

# Exploring the Antecedents of School's Performance: Readiness, Innovation, Knowledge or Inertia?

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## ABSTRACT

This paper aims to study the relationship between strategic inertia, school's readiness, innovation, and knowledge management on school's performance. Inertia is oftentimes mentioned as a factor that hinders change efforts, which negatively affects performance. However, several studies also argue that inert organizations are actually capable of doing continuous change, leading to superior performance compared to its competitors. The school is an interesting context to test these arguments as it has a high level of inertia. Meanwhile, school's readiness is a relatively novel concept and used to measure how ready the school is to face changes. This study will also explore the relationship between readiness for innovation and knowledge management, which are often cited as factors that support school performance.

**Keywords:** *Strategic Inertia, School's Readiness, Innovation, Knowledge Management, School's Performance.*

## 1. INTRODUCTION

The education sector is currently experiencing an unprecedented and unpredictable time as the COVID-19 pandemic forces schools to confront one of its significant challenges, to integrate technology into its teaching activities. The call for this transformation is not a new thing in the educational sector [1], but the implementation proves to be challenging [2], [3], even though several studies have shown promising positive results from integrating technology to school activities [4], [5].

According to some scholars, the condition in which an organization defends the status quo is called "strategic inertia" [6], [7]. In a school context, developing novel ideas is especially tough when it challenges the current fundamental assumption about teaching and learning [2]. However, would this disinclination be relevant when there are no other options for schools, except to change? And does being innovative really help schools to enhance their performance?

Schools are also not familiar with innovation activities as it has a high level of routine [8], and change initiatives seldom last for a long time [9]. Organizations with a high level of routine were said to be more prone

to inertia [10], [11]. However, some recent studies also found that organizations with a higher level of routine are capable of outperforming their competitors in the long run [12]. To make it more interesting, research also found that inert organizations are actually capable of creating continuous change, which was more effective than punctuated change [13]. It is especially interesting to study the effect of having a high level of routine on school performance, especially in this current turbulent time when routines are being shaken due to uncertain circumstances.

Besides being innovative, recent research on schools also discusses the correlation between knowledge management to school performance [14], [15], [16], [17]. Does having a proper knowledge management system really help schools to thrive? According to several studies, the answer is yes, but leadership is an integral part of the implementation [16]. School's leadership itself is an integral component of a school's readiness, which is also one of the important aspects to face the change process. It measures how ready schools are to follow new policies or face challenges that they encounter [18]. Even though school's readiness is a relatively novel construct, studies about organization readiness have been done before and show positive effects on organization performance [19].

Following these statements, this paper has two objectives. First, this study will explore further the influence of school's readiness on performance and the role of inertia in that relationship, since other studies posit that having a high level of routine and being an inert organization does not always result in poor performance. Second, this study will explore the relationship between school's readiness, innovation, knowledge management, and performance.

## **2. LITERATURE REVIEW**

The following sections will present previous studies about strategic inertia, school's readiness, innovation, knowledge management and school's performance.

### ***2.1 Strategic Inertia and Inertia in the School Context***

Strategic inertia could be identified when the rate of organizational change is slower than the rate of change in environmental conditions, and it could be defined as a tendency to keep the status quo and reluctance to renew their strategy outside the frame of the current one even when the organization's performance is declining [7, 20]. Previous research identified that this organizational rigidity could be classified into resource and routine rigidity [21], with resource inertia related to patterns of resource investment and routine inertia related to how organizations utilize those investments [22]. Another study split the terminology into three concepts: structural inertia, practical inertia, and cognitive inertia [11].

Schools, like any other organization, are not immune to the effect of inertia. There are several generic inertial constraints within the education sector, such as high level of conservatism, little catalyst for change, and mainly because it is related to many involved parties and systems, such as teachers, teacher's education, and regulation [23]. Inertia would be more likely to exist in schools if a change proposal needs to alter many components, demands the organization to create many new relationships, is a drastic measure which needs a long time and high capital to be applied, and not supported by clear communication [24].

### ***2.2 School's Readiness***

School's readiness is a relatively new concept introduced to represent the school's ability to participate in the education reform agenda set by government policy [18]. This concept had its root on organizational readiness and relied on the school's leadership to enhance the level of alignment, capability, and engagement (ACE) within the school. Empirical research found positive correlation between high level of readiness with teaching effectiveness and improvement in student outcomes, which indicate that

the internal aspect of the school has a crucial effect towards student's accomplishment, independent of funding or socio-educational positioning of the school. While school's readiness is a novel construct, organization readiness has been identified by scholars as an important factor of the successful change process [19], [25], [26], [27].

### ***2.3 Innovation in the School Context***

Innovation could be defined as processes or ideas that are new to an organization or create substantial change in terms of product, service, procedure, or strategic direction [28], [29]. In the school and education context, innovation is often seen as an important aspect in the effort to improve the competitiveness of a country [28]. Innovation was mentioned as part of organizational change capacity (OCC), which was defined as organizational and managerial capabilities that allowed corporations to adapt swiftly and efficiently as a response to uncertain situations [27]. Research done in the corporate context has shown that OCC positively influences change project performance [19].

Innovation management is a school related to transformational leadership, organizational learning, resource management, and innovation itself, which is positively related to the improvement of school performance [30]. There are several relevant innovations in school context: pedagogical innovation, technology-related innovation, and innovation in teacher professional development [31]. Other studies include course innovation, process innovation, and education chain innovation as innovation in educational context [28], [32].

### ***2.4 Knowledge Management in the School Context***

Knowledge management is a strategy to utilize information and knowledge to improve an organization's management, operation, and, ultimately, performance [14]. It aims to enhance the quality of the contribution of its employees to their organizations through helping others to understand the context of their organization, to collaborate and impart what they know and study, and to effectively argue, negotiate, and learn with and from others [33]. Implementing knowledge management in the school context may help schools to develop their planning capabilities, deal with challenges caused by reform in the educational sector, provide high quality teaching for their students, and services for stakeholders [14]. There are five knowledge management practice dimensions in the school context: knowledge acquisition, knowledge refinement, knowledge storage/retrieve, knowledge distribution, and knowledge presentation [17].

### 2.5 School's Performance

There are several indicators which have been used to measure school's performance, with the most common is the student proficiency on basic subjects or performance on international or national standardized tests [18], [31], [32], [34], [35]. Other studies add different aspects such as repetition and dropout rates [34], gap on student achievement based on gender, race, ethnicity, and socioeconomic status and readiness to enter college [35], the effectivity of services provided and efficiency of school's teachers and staffs [36], effective leadership, teamwork and effective communication, supervision on teaching-learning process, support for teacher's development, and cooperation from family and the community [30].

### 3. DEVELOPMENT OF HYPOTHESIS

The following sections will present argumentations from previous studies that led to the hypothesis development. The model of this study is also presented in figure 1 below.

#### 3.1 Strategic Inertia as a Mediator between School's Readiness and School's Performance

Strategic inertia is often identified as an aspect that could hinder change efforts, as shown in previous studies [10], [11], [20], [22], [29], [37], [38], [39], [40]. Despite studies that attempted to place inertia as an

inhibitor of change, empirical quantitative results in a broad context are still hard to find. Due to its nature, it would be interesting to see the interaction between inertia and school's readiness, which naturally support the change process.

School's readiness itself is a relatively new concept, so there is limited study about the correlation between this construct and school's performance. In Australian context, when tested against ICSEA (Index of Community Socio-Educational Advantage Index) and income per student, readiness has the highest significance in its relation to NAPLAN (standardized measure of student achievement in Australia) performance ( $\beta = 0.45, p = 0.027$ ) [18]. This construct highlighted the importance of leadership, especially when school leaders focus on talent development across schools.

To support the theory about readiness, several scholars had also proposed the idea of organization readiness being one of the factors of readiness for change, which will contribute to implementation effectiveness [25], especially if it is supported in the individual and group level [26]. Based on a study, it was stated that OCC has significant correlation to financial performance (t-value = 2.64,  $p < 0.01$ ) [27] and change project performance ( $\beta = 0.449, t\text{-value} = 5.359, p < 0.001$ ) [19].

Comparative study about inertia has risen to show that inertia has several positive benefits for organizations, including one that shows inert

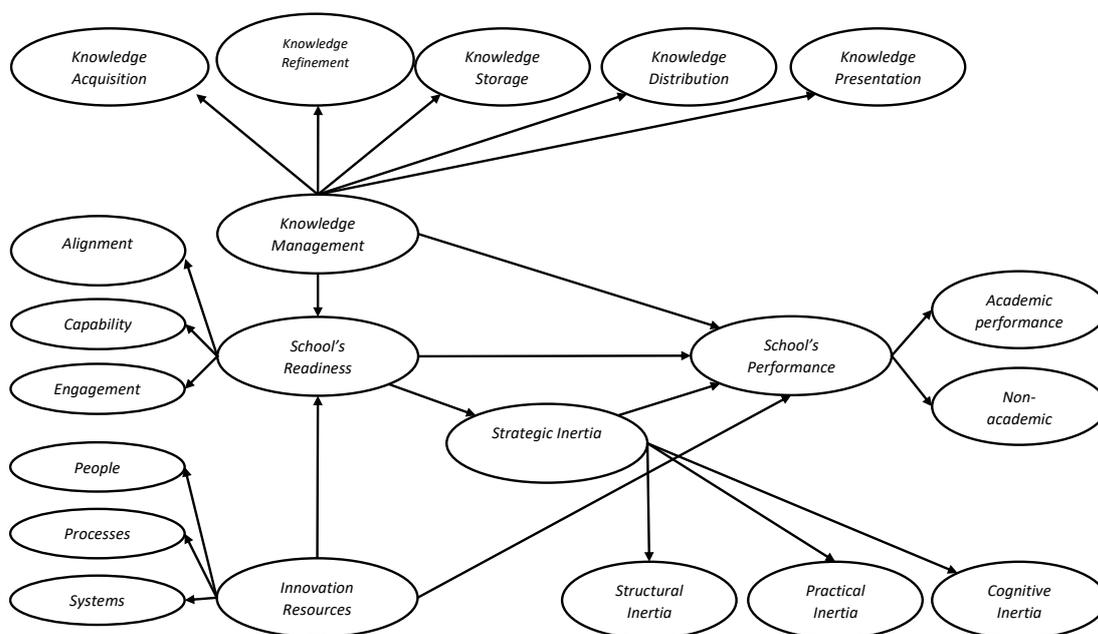


Figure 1 Research Conceptual Model

organization as actually being capable of doing continuous change, and this may improve long term performance better than punctuated change [13]. The study emphasizes the influence of the rate of inertia, rather than just the state of inertia, which would determine the change process in organizations. Routine inertia is also said to be a hidden source of organizational variation [12]. The logic behind this finding is that routine-level inertia will help to retain potentially useful variations in organizational adaptation, when combined with bounded rationality. As mentioned before, the school is an organization with a high level of routine [8] and prone to inertia [23], [24], however, so far, there is no clear empirical connection between strategic inertia in a school and the school's performance. Because of that, it is intriguing to see how readiness interacts with routine in the school as the source of change and success.

H1a: School's readiness positively influences school's performance,

H1b: Strategic inertia mediates the relationship between school's readiness on school's performance.

### ***3.2 School's Readiness, Innovation, Knowledge Management, and School's Performance***

In the firm context, innovativeness is positively related to performance (coefficient = 0.24,  $t = 2.72$ ,  $P < 0.01$ ) [41]. In the school context, innovation management is divided into four independent variables: transformational leadership, resource management, organizational learning, and school innovation [30]. From those variables, three has a direct effect on performance, transformational leadership ( $\beta = 0.890$ ,  $p < 0.001$ ), resource management ( $\beta = 0.624$ ,  $p < 0.001$ ), and school innovation ( $\beta = 0.211$ ,  $p < 0.001$ ). However, the statement that innovation is correlated to performances is not applicable to all school types. Innovation is only significantly correlated with performance in lower secondary school (T-statistics 5.655) and practical education (T-statistics -9.586) while practical pre-vocational education, theoretical pre-vocational education, higher general education, and pre-academic education had T-statistics lower than standard (T-statistics -0.932, 0.805, -1.549, 0.696, respectively) [32]. One factor that determined innovation's correlation with performance is the school's social-economic status (SES), in which innovation is negatively correlated with performance in schools with lower SES, while positively related in the higher or improving one [42].

Previous studies use different terms of innovation in their quest to find its influence on performance. To achieve performance, innovation is said to be supported by the perspective and acceptance of its human resources, organization characteristic, technology,

regulation, and system [31], [43]. Human resources, systems, and processes within the organization were said to be innovation resources [44].

H2a: Innovation resources have positive correlation with school performance.

Another widely discussed construct in education is knowledge management strategy, which pictured as a promising strategy for businesses to face its challenges, although few studies had been done to explore its implementation in school [16]. Despite several claims that knowledge management and high performing schools are closely related [14], [16], [17], [45], it is difficult to find empirical results about its connection [46, 47]. Interestingly, knowledge management relies on strong leadership to become more effective in its implementation [14], [16], [48]. This is in line with previous findings that knowledge management will significantly correlate with financial and firm competitiveness when utilizing both social and technical means [49].

H2b: Knowledge management has positive correlation with school performance

Based on the previous discussions, it was shown that both innovation and knowledge management rely on effective leadership in order to give positive contribution to organizational performance. Leadership's influence on school's performance itself had been studied, for example, in relation to the leadership style [50] or the context of the school's socio-economic level [51], which stated that it does affect performance, even though it is not easy to isolate specific activities that build effective leadership [52]. Interestingly, leadership is the main aspect that builds a school's readiness [18]. Other studies also had found that organizational readiness has potential to influence knowledge management implementation [53], [54], while innovation culture was part of readiness for change [27].

H3a: School's readiness mediates the relationship between innovation resources and school's performance.

H3b: School's readiness mediates the relationship between knowledge management and school's performance.

## **4. RESEARCH METHODOLOGY**

Research in this study would be done through an empirical quantitative process. This process was done to answer the research objectives through a framework that had been shared as a conceptual model. Research will be done in the context of private secondary schools in Jakarta, Indonesia, with schools as the unit of analysis and teachers as respondents. Like in other countries, private schools in Indonesia are not funded by the

government. This condition would make it ideal to do the research in the private school context, as they will compete on limited students as their funding resources. Following the example of previous studies, several controlling variables will be determined in this study, which are funding and social-economic status [18], the existence of a larger governing body, school type, and average teacher's working period [32].

## 5. CONCLUSION

This study explores different factors that affect school's performance, especially in terms of readiness, innovation, knowledge, and inertia. Based on literature studies, strategic inertia in an organization does not always hinder performance. On the contrary, inertia in routine could support long term and superior performance compared to their competitors. Hence, there is a possibility that inertia could mediate school's readiness in supporting a school's performance. In this study, strategic inertia was defined as structural inertia, practical or routine inertia, and cognitive inertia. School's readiness itself is a relatively novel concept that still has much to explore. It was defined as organizational readiness to face new challenges or changes. This concept relies on school leadership and measures the level of alignment, capability, and engagement within an organization. To explore the construct, this study adds two relevant concepts in studies about schools, innovation resources (related to people, processes, and systems) and knowledge management (related to knowledge acquisition, refinement, storage, distribution, and presentation).

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