows institutions to sense opportunities and threats (e.g., recognizing the need for online learning during COVID-19), seize new digital tools (e.g., adopting Learning Management Systems to improve instructional delivery), and finally, reconfigure resources.

The DCT has been used often in literature that has analysed how organizations improve their operational agility. For example, in a study by Xue et al (2025), the researchers applied this theory to show how digital transformation has helped many organizations improve their operational agility in the era of blockchain. In the context of private schools, studies have shown that schools that succeed in leveraging upon digital transformation to show higher agility, can be said to have used this technology to avert crises, respond to student needs and to remain competitive. Those institutions that do not possess dynamic capabilities struggle to keep pace with technological changes.

One of the strengths of this theory is that it explains how firms get competitive advantage over other firms with similar interests and another is its emphasis on acknowledging the role that managerial agency has in pushing an organization into success. However, its weaknesses are also impediments to making it a good theory.

One such weaknesses is that the theory overemphasizes on firm-specific factors in deciding what makes an organization successful and disregards external factors like industry and institutional factors.

While studies have shown the role of DCT in organizational success, there has been a gap in how this theory does not put external stakeholders into

consideration and how lack of resources influence the role of digital technology in schools.

## **2.8. Gaps in the Literature**

While research on digital transformation in education has been increasing steadily, there are important gaps that remain, especially in the context of private schools in developing countries like Guyana. Existing studies put much focus on higher education and developed nations, and this leaves a gap in understanding how primary and secondary schools in resource-constrained environments approach digital transformation and organizational agility (Selwyn, 2022).

### **2.8.1. Limited Research on Digital Transformation in Private Schools**

Most studies have looked at the public education systems, but limited attention have been paid to private schools although these schools have their own unique challenges and operational structures. Unlike public institutions, private schools must self-fund technological upgrades, and this makes their digital transformation journey distinct (Brown et al., 2020). The lack of research on how private schools get and then sustain digital initiatives leaves policymakers and educators with little guidance on what the best practices would be for long-term technology integration.

### **2.8.2. Lack of Empirical Data on Organizational Agility in Education**

While agility is well-studied in corporate and industrial settings, its application in education — especially in primary and secondary schools—remains underexplored. Most studies on organizational agility in education are focused on universities and large institutions, and once again, small and medium-sized private schools are ignored (Zhang et al., 2023). The absence of agility metrics tailored for schools makes it difficult to make assessment on whether digital transformation truly strengthens their responsiveness and adaptability.

### **2.8.3. Insufficient Research in the Caribbean and Guyana**

The majority of digital transformation research comes from North America, Europe and parts of Asia. There is scarce data on the Caribbean region. Studies often generalize findings from developed nations but there are major differences in infrastructure, funding and digital literacy in developing countries like Guyana. There is a pressing need for region-specific research that explains local economic, cultural and technological conditions that affect digital transformation in schools.

### **2.8.4. Need for Longitudinal Studies on Digital Transformation Sustainability**

Most existing studies on digital transformation make an analysis of short-term adoption trends, often in response to crises like COVID-19 (Anthony Jnr & Noel, 2021). However, few studies investigate the long-term sustainability of digital initiatives in schools. Understanding how private schools maintain

digital transformation efforts over time is necessary for identifying factors that maintain ongoing success rather than temporary adaptation.

#### **2.8.5. Limited Focus on Digital Literacy and Teacher Preparedness**

While studies put emphasis on the importance of technology adoption, there is little research on how well teachers and administrators are prepared for digital transformation (McCarthy et al, 2023). In Guyana, many educators lack formal training in digital pedagogy, yet few studies have looked at how professional development programs can help bridge this gap.

### **3. Materials and Method**

#### **3.1. Method of Data Collection and Analysis**

##### **3.1.1. Method**

In this study, a Systematic Review approach is used to make an analysis of how digital transformation increases the organizational agility that private schools have, using a case study of private schools in Guyana from the years spanning 2015 to 2025. The study heavily relies on secondary data that is gotten from peer-reviewed journals, reports and other scholarly sources to make a synthesis of the existing research findings.

According to Kolaski et al. (2023), a systematic review is a method that makes use of express and reproducible techniques to identify, evaluate and synthesize relevant research on a particular topic. It is a structured method that is used to analyse and appraise previous studies in a manner that is systematic. This makes sure that the assessment of the knowledge is highly comprehensive and extremely thorough. Gunnell et al. (2022) further explains that the systematic review method makes use of rigorous inclusion and exclusion criteria to filter studies. This means that it is only the most relevant and methodologically sound research that is taken into consideration in this study. All of this makes for a critical evaluation of data. It also means that the reliability and validity of findings is at a high level as all bias and inconsistencies in individual studies is automatically eliminated.

The systematic review method is therefore very appropriate for this research because it means that the synthesis of existing literature on digital transformation and organizational agility is structured and this will help to identify trends, gaps and important findings. Due to this range of credible sources, using this method means that there is a high level of reliability in findings. All of this makes it a suitable approach for the evaluation of how digital technologies influence private school agility in Guyana. Also, using this method makes this study aligned with evidence-based research practices and makes for a well-founded basis in the analysis of the effect that digital transformation has had in the Guyanese education sector (Gunnell et al., 2018; Suri, 2017; Kolaski et al., 2018).

### 3.1.2. Search Strategy

There were lots of considerations taken to find out the most accurate and appropriate search keywords to be used for this review. Keywords and phrases that made the cut included “digital transformation in education”, “organizational agility in private schools”, “technology adoption in schools”, “education and digital innovation”, “private schools and digital transformation”, and “agility in educational institutions”. These keywords helped with the retrieval of relevant research findings from reputable academic databases.

These reputable academic databases mentioned above included Google Scholar, SAGE, JSTOR, Taylor & Francis and Emerald Insight. These databases were chosen because of the established rigorous peer-review standards some have and the extensiveness of the repository of high-quality academic articles of others. Many of the journals that are published within these platforms are ranked for their credibility in educational research, digital transformation studies and organizational development.

The use of these databases meant that there was guaranteed access to sources that were not only reliable, but also consequently, were authoritative. This meant that the validity and rigour of the systematic review remained in place. This selection of sources meant there was a thorough search of the available literature that meant that it was only the most relevant and high-quality studies that were included in the analysis.

### 3.1.3. Inclusion and Exclusion Criteria

When selecting the studies that will be included in this systematic review, a rigorous inclusion and exclusion process was used to make sure that the review has relevance, is credible, and is in alignment with the research objectives.

#### **Inclusion Criteria:**

- Studies published between 2015 and 2025 to show only up-to-date and relevant findings on digital transformation and organizational agility in private schools.
- Peer-reviewed journal articles, conference papers and academic theses whose subjects are on digital transformation, organizational agility and the role of technology in education.

#### **Exclusion Criteria:**

- Studies that were published before 2015 as they may not show what will be deemed current technological advancements or the recent trends in the digital space.
- Studies whose focus are solely on public schools or higher education institutions and which have no direct relevance to private schools.
- Articles that are written in other languages than English unless there is a reliable translation available.

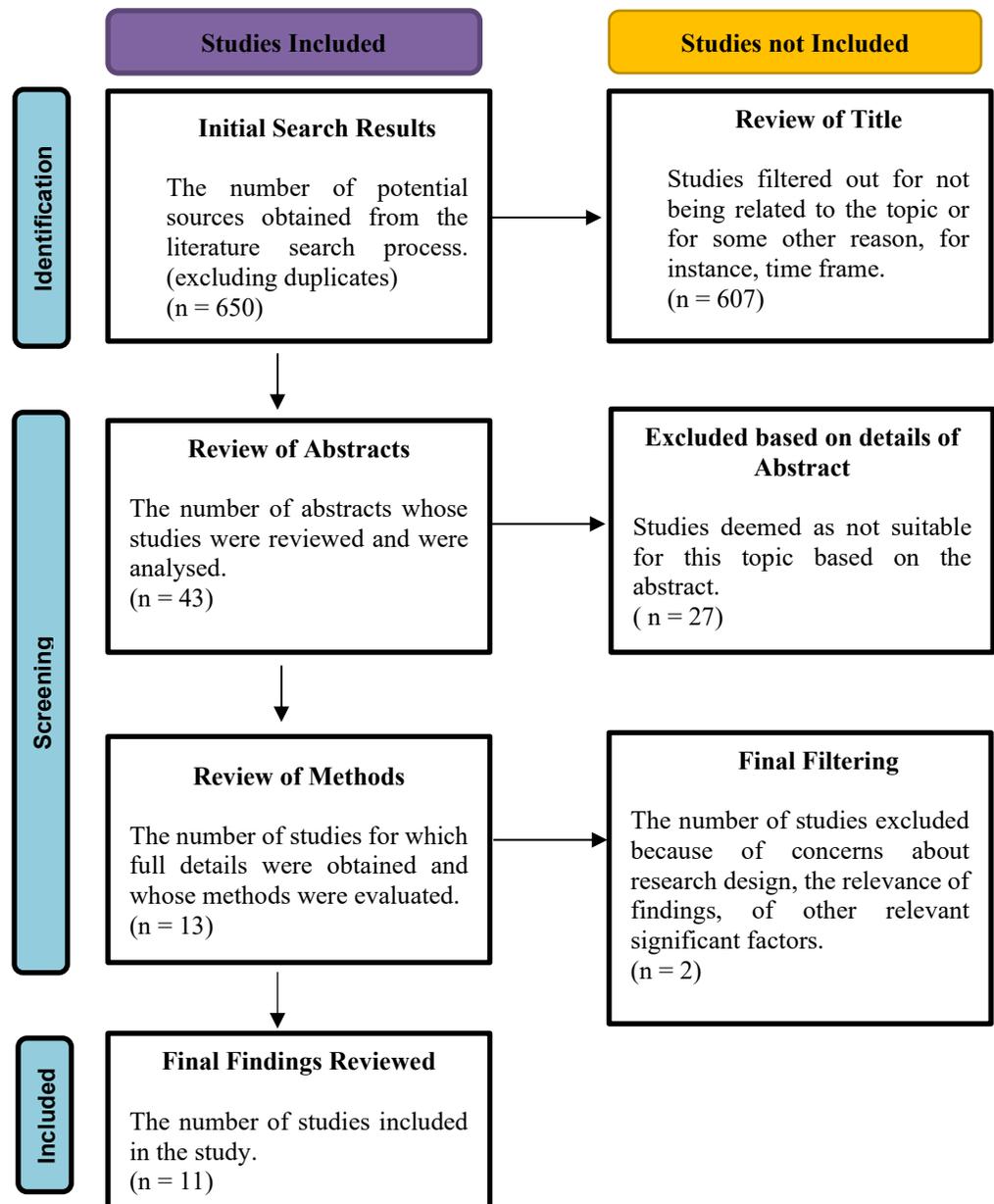
### 3.1.4. Data Collection

Data was taken from secondary sources which mainly consisted of peer-reviewed articles and reports that were published in the online databases mentioned above. The studies that were selected were full of qualitative and quantitative findings of how digital transformation and organizational agility in private schools have intertwined. The main databases that were used for data collection included:

- Google Scholar
- JSTOR
- SAGE Publications
- Taylor & Francis
- Emerald Insight

**Figure 1**

*PRISMA Chart, Source: Developed from Page et al., (2021).*



The choice of secondary data was not made without reason. It was because of time constraints, as carrying out primary research within the study's timeframe was not feasible. The nature of the topic also made it safer to rely on existing literature rather than collecting new primary data.

The PRISMA chart in figure 1 below briefly sets out the data collection process, showing the final number of articles from which data was extracted, and analysed for this study.

### **3.1.5. Data Analysis**

The data that was collected from the selected studies were analyzed using a systematic approach and the findings gotten by thematic analysis. This approach is especially effective when patterns and common themes are to be identified across different studies.

In this study, the thematic analysis was carried out by first of all familiarizing myself with the selected studies. Their findings were then reviewed and important pieces of data that were relevant to the research questions were extracted. These findings were then divided into categories of themes that was in correspondence to the main aspects of the research. The themes were created based on recurring patterns in the data and based on their relevance to digital transformation and organizational agility. A matrix method was used to organize the data and this meant that there was easy comparison between studies and aligning themes were easily picked.

One limitation though was that some important findings may have been interpreted in different ways depending on the context of the study. To limit this as much as possible, a careful review was carried out to make sure that there was consistency in theme identification.

### **3.1.6. Ethical Issues**

As can be expected, there were minimal ethical concerns with this research. This is because this research is a systematic review that is entirely based on secondary data collected from existing literature. However, there were other ethical concerns that had to be considered. It was very important to make sure that all sources of data were properly credited through appropriate in-text citations and references in line with academic integrity standards.

This importance of respecting copyright and intellectual property rights was taken into consideration diligently throughout the research process. All studies that were selected for inclusion were properly acknowledged in the final report to conform with the ethical standards of academic research.

## Results

### 4.1. Presentation of Findings

Theme	Findings	Data Sources
Policy and Strategic Frameworks	<p>Since the pandemic, a number of private schools in Guyana have started putting more structured systems in place to guide how they use technology. Some schools now have internal policies that cover things like how students should use devices in class, how teachers are expected to use learning platforms, and basic rules around digital conduct.</p> <p>While not every school has an official document, many have created their own guidelines based on what works in their locality. For example, a few schools have rolled out year-by-year digital goals, starting with infrastructure, followed by training, and then moving to the use of online platforms like Google Classroom.</p>	<p>Abdool &amp; Governance (2019)</p> <p>Bradley (2021)</p> <p>Aliyu et al (2021)</p> <p>Lewis (2025)</p>
Technology Integration	<p>In the past decade especially, there has been an over 100% rise in the adoption of educational teaching games like Kahoot! in school classrooms.</p> <p>The use of Coursera has also been increased, as it is now used for teacher training and continuous development.</p>	<p>Lewis (2025)</p> <p>Elliott (2020)</p>
Organizational Agility	<p>During the pandemic, schools quickly evolved, using Zoom and other virtual classrooms to reach students trapped in their homes.</p> <p>Also the use of communication channels changed from printed or written memos to better communication via online channels like WhatsApp.</p> <p>Some schools developed or expanded their digital libraries allowing them to offer e-books, recorded lessons, and online resources that enabled students to access materials at any time.</p>	<p>Abdool &amp; Governance (2019)</p> <p>Lewis (2025)</p> <p>Elliott (2020)</p> <p>Tallon et al (2019)</p>
Training and Development	<p>Another finding is that where there is an initial training session for staff on the use of digital tools, it is highly important for there to be ongoing and continuous training sessions and</p>	<p>Martin (2021)</p> <p>Moore et al (2016)</p>

	programs because when schools invested in professional development, they saw that they had quite a sizable increase in implementing digital technology than those who did no such thing.	Lewis (2025)
Economic Impacts	Using digital technology in schools mean that there is now more cost savings as resources are better managed due to administrative efficiency, but many schools are in a high struggle with how costly the initial implementation of any technology is.  The development of online learning platforms for schools like Coursera or Udemy can cost anywhere from \$70,000 to \$105,000. If it is a fully customized eLearning website solution, it can cost up to \$100,000. This price includes the cost of development from scratch, custom web design, QA testing, and project management.	Adamosoft (2024)  Martin (2021)  Bissessarr (2022)

## 4.2. Summary

This chapter outlines the systematic approach to analysing the effect of adopting digital technology on organizational agility of private schools in Guyana. This systematic method was used in order to guarantee the rigour of the findings. The chapter used keywords to find articles in selected important databases that was useful in arriving at the findings presented at the end of the study.

## 5. Discussion

This section discusses five specific ways that digital transformation has had an impact on private schools in Guyana. It will examine these themes in reference to the Dynamic Capabilities Theory and Resource-Based View (RBV) which were explained in the literature review. The aim is to link these theoretical concepts with the realities that have been observed in schools, especially when examining how they adapted during major disruptions such as the COVID-19 pandemic.

From the literature reviewed, several themes emerged. There are infrastructure and policy challenges and changes in teaching and administrative practices that can affect transitioning to an online course. These findings show that while some private schools in urban Guyana have made progress in adopting digital tools and processes, others, particularly in rural areas, continue to confront barriers like poor connectivity and limited technical capacity.

The discussion that follows draws connections between theory and practice, and points out where the Guyanese experience aligns with or diverges from existing literature.

### **5.1.1. Digital Infrastructure and Policy Support in Private Schools**

Digital infrastructure, in the context of education, covers everything from hardware, software, network connectivity, to technical support systems that are fundamental to the facilitation of digital learning and the strengthening of administrative efficiency within educational institutions. In Guyana, like in many other places, there are challenges to the proper implementation of digital infrastructure in private schools.

One of these challenges is financial constraints. Private schools are expected to fund their own upgrades. This effectively mean that progress can be uneven. Some schools, especially those in urban areas like Georgetown, have been able to install computer labs, purchase tablets, and upgrade internet connections (Aliyu et al, 2021). While these upscale private schools are taking advantage of better resources, leadership support, and an unfettered access to skilled IT personnel, there are many rural private schools that have very poor infrastructure and have limited governmental assistance. In some areas, for example, internet connectivity is still unreliable or sometimes not even available at all (Abdool & Governance, 2019). Without strong internet access, online classes, digital exams, or even simple tasks like emailing assignments become difficult.

Another challenge is infrastructural limitations, which notably includes internet access and the reliability of electricity supply. Lewis (2025) reports that internet connectivity remains a major challenge throughout Guyana, especially in rural and hinterland regions. These geographical areas often pose logistical difficulties in the deployment of the necessary infrastructure that will guarantee universal broadband access. Private schools located in these regions inevitably face similar, if not greater, hurdles in setting up consistent and high-speed internet connectivity. Also, the lack of continuous electricity supply nationwide further compounds these challenges, as digital infrastructure relies heavily on a stable power source. These infrastructural deficiencies have the ability to impede the effective integration of technology into the curriculum and, thus, limit the potential benefits of digital learning resources.

Policy support is also a very important issue. While the Ministry of Education has encouraged digital initiatives, most of the focus and funding goes to public schools. Private institutions are often left to figure this out alone with occasional grants from government (Bradley, 2021). So, while initiatives like “One Guyana Digital School”, a government-led platform that provides online learning materials for students preparing for the Caribbean Secondary Education Certificate (CSEC) examinations, is explicitly stated to be accessible to all students in Guyana, other initiatives like the establishment of smart classrooms in schools across the country and those involving the

procurement and distribution of tablets to students are primarily focused on public school.

The Dynamic Capabilities Theory helps to explain how some schools have managed to respond and adapt even with these daunting challenges. Schools that quickly adopted online learning platforms in order to support teachers and students during the pandemic showed that they had a strong ability to “sense” and “seize” opportunities. These were mostly schools that had staff who were proactive and who already had some experience using digital tools before the pandemic hit.

From the Resource-Based View (RBV) context, the schools that have moved ahead are those with unique internal resources—such as knowledgeable staff, flexible management, and access to funding. These resources allowed them to adapt faster, showing that digital transformation is not just about access to technology, but also about the capabilities of the institution to use what they have effectively.

### **5.1.2. Technology Integration in Teaching and Learning**

Another major theme revealed in this research is that technology has an integral role in everyday classroom practice. In the last decade, there has been a noticeable increase in the way digital tools like Kahoot, Google Forms, and even full online platforms like Coursera are used. These platforms are no longer seen as extras or add-ons—they are now part of the learning environment in many private schools (Lewis, 2025).

Evidence drawn from Lewis’s (2025) study of Guyanese schools shows that Kahoot!, for example, has found great appeal among teachers because of its simplicity and because of the way it engages students. It turns revision sessions into a game, which makes it easier for students to recall important facts or practice concepts. Teachers who use these tools have reported that students are more alert, more willing to participate, and sometimes even more prepared when they know that a Kahoot! quiz is coming up. This manner of technology integration fits well with constructivist approaches to learning, where students learn best through interaction and immediate feedback. (Brau, 2020).

In terms of professional development, the adoption of Coursera and other similar platforms has opened up new ways for teachers to grow in their careers (Elliott, 2020). Some schools have started encouraging their staff to take online certification courses in pedagogy, classroom technology, or even school leadership. This shows a shift in mindset—from relying only on local workshops to embracing global resources. It also reflects how private schools are now trying to stay current, not just in how they teach students, but in how they support their teachers.

In terms of Dynamic Capabilities Theory, schools that are actively making use of platforms like Coursera are showing that they have the ability to reconfigure their internal competencies. These schools are not just being reactive to change but they are also building professional capacity by encouraging continuous learning beyond the classroom. Evidence of this can

be seen in schools like Guyana Digital School conducting market research on student preferences for online learning, tracking enrollment trends in online courses, and monitoring the adoption of online learning technologies by peer institutions (Guyana Digital School, 2024). It is a sign that some institutions are thinking long term and are then trying to build resilience by strengthening their teaching teams.

The Resource-Based View (RBV) is also relevant here. Lewis (2025) found that urban schools have made successful use of these digital tools often. A survey of the teachers, found that this was because urban schools were well-equipped (70% had sufficient technology) in contrast to rural schools (only 30%). Therefore, the success of technology integration lies in having access to certain resources. These resources include a motivated staff, a culture of innovation, and access to better equipment. These intangible assets are difficult to copy and can give these schools a clear advantage when it comes to integrating technology into their teaching and learning practices.

Overall, what this shows is that technology in private schools is not just about computers or projectors. It is about the mindset of the school; whether they are willing to try new methods, invest in their staff, and make technology part of the learning journey rather than just a one-off solution. For the schools that have embraced it, the results are already beginning to show in the way that students are engaged and the way that teachers grow.

### **5.1.3. Organizational Agility in Private Schools**

One of the most impressive shifts seen during the pandemic was how quickly many private schools in Guyana were able to change the way they operated. Almost overnight, classrooms that once relied heavily on chalkboards and face-to-face interaction found new ways to connect with students who were suddenly stuck at home. These changes did not just happen without challenges, but what is impressive is how fast some schools did act. Instead of waiting for formal policies or instructions, many administrators and teachers started experimenting on their own. According to Abdool & Governance, (2019), within weeks, they were setting up timetables, organizing links, and adapting lessons for the screen. In some cases, teachers were teaching themselves how to use these tools late into the night just to be ready for class the next day. This kind of quick response is a clear example of what organizational agility looks like in practice (Tallon et al, 2019).

Another area where this agility was seen is in how schools handled internal communication. Before the pandemic, schools relied on circulars, printed memos, or word-of-mouth announcements. But with staff and students spread out and confined in their various houses, those methods were no longer practical. Many schools turned to WhatsApp groups, email, or learning platforms that allowed for instant messaging. These tools helped administrators share updates faster, teachers coordinate better, and helped parents stay in the loop (Lewis, 2025). It also made schools more responsive—decisions could be made and shared in real time.

Some schools also took this period as a chance to expand their access to academic resources. A few developed small digital libraries or curated collections of e-books and video lessons. From a Dynamic Capabilities Theory standpoint, these schools displayed the ability to sense change, take new tools, and to immediately change the way they operated.

From a Resource-Based View (RBV) standpoint, the schools that made the smoothest transitions were those that had built strong internal systems long before the pandemic. They had flexible staff, supportive leadership, and had a culture that was welcoming of innovation. It was these “soft” assets—though they were not always visible—that made it simpler for them to adapt when it mattered most.

Overall, the way private schools responded to the sudden shift brought on by COVID-19 shows that agility is not just a theory. It is something that happens in real time, under pressure, and often with limited resources. And for schools in Guyana, it has become one of the clearest signs of their ability to survive and grow in a fast-changing educational environment.

#### **5.1.4. Training and Development for Staff**

One of the clearest patterns that emerged from the findings is that digital transformation cannot succeed unless the people using the tools are well-equipped to do so. In many private schools in Guyana, especially during and after the pandemic, schools that had made early investments in training their teachers saw better and faster results. Teachers who had a good understanding of how to use tools like Zoom, Google Classroom, or even just how to navigate a digital timetable were more confident, more prepared, and more willing to innovate.

The most successful schools were those that did not stop at one training session. They understood that digital transformation is an ongoing process, and so they created space for regular refreshers, peer-led workshops, or even encouraged teachers to take online courses on their own (Martin, 2021). What this did was build a habit of learning within the teaching team. It also reduced fear. Instead of feeling overwhelmed by new platforms, teachers started to experiment—creating quizzes, recording lessons, and managing class communication more smoothly.

On the other hand, research showed that schools that rushed into online teaching without investing in training often struggled at first as the resources, though available, were not being used properly (Moore et al, 2016). Some teachers avoided them completely, while others stuck to only the basics. In these schools, technology felt more like a burden than a help. It showed clearly that the issue was not just about having access to digital tools, but about knowing how to use them well.

The Dynamic Capabilities Theory explains this well. Schools that were able to “sense” the importance of teacher development and “seize” the moment to invest in training ended up being more prepared. They were not reacting. They were evolving. The Resource-Based View (RBV) also supports this. A trained

and motivated staff is an internal asset—one that cannot easily be copied. And it is these internal resources that make the biggest difference when external conditions change.

What is clear from all of this is that successful digital transformation depends on people. Tools are only as useful as the hands that use them. And when schools invest in their staff—not just once, but consistently—they build something stronger than technology: they build confidence.

#### **5.1.5. Economics Impacts of Digital Transformation in Schools**

Introducing digital tools into schools has brought both relief and new challenges when it comes to finances. On the one hand, the research shows that tasks like tracking attendance, sharing grades, sending announcements, and collecting fees could now be done faster and with fewer materials. That means less printing, fewer manual records, and more time for staff to focus on meaningful work, with one study estimating the financial saving is up to 15% (Bissessarr, 2022).

However, there has also been costs too. Even though these benefits are real, the research shows that the financial strain that comes with starting the digital journey is hard to ignore. Many private schools do not have large budgets to begin with, and the cost of setting up digital platforms can be discouraging. Based on industry reports cited in [Adamosoft \(2024\)](#), building a functional online learning platform from the ground up can cost anywhere between \$70,000 to \$105,000. For those who want something fully customised—with its own design, features, support tools, and secure hosting—the amount can be even higher. This is especially difficult in a context where many schools are already stretching their funds to meet basic needs.

As a result, schools often try to find cheaper ways to go digital. Some sign up for free versions of popular tools, while others use messaging apps like WhatsApp or video calls through Zoom and Google Meet to deliver lessons. These tools may not offer the same experience as a complete learning platform, but they allow schools to stay connected with students. However, this kind of setup can be unstable and often lacks the structure needed for long-term planning or full digital integration (Bissessarr, 2022). These are the limitations that can affect the quality of education delivered which would negatively impact student performances and the school's reputation.

When we look at this from the perspective of the Dynamic Capabilities Theory, we can say that the schools that made it work were not necessarily the richest—but they were the quickest to act. They saw what needed to be done, looked at the tools they could afford, and used them in creative ways. In times of crisis like the COVID-19 pandemic, this ability to adapt quickly was a real strength.

From the Resource-Based View, the edge that some schools had, came not just from money, but from other things that matter—like skilled leadership, good planning, supportive teachers, and even community partnerships. A school that had these qualities could stretch a small budget in ways that made a big difference. For instance, a school with a strong parent-teacher association

may be able to raise funds for technology upgrades or secure pro bono technical support from community members.

In the end, it is clear that digital transformation is not just a technology issue. It is also a money issue. But beyond that, it is a leadership issue, a planning issue, and a question of what resources—seen or unseen—a school can bring to the table. Until the cost of quality digital tools becomes more manageable, and more funding opportunities open up, private schools will continue to move forward at different speeds. Still, for those that find a way, the long-term savings and improvements can make the initial investment worth it.

## **6. Conclusion**

The purpose of this study was to look into how digital transformation has affected private schools in Guyana over the last ten years, with specific reference to what this has meant for their agility and their overall performance. After looking at different recent findings, it is now clear that the impact goes even beyond devices and software. It touches on the way that these schools operate, how they make decisions, and how quickly they can respond to sudden changes in their environment.

The research revealed that when the digital tools are properly used, they bring major benefits—not just to students, but to teachers, administrators, and even the overall management of schools. Schools that had solid leadership, motivated staff, and even a basic digital infrastructure were often the ones who managed to adapt faster and keep going through tough periods like the COVID-19 pandemic. The ones who struggled were not necessarily unwilling, but they lacked the tools, training, or funding needed to make the changes that were required.

The theories that were used in the research—Dynamic Capabilities Theory and the Resource-Based View—helped in making sense of what was observed. The gap between rural and urban schools, between well-funded and under-resourced institutions, was real and cannot be ignored. Digital transformation may be the goal, but not everyone starts from the same place. Without the right support from government, community, or private investment, many schools sadly risk being left behind.

Digital change in schools is not just a technical issue. It is a leadership issue. It is a planning issue. And, most of all, it is a human issue. Success will depend on the choices that schools make and the support they receive moving forward.

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## Conflict of Interest

The author declares no conflict of interest.

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