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**License Master Doctorate (LMD) System Strategic
Implementation and It's Influence on Academic Performance
in Democratic Republic of Congo: A Literature Review**



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**License Master Doctorate (LMD) System Strategic Implementation and
It's Influence on Academic Performance in Democratic Republic of
Congo: A Literature Review**

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Abstract

Purpose: The purpose of this study was to conduct a literature review on the influence of Strategic Implementation of License-Master-Doctorate System on academic performance. The specific objectives of the study were: to establish the influence of leadership on academic performance in Public Universities in DRC; to determine the influence of resources on academic performance in Public Universities in DRC; and to ascertain the influence of structure on academic performance in Public Universities in DRC. The study was anchored on situational leadership theory, resource based view theory and structural contingency theory.

Findings: The literature showed that the License-Master-Doctorate system is being adopted mostly in African French speaking countries. It was also concluded that the various concepts of strategic implementation of LMD system have been dominantly applied in the western context where the LMD system was earlier adopted than in the African context. The study also concluded that the implementation of the LMD system has significantly improved academic performance.

Unique contributions to theory, practice and policy: The study recommends that the government being in-charge of public universities should ensure that these institutions are managed by competent leaders who are professionals. This will ensure that they are able to set vision, communicate effectively to the staff and students, motivate the employees to do their best as they implement the LMD system and also to be accountable for their actions. It is also recommended that public university management should adequately utilize the available resources to enhance academic performance. In addition, the management should collaborate with private organizations like Non-Governmental organizations to get more resources for their institutions. Another recommendation is that the university management should be responsive to organization change especially in the implementation of the LMD

system and put in place adequate controls to ensure that the employees do not deviate from the overall vision.

Key Words: *License-Master-Doctorate System Leadership, Resources, Structure, and Academic Performance*

Background of the Problem

The various crises confronting education systems at all levels and across the African continent have compelled policymakers to adapt learning curricula to the context of current globalization. As a result, several countries have embarked on modernization policies for higher education systems and programs. Among those systems, is the License-Master-Doctorate System, also known as LMD Reform or Bachelor-Master-Doctorate System (BMD) or Bologna Process (Mignanwande & Hounmenou, 2016). Since 1998, with the Bologna process, European countries have decided to commit in the License - Master - Doctorate (LMD) reform. The objective was to make Europe the most competitive and dynamic knowledge-based economy in the world, able sustainable economic growth with improved employment and greater social cohesion. Building a European area of higher education capable of meeting the challenges of international competition by taking up the scientific and economic challenges launched by the United States, Japan and some emerging countries such as China, India, etc. (Association des Universités Africaines, 2008). Higher education in Francophone Africa, which had previously had very close ties to the French system, is now faced with the challenges of adopting this higher education scheme, which is now considered the pedagogical aspect of globalization. The system had been already in place in Anglo-Saxon, English-speaking, and Portuguese-speaking countries, as well as in the majority of emerging countries. As a result, all French-speaking African countries are being challenged to improve their education in order to meet international standards (Association des Universités Africaines, 2008).

The LMD reform is a system that organizes teaching into semesters and units. It is indeed a collection of content organized in multidisciplinary and transdisciplinary domains that includes a variety of courses (Miliani, 2017). The System is an institutional response in the sense that its implementation requires the entire university to adopt a common framework of training presentation: course of study, semester duration, minimum hourly volume of a unit, diploma title (Association des Universités Africaines, 2008). The education system guarantees the retraining of students and takes care of reducing the level of wastage (Miliani, 2017). The implementation of the LMD reform is a critical factor in improving educational quality in academic institutions. (Sack, 2011). The Bologna Process provides new insight on students while responding positively to the need of the market on the ground. The system imposes a certain rhythm of self-updating on the learner by maintaining the relationship with the current world changes. Higher education that have gone through LMD reform, reaches a considerable dimension of education, both qualitatively and quantitatively. The reform promotes pedagogical innovation and academic performance of the type “Bottom-up” (Merah, 2017). According to Crosier (2013), the Bologna Process is an important step towards developing a more harmonized higher education system across countries in Europe

and beyond Europe. Although the Bologna Process began as a European initiative, its implications extend far beyond its borders. This process has influenced higher education policies in several countries toward regional harmonization, with a focus on credit transfer systems, quality assurance frameworks, and increased student and teacher mobility over the last decade. As a result, the Bologna process contributes to the establishment of a political space for data-governed education that allows for performance measurement, comparison, and quality control. The academic performance is therefore achieved (Frashld, 2014).

Academic performance is the qualitative and quantitative outcome produced during the learning process, based on instructor evaluations through mandated objective tests (Sanz, 2017). It is considered to be the center around which the whole education system revolves (Abaidoo, 2018). The academic performance of students determines the success or failure of any academic institution. According to Narad and Abdullah (2016) academic performance refers to the information obtained as measured by a teacher's marks or an educational goals set by students and teachers to be achieved during a specified time of period. Narad and Abdullah explain that these objectives are measured by continuous assessments or examination outcomes. Academic performance of students is therefore a key feature in education sector (Abaidoo, 2018). Globally in Germany, Hahm and Kluve (2019) revealed that the implementation of the Bologna Process has resulted in a significant and sizeable increase in the probability of graduating within the planned instructional time; it has also resulted in a significant decrease in standardized study duration. Students' academic performance has significantly improved as they are now able to provide practical solutions to current socioeconomic problems. The research concluded that the Bologna reform has qualitatively favorable effects on crucial individual-level educational achievements. At the students' future careers in the labor market is promising, the treatment group's average final overall grade is significantly higher. In Italy, a study by Chies (2016) showed that younger students who chose the Bologna reform outperformed their peers in terms completion and employment opportunity. The findings indicated that the reform's effectiveness in increasing efficiency, competency and completion was highly confirmed among students. In Ireland, Jörgens (2015) discussed on the advantages of inter-university relationship and mobility of students. The findings proved that there was a correlation between higher levels of implementation of the Bologna process and higher good relationship between universities in European High Education area. This caused in turn a high mobility rates among students.

Regionally, although there is limited literature in the area due to late adoption of the Bologna process, in Algeria, a study by Miliani (2017) proved that a good LMD implementation ensures a good training of students and high decrease of waste. While the system increases students' employability, it also trains them in self-learning and self-training. As a result, it claims to strive for training quality. The research focused on stakeholders, mainly students and teachers only. In Togo, Teclessou, (2020) carried out a research on the evaluation of the "License, Master, Doctorate" reform in medical school of University of Lomé. The study discovered that the absence of intermediate diplomas and pathways between different courses of medical and paramedical training was the main weakness of LMD reform since its

introduction. With teachers as main respondents, the study emphasized the importance of system implementation by aligning local realities with international learning standards in medical sector. Hindeya (2014) on the other hand, tried to establish the relation between strategy implementation of the Bologna process and its influence on students in Ethiopia. The survey concluded that Credit Transfer Accumulation System (CTS), Competence Based Education (CBE), flexibly learning paths, recognition of prior learning, students and staff mobility were positive influence of the Process of Bologna on Ethiopian Higher Education.

Locally in D R Congo, a study by Ngoyi (2020) showed that the implementation of the LMD System in Kisangani University results in more efficient, competitive, and competent students. This is justified by two major factors gathered: a rigorous introduction to scientific research and a different method of teaching and learning. On the other hand, serious issues related to academic governance were identified: administrative and pedagogical inefficiency, insufficient of technical material and poor financial support. While students were concerned about the difficulties encountered during the process of implementing the new system, teachers were concerned about the lack of rigor in recruiting students. The independent variables were motivations and expectations in adopting the LMD System, experiences during the learning process of the LMD reform program, and challenges in the implementation process. Oluwatoyin (2019) believes that university academic performance is usually affected by strategic implementation of the System put in place or of the strategic plan. Onserio and Wanjira (2018) on the other side, supports that the implementation of the strategy has a significant impact on the organization's performance in terms of resource allocation, strategic leadership, strategic communication, monitoring and control strategies. A well-implemented and communicated plan, according to Meigaru, Siamoo and Salema (2019), holds all staff accountable for their actions and interruptions. As all stakeholders are actively involved in strategic planning implementation in colleges or universities, objectives are achieved and academic performance increases. In Karanja's view (2014), strategy implementation is an essential component of strategy management because it entails allocating available resources to put a chosen strategy into action, as well as having a good structure and effective communication in order to maximize profits and stakeholders' satisfaction which is academic performance in educational sector.

Statement of the Problem

The main objective of the Bologna process is the creation of an intelligent and solid structure that promotes employability of young people and the global competitiveness of effective higher education. In the reform, the emphasis is no longer placed on the promotion of the mobility of teachers and students, the promotion of inter-university cooperation, setting up a credit system transferable (European Credit Transfer System), but on educational quality, educational professionalization, learner autonomy and above all academic success. The fight against university failure remains at the heart of the concerns of the Bologna Process (Pascal, 2017). The dynamics of higher education mutations have many consequences, specifically regarding its stage of implementation. The Bologna Process is one of the mutations that requires more attention in the action stage (Diop, 2016). In the D R Congo, the

implementation of the License-Master-Doctorate system seems to pose problems. The reform faces a number of obstacles related to expertise, standards for linking to the system and mobilization of funds from Technical and Financial Partners (TFPs) (Gouvernement, Rapport préparatoire 2021, Revue Sectorielle). According to Muyamba (2020) the sector of Higher Education in DR Congo faces a number of challenges, including limited academic autonomy in the selection of leaders and program design, the proliferation of higher education institutions, and a vast number of staff administration within the ministry and higher education institutions.

Numerous reviewed in global, regional, and local level, have associated good strategic implementation of the LMD reform to academic performance. Based on the literature, studies had been carried out in different contexts: Teclessou, Kpelao and Saka (2020) study “Evaluation of the license, master, doctorate reform in medical school of University of Lomé: strengths and weaknesses” was in the health sector, while Miliani (2017) research “The LMD reform: an implementation problem” focused on education sector. Other numerous studies focused as well on education sector but used different variables: Hindeya (2014) examined the Credit Transfer Accumulation System (CTS), Competence Based Education (CBE), flexibly learning paths and recognition of prior learning, while Ngoyi (2020) focused on the motivations and expectations in adopting the LMD System, experiences during the learning process of the LMD reform program, and challenges in the implementation process. Jörgens (2017) discussed on the inter-university relationship and mobility of students while Chies (2016) looked at the terms completion and employment opportunity of the students. So far, none of the studies has looked at the influence of strategy implementation of the LMD system on academic performance in Democratic Republic of Congo by investigating on leadership, resources and structure so as to improve academic performance. The current research was therefore an attempt to fill this gap.

Objectives of the Study

The main objective of this research was to conduct a literature review of the influence of Strategic Implementation of License-Master-Doctorate System on academic performance. The specific objectives were:

- i) To establish the influence of leadership on academic performance in Public Universities in DRC
- ii) To determine the influence of resources on academic performance in Public Universities in DRC
- iii) To ascertain the influence of structure on academic performance in Public Universities in DRC

Theoretical Review

Situational Leadership Theory

The situational leadership theory was developed by Hersey and Blanchard in 1969. The theory posits that there is no ideal leadership style. However, it depends on the leadership

style and tactical approaches that are most appropriate for the job. The theory holds that the best leaders are those who can modify their approach to the circumstance and take into account cues like the nature of the task, the makeup of the group, and other elements that may help get the job done. According to the theory, there are four main types of leadership. The first is the telling method, in which the leaders instruct followers on what to do and how to do it (Hersey & Blanchard, 1969). The second involves more back and forth between leaders and followers as the leaders attempt to persuade the group members to adopt a particular strategy by pitching their views. The third is participation, where group members take a more active role in formulating ideas and making decisions while the leaders provide less direction. The last type of leadership is delegation, which is characterized by a less active, hands-off style of management. The group members tend to make most of the choices and bear the majority of the blame under this leadership approach (Cherry, 2020). Four distinct stages of maturation are also identified by the situational leadership theory. While the second maturity level, also known as medium maturity, indicates that the group members are enthusiastic and willing but lack the ability, the first maturity level, which is considered to be low maturity, observes that group members lack the knowledge, skills, and willingness to execute the work (Blanchard, 2020). The third maturity level, which is often referred to as medium maturity, is characterized by group members who are capable of carrying out the work but hesitant to accept responsibility. Members of the fourth maturity level, which is high maturity, are highly skilled and eager to complete the assignment (Nevarez, Wood & Penrose, 2013).

The notion contends that leadership styles and maturity levels ought to correspond in order to be effective leaders. As a result, telling leadership style corresponds to low levels of maturity, whereas selling leadership style corresponds to middle levels of maturity. High maturity level is connected with delegating leadership style, whereas the second degree of maturity, medium, is matched with participating leadership style (Gill, 2011). The situational leadership theory states that when followers lack the initiative or knowledge to complete a task independently, a more directive style of leadership may be required in the early stages of a project. The leader may choose to adopt a more delegating style as subordinates gain experience and understanding (Hersey & Blanchard, 1996). Recognizing that there are numerous approaches to solving a problem and that leaders must be able to evaluate a situation and the maturity levels of subordinates in order to determine which approach will be most effective at any given time, the situational approach to leadership also highlights the drawbacks of the single-style approach. Therefore, this leadership theory takes into account the complexity of dynamic social events and the numerous actors playing various roles that will ultimately influence the outcome (Blanchard & Hersey, 1988). Leaders in an organization, such as a university, must think about their interaction with the university community. This is due to the possibility that social and interpersonal factors may influence the most effective course of action. This is so that while a highly talented group may benefit from a democratic style that encourages independence, a situation where the employees lack efficiency may benefit from a style that emphasizes order, norms, and clearly defined positions. Additionally, because jobs differ, a leader must have a thorough understanding of

what each one includes in order to assess if it has been properly and competently completed (Meier, 2016).

The theory contends that the degree of authority the leader has over the group's members must also be taken into account. This is so that certain leaders can utilize the position's inherent power to their advantage, while others can exploit their connections to the workforce to their advantage. This makes it crucial for the group leaders to take into account each member's maturity level in order to determine their capacity and willingness to complete a task (Nevarez, et. al., 2013). This theory is relevant in this study because it will assist the university leaders develop relationships with the other stakeholders such as lecturers, students, parents and government because they will customize their style of leadership to their development level. This is because each stakeholder group requires a unique level of hands-on and communication-based leadership. The school leaders as they implement strategies in line with the LMD system will be able to assess the stakeholder's skills, confidence, and motivation, and determine what type of leadership style to use so as to enhance academic performance.

Resource Based View (RBV) Theory

The RBV theory was conceptualized by Barney (1991). It mainly looks at how different organizations perform depending on their resources. The two basic presumptions of the theory are heterogeneity and immobility. The first presumption is that businesses' talents, competences, and other resources vary from one company to another. This is due to the fact that firms would be unable to use alternative tactics to outcompete one another if they all had the same quantity and mix of resources. The theory therefore presupposes that businesses use their various resource bundles to gain a competitive advantage (Barney, 1991). The second supposition holds that, at least in the near term, resources are immobile and do not shift from one organization to another. Companies are unable to imitate rivals' resources and carry out their strategies as a result of their immobility. Intangible resources including brand equity, business processes, human capital, and intellectual property are frequently immovable. The main source of a company's sustainable competitive advantage is typically internal intangible resources (Peteraf & Barney, 2003). According to Barney, Wright and Ketchen (2001), physical items including land, structures, machinery, equipment, and money are considered tangible assets. Physical resources are freely available on the market; hence they offer little long-term value to businesses because competitors can quickly obtain the same assets. Consequently, the RBV theory's focus on an enterprise level, or business level, of analysis, is one of its core tenets. The resources and capabilities that an organization controls are the key emphasis because they are what cause performance variations amongst organizations.

The theory thus aims to clarify how organizations preserve distinctive and long-lasting positions in situations of competition. This is accomplished by emphasizing differences based on efficiency rather than other potential disparities between businesses (Hoopes, Madsen, & Walker, 2003). Instead of having to learn new skills for every opportunity, it is much more possible to take advantage of external opportunities by employing current resources in a novel way to achieve a competitive advantage. According to RBV theory, resources play a

key role in assisting businesses in achieving improved organizational performance. According to the hypothesis, a company can gain a long-term competitive advantage by managing resources that are valuable, uncommon, difficult to duplicate, and non-replaceable. Therefore, a university leader's responsibility is to assist the organization in using resources more wisely and effectively than other universities throughout time (Barney & Clark, 2007). The theory is important to this study because it helps university leaders understand how and why its resources are better or worse than those of its main competitors. This shows that when the university head understands the benefits they can gain by effective implementation of the LMD, they will use the available resources to improve academic performance among their students. This is because they will explore ways that can help them implement the system in their universities using the current resources better, more efficient and more cost-effective than other university managers are doing.

Structural Contingency Theory

The structural contingency theory was conceptualized by various authors between 1960 and 1970 (Burns & Stalker, 1961; Chandler, 1962; Woodward, 1965; Thompson, 1967; Blau, 1970; Child, 1973; Galbraith, 1973; Rumelt, 1974). According to the notion, there is no one perfect organizational structure; rather, the best organizational structure varies on the challenges an organization must face. The theory states that organizations will function well if managers match organizational traits, such as its structure, with environmental variables (Donaldson, 2001). According to Umanath (2003), the structural contingency theory asserts that adopting the optimal level of structural variables that depend on a certain level of the contingency variable is not necessary for organizational performance. Fit is one of the most crucial ideas in the theory (Tenhialla, 2011). Fit should contain alignment, co-alignment, match, conform, consistent with, and suited for, according to the theory. Therefore, an organization will function more efficiently than one whose features do not match the circumstances in its position. Examples of such characteristics include needs, demands, goals, objectives, and organizational structures (Umanath, 2003). According to the theory, a fit can be defined as an unconditional or conditional relationship between variables. Three categories of fit were identified by Umanath (2003): congruence, contingency, and holistic configuration. Congruence refers to the interaction between an interesting variable—like information technology—and organizational elements without considering how the relationship affects performance. Contingency states that the degree of a third variable z determines how one variable x affects another variable y . As a result, when z is low, the impact of x on y is different than when z is high. In other words, the impact of x on y depends on z or is influenced by z 's magnitude. Variable z moderates the interaction between x and y (Donaldson, 2001).

The idea states that holistic configuration refers to simultaneous interdependencies among variables that are sensitive to many contingencies, or overall internal coherence of a set of organizational qualities (Cao, Wiengarten, & Humphreys, 2011). Umanath (2003) noted that there are two distinct ideas of fit. Fit has traditionally been viewed as a bivariate relationship in which environment and structure separately co-vary. Systems-based approaches, on the

other hand, have emphasized more systemic, holistic approaches to the concurrent interplay among numerous factors and circumstances (Miller, 1981). According to structural contingency theory, there are two fundamental contingencies: organizational task and size. The number of employees in general has been used as an operational definition of size (Long, 2022). Smaller organizations do well with less bureaucracy, while larger organizations do better with more (Child, 1975). Specialization, formalization, differentiation, and decentralization are further potential outcomes (Donaldson, 2001). Task interdependence and task uncertainty are the two halves of the task contingency. For instance, there is often less organizational formalization and more decentralized decision making as task uncertainty rises due to increased product or service innovation (Donaldson, 2015).

According to the theory, organizations cannot function at their highest level of effectiveness if their structures are flawed. Finding the ideal organizational structure, however, is a challenging, continuing, and time-consuming task (Schminke, Cropanzano & Rupp, 2002). This is due to the fact that organizational structures are challenging to develop since they frequently result from managerial effort, strategic decision-making, environmental factors, and chance. As a result, institutional performance is a function of how well structure, people, technology, strategy, and culture fit together. Therefore, organizations with greater fit will perform at higher levels, while those with worse fit will perform at lower ones (Cao, et. al., 2011). This theory is relevant to this study because it can be used by the university management in the implementation of LMD system to enable them understand what affects their university and work hard to create the perfectly fitting structure that will result in improved academic performance. They will also be able to look into the contingencies in line with the size of the university and the task at hand of implementing LMD effectively for enhanced academic performance by the students. The university management will also consult their employees on the effectiveness of the current organizational structure and work together to remedy any problematic areas so as to enable everyone accomplish the organization's vision, mission and goals.

Empirical Review

Leadership

Awadh (2021) analyzed the impact of collaborative leadership on academic achievement in the US. The study examined the relationship between collective and instructional leadership skills and academic accomplishment. Similar to this, Noor and Nawab (2022) investigated the relationship between leadership techniques and academic achievement in Pakistani secondary schools. The study specifically looked at how school leaders' priorities, the creation and dissemination of the school's vision, the control of instructional margins, and the encouragement of teacher professional development affected student academic achievement. Focused groups, interviews, and leadership practice observation were employed to gather data for the study. According to Awadh's report from 2021, instructional leaders are the key players in leadership. Additionally, it was discovered that leadership affected the working environment, knowledge, and skills of teachers, all of which improved student achievement. According to the study, school leadership changes should be made in order to improve

academic achievement. On the other hand, the findings of Noor and Nawab (2022) revealed that school leaders had a limited involvement in instructional leadership. They prioritized administrative and management chores more than student accomplishment, teacher professional development, and fostering a learning culture, according to another finding. According to the report, change agents should concentrate on developing school administrators into instructional leaders in order to enhance classroom practices. Additionally, it was advised that leaders should build teachers' capacities and foster a learning culture in classrooms.

Fred and Singh (2021) looked at how leadership styles affected pupils' academic performance in rural schools in Malaysia. The study concentrated on building a learning climate in the school, expressing the school goal, administering the instructional program, and defining the school goals. The study used the instructional leadership paradigm and a mixed method approach to research. Additionally, Azar and Adnam (2020) looked into the impact of leadership on Malaysian students' academic achievement. The study specifically focused on the effects of good leadership and the key elements that boost student achievement. Data from the respondents were gathered using convenience sampling for the study. The findings indicated that democratic and transformative leadership is the most effective model of educational leadership to be used in schools. According to Fred and Singh's study from (2021), men and female instructors had different opinions of their head teachers' instructional leadership techniques. The study also showed that school leaders found it challenging to raise academic standards because of the problems and difficulties they faced. It was suggested that the government evaluate the current regulations in order to empower school administrators and increase their efficiency in running schools. Another result by Azar and Adnam (2020) was that successful leaders were key to both teacher development and student improvement. Quality teachers were the primary contributors to students' achievement. The study also discovered that the greatest approaches to develop leaders in a company were through the processes of task delegation, shared accountability, and decision-making. The study concluded that because traditional leadership had run into new difficulties, school leaders needed to adapt to new models for improved improvement. Additionally, it was advised that for leaders to successfully bridge the gaps between official and informal leadership, a high degree of reciprocal trust must be developed.

A study on the effect of principal leadership on secondary school pupils' academic performance in Nigeria was carried out by Akingbemi and Abdullah in 2022. To examine how they affect academic performance, the study concentrated on the factors of leadership styles, principal knowledge, experience, and accountability. The results demonstrated that principals have a significant impact on the quality of the school, which improves academic success. This study provided evidence that school administrators might enhance students' academic achievement by utilizing their leadership characteristics, including their leadership style, expertise, experience, and accountability. Asamoah and Tseer (2021) examined the impact of leadership on academic achievement in Ghana. The study that examined how leaders might impact how academic activities are planned, ensure successful teaching and

learning, and promote wellness. The study, which used a cross-sectional research design, discovered that the implementation of several leadership styles by school administrators, such as transformational, transactional, servant-leadership, and autocratic, had an impact on academic performance. Oyugi and Gogo (2019) in Kenya looked at how leadership philosophies affected students' academic achievement in secondary schools. The study specifically looked at how democratic, autocratic, and laissez-faire leadership styles affected academic performance. Data were gathered for the study using a rating scale from the Donclark questionnaire methodology. The findings demonstrated that democratic leadership had a beneficial impact on academic performance in terms of decision-making, communication, ownership, professional growth and empowerment, conflict resolution, and management. According to Asamoah and Tseer's findings from the year 2021, democratic and student-involved schools outperformed non-democratic and non-involved schools in terms of academic achievement. The report proposed that the government incorporate leadership development into the teacher preparation program. In order to keep university leaders up to date on different leadership philosophies, it was also suggested that the education ministry host regular seminars on leadership development.

Resources

Ahmed and Othman (2017) explored the relationship between resources and performance in Malaysia. The internal elements that affect performance were examined in the study. Organizational innovation has a considerable impact on performance, according to the study that assessed the body of available literature. According to the report, firms should invest in information technology resources to boost performance since they inspire people to be more inventive. In a similar vein, Onyali, Akinfolarin, and Famuti (2018) looked into how secondary school students' academic performance was affected by human resources. The study used a multi-stage sampling technique and a correlation survey research methodology. Abdullahi and Sirajo (2020) looked at the impact of resource determinants on the effectiveness of instruction on student performance in secondary schools in Nigeria. The study's precise goals were to examine physical resources, financial resources, and human resources. The study, which evaluated previous research, discovered that the lack of suitable classrooms, laboratories, furnished staff offices, computers, and textbooks had an effect on student achievement. Another finding was that the facilities installed were hampered by insufficient financial resources. Further investigation indicated that although the staff was acceptable, the professors lacked ICT expertise. According to Abdullahi and Sirajo (2020), the government should make sure that all secondary schools have access to sufficient training resources in order to have a strong academic performance. Additionally, it was suggested that the government enhance funding provided to schools in order to help them acquire the necessary physical infrastructure. It was as well advised that school administrators be urged to collaborate with the local community in the provision of educational materials.

According to a study by Onyali *et al.* (2018), the recruitment procedure, the placement of teachers in schools appropriately, and routine performance review all had an impact on students' academic achievement. The report showed that school administrators should arrange

appropriate professional development opportunities for teachers so that they can carry out their duties of delivering teaching in a professional manner. Kutu, Nzimande, and Ngema (2020) conducted research on the impact of resource accessibility on academic achievement in South Africa. The study looked at the school management, accountability, and student self-determination resource components. According to the report, educational resources have a big impact on how well students achieve. In 2019, Maina and Njagi looked into how resources affected how well private primary schools in Kenya performed. Human resources, financial resources, information technology resources, and organizational leadership were the study's specific goals. Cross-sectional, explanatory, and descriptive research designs were used in the study. According to the results, resources had a statistically significant favorable impact on academic performance. The study by Kutu *et al.* (2020) came to the conclusion that while numerous factors contribute to better academic achievement, educational resources alone are not always the most important instrument for addressing the larger educational outcomes. The study suggested that as strategies to increase academic performance, it should be encouraged to improve teacher preparation, academic administration, and teacher accountability. In order to improve student performance, it was also advised that the accessibility of textbooks and related educational materials be greatly increased.

On the other hand, Maina and Njagi (2019) advocated for schools to make investments in human resources and implement policies for the sourcing and use of finances. Additionally, it was suggested that the ICT infrastructure procurement policy be tightened and put into effect. Additionally, the policy for providing strategic direction, communicating, and allocating resources needs to be enhanced. Ongeti and Machuki (2018) also evaluated how resources affected state company performance. The study's primary emphasis was on both material and immaterial resources. Cross-sectional descriptive survey design was employed in the study. It was discovered that resources and performance had a good link. According to the study, managers should boost resource integration, renewal, and recombination for better performance. The government policy should, according to another recommendation, be centered on promoting resource acquisition, integration, configuration, and combination for greater performance in public institutions.

Structure

In Philippines, Porlares and Tan (2021) investigated the influence of structure on academic performance. The organization's social or human resource structure was the main subject of the investigation. The results demonstrated that a school's organizational structure has an impact on how information is transmitted, communicated, and integrated as well as how processes are implemented both inside and outside of the school. Similar research on the connection between organizational structure and academic performance in indigenous educational institutions was conducted in Indonesia by Perawironegoro (2018). The study examined the aspects of job clarity, work relationships, delegation to subordinates, task completion processes, helping one another, and cooperating. The research showed a link between organizational structure and academic achievement. According to a study by Porlares and Tan (2021), school administrators should consider how the stakeholders in their

organization interact routinely through underlying and established processes and exploit this pattern to enhance academic achievement. It was also suggested that in order to identify the hidden systemic processes operating in communication channels, paper trails, cross-departmental relationships, and behavioral channeling for better academic performance, reflection on the systemic viewing of the organizational structure was necessary. According to Perawironegoro's (2018) study, managers should manage the school system well to improve academic achievement.

Hutabarat (2015) investigated how organizational structure affected students' academic performance in Indonesian senior high schools. The study especially looked at how transferring decision-making, parent involvement, stakeholder involvement, student involvement, and fund-raising management affected outcomes. Ogbo, *et al.* (2015) evaluated the effect of structure on performance in Nigeria. The study focused on decentralization, task repetition, and limited scope of control. The results showed that work routines effect staff productivity both negatively and positively depending on timing, and that decentralization improved better decision-making.

Hutabarat's (2015) findings demonstrated that organizational structure had a direct bearing on academic performance. The results also showed that pupils performed better when their teacher participated in decision-making. The study suggested that in order to raise student academic performance, school leaders and other stakeholders should collaborate. Ogbo *et al.* (2015) discovered that a limited span of control improved operational efficiency. The study suggested that managers implement decentralization to enhance the decision-making process and should also permit low level managers to participate. Additionally, it was advised that managers blend parts of task routine and variation to benefit from task assignment. The breadth of control should be kept at a level that can be efficiently handled by individual managers, according to another advice for managers.

In Zambia, Chizyuka and Daka (2021) compared a private school and a state school to examine the relationship between structure and the delivery of high-quality education. Both descriptive and naturalistic research designs were used in the study. The study discovered that while the public school had a hierarchical organization, the private school had a team-based structure. Additionally, it was found that the organizational structure of the private school either helped or impeded the promotion of quality learning through its superior physical amenities compared to the public school. Nyathi and Bhebhe (2019) looked at the impact of organizational structure in Swaziland's high-performing schools in a different study. According to the study, flexible structures have advantages over rigid ones because they generate environments that are more favorable to teaching and learning. Additionally, it was discovered that flexible structures foster greater control, stronger motivation, and more opportunities for group learning for both teachers and students. According to Chizyuka and Daka's findings from 2021, compared to the public school, the private school had a quicker process for maintaining its resources, including computer labs, physical buildings, and science laboratories. In order to provide students with beneficial educational experiences, the report advised that the government reform the lines of accountability in both public and

private schools with stronger ties between instructors, administrators, and parents. Another finding from Nyathi and Bhebhe (2019) indicated that high performing school environments encouraged innovation and improved group decision-making. According to the study's findings, high-performing school structures allowed instructors to create effective teams that improved student achievement. The study's recommendations were that, despite the fact that school structures are already established, school leadership should modify them to better meet their institutions' needs for adaptability and innovation. Additionally, it was suggested that for improved academic achievement, structures should foster collegiality, teamwork, and team teaching.

Conceptual Framework

Independent Variable

Dependent Variable

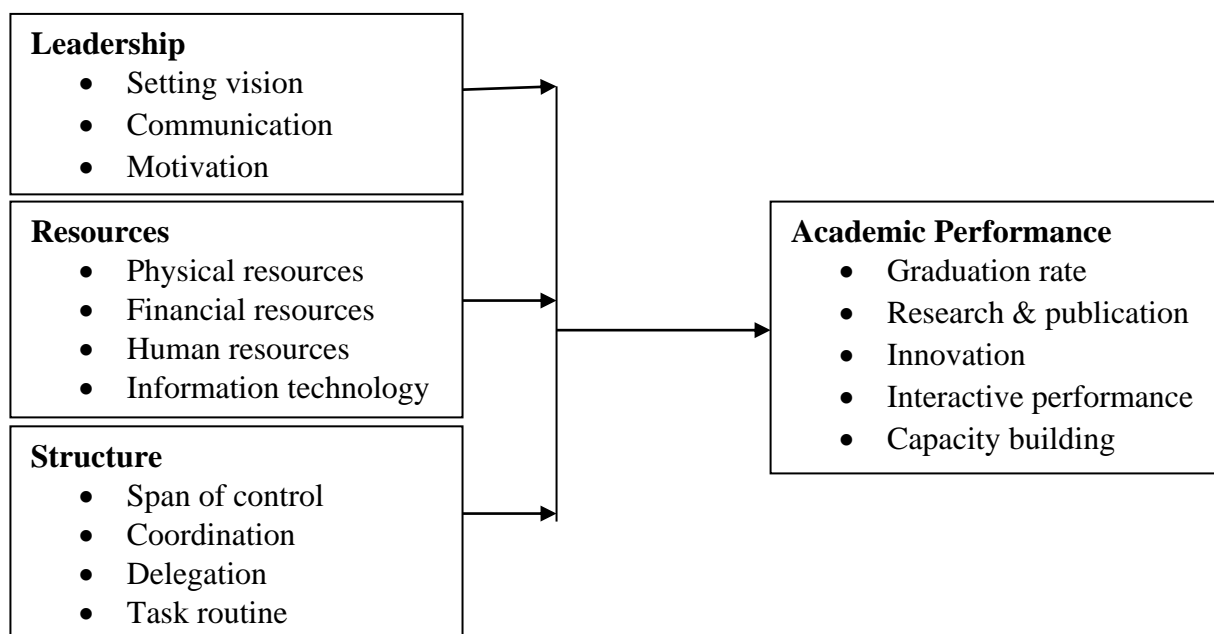


Figure 1: Conceptual Framework

Figure 1 shows that the independent variable strategic implementation of LMD system is reviewed under these dimensions: leadership under the parameters of setting vision, communication, motivation, and accountability; while resources is under the constructs of physical resources, financial resources, human resources and information technology resources. In addition, structure is examined under the parameters of span of control, coordination, delegation and task routine. The dependent variable on the other hand is examined under the dimensions of graduation rate, research and innovation, interactive performance and capacity building. According to the conceptual framework, when university leaders set a clear vision, they will be able to set the strategic pace for the other stakeholders in the university such as the lecturers and students as they will have a clear picture of what they are working towards and this will improve the graduation rate of the students, ensure there are more researches and publications among the staff and students and encourage

innovation in the institution. In addition, through effective communication of the vision and strategy of the vision which allows for the teachers and students to give feedback, the university administration will be able to improve academic performance. Through the leaders motivating the teachers to offer quality teaching to the students, the universities will be able to perform better as the schools will have received quality education. Further, having school leaders who are accountable for their actions will motivate the other members of the university communities to uphold integrity in their undertakings and this will lead to a positive academic performance among the students. Under the resources variable, when universities are facilitated with adequate physical resources such as classrooms, laboratories, libraries, toilets and instructional materials, the teachers will be able to work in a conducive environment and this will encourage them to offer quality education to the students which translates more innovations among the staff and students.

In addition, through the provision of adequate financial resources, the school managers will be able to provide the required equipment and employees to ensure that the LMD system is effectively implemented. Having adequate human resources who are qualified will ensure that the schools have the capacity to effectively implement the LMD system and this will enhance capacity building. Information technology resources which are very critical for enhancing the provision of quality education will be very instrumental to the teachers as they will be able to use the latest technology to ensure the students get quality education thus be able to research more and be innovative. According to the conceptual framework, under the structure variable, when universities are able to ensure that the span of control is clear to all the stakeholders, each person will be able to know what they are expected to do at a particular time and this will ensure there is no overlap of authority which is crucial for improving academic performance. Further, through the elaborate coordination of university activities, the management will be able to ensure there is no conflict or confusion among the university community and this will boost the graduation rate per year. By delegating the various roles to the employees, the university members will empower them to be more diligent in their duties and this will motivate them to give their best so as not to disappoint their leader. In so doing, the students will benefit through the provision of quality education and thus boost their performance. Finally, by ensuring that the routine tasks especially by teachers are well undertaken whereby no lectures will be missed, the university administrators will be able to ensure that the university syllabus is covered in time and that the students are well prepared to sit for their exams which will transform to better grades.

Conclusions

This paper aimed at examining the influence of strategic implementation of License-Master-Doctorate system on academic performance. As has been noted from the literature reviewed, the main objective of the countries adopting LMD system is to become the most competitive and dynamic knowledge-based economy as well as to promote pedagogical innovation and academic performance. Therefore, policy makers in African countries have modernized their curriculum in line with current globalization policies in higher education systems. The literature also concluded that the License-Master-Doctorate system is being adopted mostly

in French speaking countries. This study also concludes that as noted in the global and regional studies reviewed, the implementation of the LMD process, academic performance has significantly improved. The limited literature in DRC, revealed that implementation of the LMD System results in more efficient, competitive, and competent students but this is disputed a study that posited that the sector of Higher Education in DR Congo faces a number of challenges. According to literature on the implementation of LMD system and academic performance, various authors have looked at different dimensions. In this fact, this paper contends that the empirical and theoretical studies on the influence of strategic implementation of the LMD system on academic performance particularly in DRC have inadequately informed this practice. This is because none of the studies have investigated the strategy implementation of the LMD system in Democratic Republic of Congo in terms of leadership, resources and structure so as to improve academic performance.

The reviewed studies were mainly anchored on strategic management theories such as stakeholder theory, agency theory, institutional theory and capabilities theory to explain the influence of strategic implementation of LMD system on academic performance. By adopting situational leadership theory, RBV theory and structural contingency theory, makes this study unique due to its contribution of adoption of theories that put into consideration the inclusion of leadership, resources and structural theories domains of strategic implementation. Besides, literature postulates that institutions of higher learning that need to enhance their academic performance need to adopt leadership that promotes wellness, encourages accountability, able to set priorities and knowledgeable. In addition, literature points out that academic performance in higher education can be boosted by ensuring the resources are available and policies are in place to guide the implementation. In terms of structure, literature posits that institutions of higher learning can enhance academic performance by having flexible structure, stakeholder involvement, good working relationships and delegation. However, these concepts have been dominantly applied in the western context where the LMD system was earlier adopted than in the African context. Further, literature on strategic implementation on academic performance may borrow theories from management theories such as contingency theories and systems theories to explain the relationship that may occur between variables given that leadership, resources and structures are management aspects in an organization.

Consequently, theories could also be borrowed from the field of psychology to explain these relationships particularly those related to the psychology of academic stakeholders who are in-charge of implementing strategies in the institutions of higher learning. Studies on the relationship between strategic implementation and performance have looked at academic performance under the dimensions of grades scored by the students. By looking at the constructs of research and publication, innovation, interactive performance and capacity building in public universities, this study enriches the existing literature by expanding the scope of academic performance. In addition, most of the reviewed studies on the research topic have been done in western countries especially in Europe and are scarce in Africa region particularly DR Congo. This can be attributed to the fact that mostly French speaking

countries in Africa are adopting the LMD system and thus the empirical data is limited. According to the literature reviewed, studies that employed regression models to examine the relationship between strategic implementation of LMD system and academic performance were limited at the African level as compared to the global studies. Therefore, higher levels of inferential statistics like structural equation modeling and factor analysis should be incorporated as they allow the possibility of capturing multiple relationships among variables. It is also evident from the studies reviewed had used various methodologies for sampling such as convenience sampling and multistage sampling. Literature showed that studies used focused groups, interviews, observation and questionnaires to collect data. Further, most studies employed case studies especially in the private universities with cross-sectional surveys at only one point in time to assess the influence of strategic implementation of LMD system on academic performance. However, studies that used longitudinal approach were limited.

Recommendations

There are various factors that contribute to the influence strategic implementation of license-master-doctorate system on academic performance in institutions of higher learning. Hence in the leadership spectrum, the government being in-charge of public universities should ensure that these institutions are managed by competent leaders who are professionals and competent. This will ensure that they are able to set vision, communicate effectively to the staff and students, motivate the employees to do their best as they implement the LMD system and also to be accountable for their actions. In addition, the government should organize for regular leadership development seminars to equip the leaders with adequate skills for better management of public universities. Public university leaders should adequately utilize the available resources to enhance academic performance. The physical facilities should be maintained and refurbished to provide adequate spaces for the students to study while the skills of the available employees should be adequately utilized to provide quality education to the students. Leaders should also support teacher professional development through workshops and seminars to ensure their teachers are able to deliver content to the students. The available financial resources should be budgeted for effectively for all programmes in the public universities and the management should collaborate with private organizations like Non-Governmental organizations to get more resources for their institutions. Information technology resources should be prioritized in public universities as they will make the learning experience better and encourage both staff and students to be more innovative and to carry out quality research. It is also recommended that the university management should be responsive to organization change especially in the implementation of the LMD system and put in place adequate controls to ensure that the employees do not deviate from the overall vision. In addition, effective communication to all stakeholders should be encouraged to ensure that they are all aware of what is happening. The management should also delegate tasks and authority where applicable to ensure that there are no delays and that everyone owns the process of implementing the LMD system. Further, the management should blend task routine and variation to promote teamwork.

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