Leadership in a Changing World: Relating Transformational Leadership to Internal and External Environmental Issues in Technical Universities

Elizabeth Addy, Audrey Addy and James Addy

Abstract

This paper seeks to relate the characteristics of transformational leadership (TL) to the strengths, weaknesses, opportunities and threats (SWOT) analysis of technical universities (TUs) in Ghana. The low performance of TUs in Ghana, has necessitated the need for effective TL. Using the qualitative approach, a documentary review and content analysis of 10 TUs were employed for the study. The study found that, the strength of the TUs were the qualified and experienced staff, the university structure, ICT services and flexible academic programmes. The main weaknesses were the inadequate staffing and low research output with opportunities identified as collaborations with industry and other institutions, whilst threats included the low and negative perceptions by the public about the TUs. Comparatively, it was revealed that the TUs in the southern part had more strengths than those in the northern part of Ghana. The TL was therefore key in providing transformation to the TUs by strengthening their SOs and minimizing their WTs. This study contributes to the technical tertiary education in the area of internal and external environmental conditions that could enhance performance of TUs. The content and SWOT analyses added another dimension to the qualitative documentary case study for the TUs.

Keywords: transformational, leadership, technical universities, strengths, weaknesses

1. Introduction

In a rapid transforming world, universities require a blend of unique features of transformational leadership styles to be innovative, and ensure sustainable performance to succeed. Transformational leadership (TL) have been known to be directive, participative and democratic [1]. Every organization has its strengths, weaknesses, opportunities and threats (SWOT) for which the same applies to technical universities (TUs). Leadership in technical university education has become critical because of intense competitions among tertiary institutions for sustainable performance and innovations. Each staff and student in a tertiary education is a

potential leader and must work towards the vision and goals of the institution. Universities are required to transform people through the generation and application of knowledge, develop technological innovations for the performance and productivity of the institution [2, 3]. Scholars have argued that, there has been a paradigm shift in leadership styles to a more integrated approach for innovations [4, 5]. Other authors argue that, the growing demand for transformational leadership practices in organizations are to ensure high performance and productivity [6–8]. Studies on the qualities of TL emphasizes on its strengths and benefits for innovations, with limited studies on the weaknesses and threats that could hinder performance [7, 9–11].

In Ghana, TUs have undergone many transformational changes and is still underway, which requires TL to address such deficiencies [12]. The transformational changes in TUs, who were formerly polytechnics, began with their establishment in the 1960s as technical institutes to train people in craftsmanship [13]. They were re-designated into polytechnics to run non-tertiary programmes in 1963, and in 1992, the PNDC law 321, upgraded the polytechnics into a tertiary status. In 2007, the Polytechnic Act (Act 745) was passed to replace the PNDC Law 321, for a clear mandate to the polytechnics [12, 14]. The Technical University Act, 2016 (Act 922), converted the polytechnics into TUs to provide high skill training of students for industry [15]. Currently, Ghana has ten (10) public TUs located in ten (10) regions of Ghana.

These status transitions and low performance of the TUs require transformational leadership approaches to stimulate and accelerate the development of TUs in Ghana. This paper therefore aims to develop a conceptual model of the SWOT in TUs in relation to the features of the TL. It contributes to the internal and external environmental conditions which could enhance or hinder performance of TUs in Ghana. With the introduction in the Section 1, the Section 2 discusses the theoretical frameworks, whilst Section 3 presents the methods. Section 4 analyses the results with discussions in Section 5. The limitations to the study is in the Section 6 and the conclusion in the final chapter.

2. Theoretical framework

2.1 Transformational leadership theory

Many scholars have argued that transformational leadership theory is one of the prominent leadership theories that results in change and innovative work behaviour in organizations [16–20]. It also has been associated with managerial effectiveness during organizational change [1, 21]. The theory has evolved from the great man theory [22, 23], the trait theory [24, 25], the behavioural theory [26], situational theory [27, 28], and the transactional theory [29, 30].

Other scholars have classified TL into four areas: idealized influence, individualized consideration, intellectual stimulation and inspirational motivation [31, 32]. Podsakoff et al. [33] also identified six themes which corroborates with the four categories identified, with additional two on fostering acceptance of group goals and expectation of high performance. This means that, TL is comprehensive, dynamic and continue to expand with seven characteristics identified, which supports the views of earlier scholars. Extended and integrated literature on the seven TL are envisioning a new future (visionary), persistent communication, model desired behaviour, empower employees, meaningful changes and strategy, integrity and creating a sustainable organization (**Figure 1**) [17, 34–37].
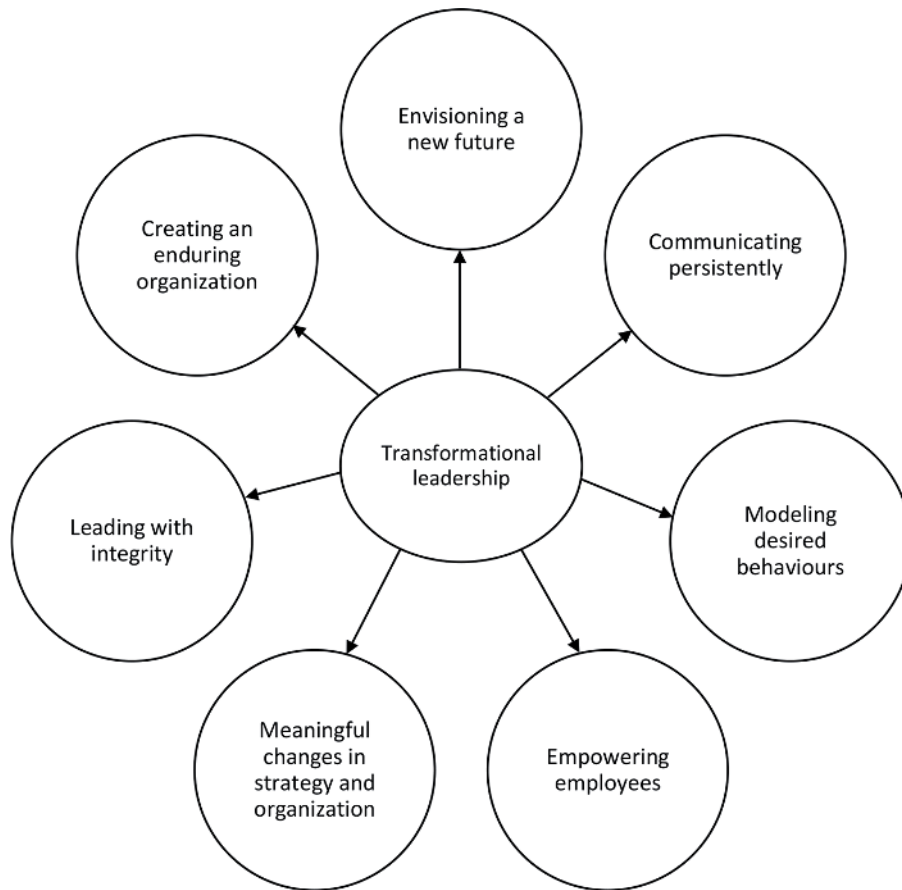
Figure 1.
Characteristics of transformational leadership. Adapted from: Hill and McShane [34].

Visionary: transformational leaders have a different and purposeful future for the organization they lead. This new vision transitions into the strategy and architecture of the organization.

Persistent communication: the new vision is communicated to employees consistently. They ensure that, there is information dissemination of their new vision to employees and they adopt and implement the vision. Top-down approach as well as bottom-up approach is accepted in such organization.

Model desired behaviour: the transformational leaders lead by example. They practice what they communicate to their employees. Their self-leadership style are exhibited by their followers.

Empower employee: the transformational leaders implement the grand strategic vision and by that they motivate employees to be innovate and apply various approaches to enhance organizational performance.

Meaningful changes: the changes effected by transformational leaders include the structure, processes, controls and incentives to promote work behaviours that is required to implement their strategic vision.

Lead with integrity: transformational leaders believe that they would have followers if people believe and trust their leadership vision. They build reputation for the organization, ensure fairness and firmness and behave in an ethical manner.

Sustainable organization: requires that organizations continue to operate efficiently and effectively to ensure continuous operations of the organization.

2.2 SWOT analysis theory

Theoretically, the SWOT analysis methodology identifies the internal and external environment in which the organization exists [34, 38]. Arguably, the application of SWOT analysis for the TUs is relevant due to the many actors or stakeholders involved.in determining the TL qualities that would promote innovation performance of the TUs. As such the cooperate strengths and opportunities could improve the performance of the TUs whilst the cooperate weaknesses and threats could inhibit performance. The strengths and weaknesses are internal factors and the opportunities and threats the external factors. The main goal of the SWOT analysis is to develop a systematic assessment of the phenomenon which would support decision-making related to strategic dimensions of the goals. In this study the SWOT analysis amount to assessing theoretically, the methodology and application of TLs in TUs. In general, a SWOT helps to develop the assessed phenomenon for further sequences of improved goal achievements and has an exploratory aspect which have not been noticed by other means of analysis. This exploratory force originates from the requirement to identify and distinguish overtly the four different categorization dimensions of the SWOT in the TLs [3].

Nevertheless, the SWOT analysis approach was the appropriate for this research due to the dynamic and comprehensive nature of the TL and the diverse stakeholders associated with the TUs to derive a holistic results on the phenomenon. The SWOT will help identify the total general strengths and opportunities of the TUs as well as the overall weaknesses and threats that could facilitate or inhibit the performance of the TUs.

3. Method

The study adopted the qualitative documentary approach and content analysis. According to Yang and Hwang [39] document review forms part of the qualitative case study. Data was collected from the strategic plans, reports from the vice-chancellors, policy documents on the operations of the TUs and sub-committees of ten (10) technical universities in Ghana. The strategic plans and other document of the 10 TUs were employed for the study which covered a 5-year period. It contains the vision, mission, core values, strengths, weaknesses, opportunities, threats and the strategic thrust which exist in the TUs. The TUs implement the strategic plans based on the approval by the TU council. The vice-chancellors, management and staff take full responsibilities of the implementation of the plan. Information was also obtained from the websites of the TUs.

The 10 TUs comprise of Accra, Takoradi, Cape Coast, Koforidua, Ho, Kumasi, Sunyani, Tamale, Wa and Bolgatanga. The northern part consist of three TUs, which are Tamale, Wa and Bolgatanga, whilst the southern part includes Accra, Takoradi, Cape Coast, Koforidua, Ho, Kumasi, and Sunyani.

The focus of the study is a comparative analysis on the strengths and weaknesses of the TUs that affect their environment positively or adversely for performance. A comparison was made on the strengths and weaknesses of the TUs in the southern part as against the northern side. Though interviews and survey may have revealed the individual's perceptions of what strengths and weaknesses exists in the TUs and the style of the TL practiced, the scope of the study is limited to the TU documents for the content analysis.

4. Results and analysis

4.1 Strengths of transformational leadership and technical universities

The strength of transformational leadership is based on the premise that, leaders exhibit positive work behaviours of commitment, readiness, transparency and support that generate innovations and improvement of the organization [5]. First, the theory is comprehensive and all-inclusive because it covers broad descriptions of leadership qualities from different perspectives at the management levels [40]. Some of the leadership qualities are the ability to influence followers, integrity, provide motivation and morality at the organization [26, 41]. In the TUs, the characteristics of the TL are embedded in the analysis of the strategic plan, with key theme being the experienced and qualified staff, who are of integrity, innovativeness, commitment and excellence. The quality of staff reflects in the increasing number of students in the TUs. Another strength is the communication flow between the leaders and their subordinates with the aim of adopting moral standards that guide favourable interactions [4]. Effective communication flow is the one of the hall marks of a TL. Each of the TUs have an organogram or organizational structure which indicates the reporting lines of authority and channels of communication. Each faculty or administrative department has a head of department, supervisors, and subordinates. As such there is continuous flow of information from leaders to subordinates. Third, the TL motivates their followers to go beyond their limits and attain higher heights [42–44]. Hu et al. [44] argue that inspirational motivation encourage employees to exert more efforts to tackle challenges, work towards achieving their goals, and create more opportunities. The TUs have motivated staff whose aim is to achieve the goals of the university. Fourth, TL are encouraged to be innovative, creative and solve problems [8, 45]. Hu et al. [44] assert that, creativity and innovation occur in organizations whose leaders practice transformational styles. In the TUs, creativity and innovation have become essential because of the need to sustain relevance and competitive advantage in today's higher educational institutions for growth of new knowledge, ideas and research in a globalized world [8, 46]. Fifth, TLs are strong in their support they provide to members and help them develop their career, overcome personal fear and take on difficult and situational challenges [47]. The TUs have staff development policy for which they encourage staff to pursue further studies by offering scholarships, seminars, workshops and conferences for staff. Six, transformational leaders serve as role models to their followers and adopt proactive means to realize the vision [48, 49]. In TUs, the teaching and non-teaching staff follow the vision enshrined in their strategic plan inspire their followers to espouse the ownership of the TU goals in harmony with their personal goals for a follower transformation [28, 50]. All the 10 TUs have a vision, which are similar and reflect on their TL styles (**Figure 2**; **Table 1**) [51, 52]. For instance the visions of five of the TUs were stated as:

> *"A world-class technical university recognized for excellence, innovation and societal relevance (TU 1)".*

> *"A world-class technical university devoted to science, technology and entrepreneurship education (TU 2)".*

> *"Recognized as the top technical university in Ghana, with strong regional influence (TU 3)".*
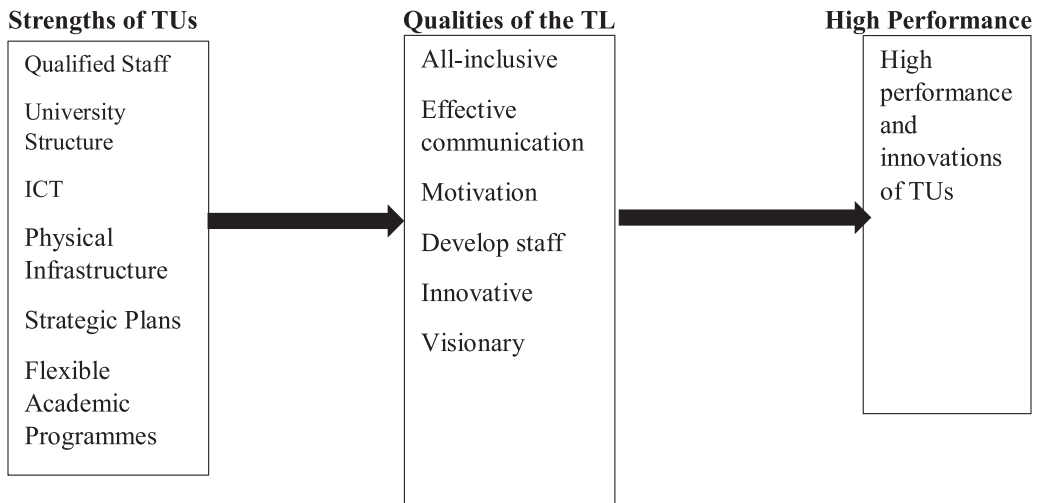
Strengths of TUs	Qualities of the TL	High Performance
Qualified Staff University Structure ICT Physical Infrastructure Strategic Plans Flexible Academic Programmes	All-inclusive Effective communication Motivation Develop staff Innovative Visionary	High performance and innovations of TUs

Figure 2.
Strengths of TUs in relations to TL. Source: Author's Construct (2021).

Strengths of transformational leadership	Author, year	Strength of technical universities
Comprehensive and all-inclusive	Burns, 1978; Bass, 1985; Siangchokyoo et al., 2022; Yukl et al., 2013; Korejan and Shahbazi, 2016	Leadership, staff, students, resources
Communication flow	Siangchokyoo et al., 2020; Khattak et al., 2019	1. Hierarchical structure/organogram 2. University's websites open to staff, students and the general public 3. ICT-internet services
Motivation	Klaic et al., 2020	Motivated staff
Innovation, creativity and problem solving	Avolio et al., 2014; Benmira and Agboola, 2021	Provide entrepreneurship/employable skills Has entrepreneurship centres
Career/staff development	Bass, 1985; Owusu-Agyeman, 2021	Qualified and experienced staff Staff development policy
Visionary	Bass, 1999; Hill and McShane, 2008	All the TUs had a vision and strategic plan with strategic thrusts

Source: Author's Compilation (2021).

Table 1.
Strengths of transformational leadership in technical university education.

> "The vision of the university is to become an internationally reputable institution of excellence in the provision of technical education (TU 4)."

> "University is to become a leading global tertiary institution that offers high quality career oriented programmes in... (TU 5)".

4.2 Weaknesses of TUs and relations with TL

Weaknesses or challenges of transformational leadership (TL), though exist, is limited in literature. Leaders have challenges of integrating the situational conditions with the group goals which allow individuals to work outside of the group goals [4]. In TUs, the administration system is associated with the committee work

Weaknesses of transformational leadership	Author, year	Challenges/weaknesses of technical universities
Lack integrative situational conditions	Owusu-Agyeman, 2021	Rigidly follow their statutes, strategic plan and policies
More theoretical than practical	Yukl et al., 2013	Inadequate resources to practice TL (human, physical, funding, teaching and learning materials)
Lack of consistent behaviour of leadership	Bass and Avolio, 1990; Hill and McShane, 2008	Changes in academic and administrative leadership
Differentiation of TL with other the leadership behaviour	Karadag, 2019	Many different leadership styles practiced by the leadership—no well-defined structure and model for leadership
Source: Author's Compilation (2021).		

Table 2.
Weaknesses of transformational leadership in technical university education.

and teamwork. As such, urgent emerging situational conditions which require immediate attention, delay due to the bureaucracies.

Second, the qualities of the TL, is conceptual and closely related to each other, and this may be quite difficult to observe and its impact on the followers [20]. The concept of the TL has not been fully embraced in the TUs as other leadership styles may be employed by leaders in the TUs.

Third, it may be difficult to consistently adopt to the TL behaviours to achieve the goals of the TUs as leadership changes periodically [53]. After every 4 years, academic and administrative leadership changes occur in the TUs and may result in the lack of continuity of activities of the TUs.

Fourth, the employees may have difficulty in differentiating between various TL behaviours as they may perceive them to be in the same leadership sphere [54]. Leadership in TUs could exhibit charismatic, transactional, servant leadership or a blend of them which will be difficult to associate them with TL style. **Table 2** shows the weaknesses of TL in TUs. There has not been any cutting edge type of leadership adopted by the TUs (**Figure 3**).
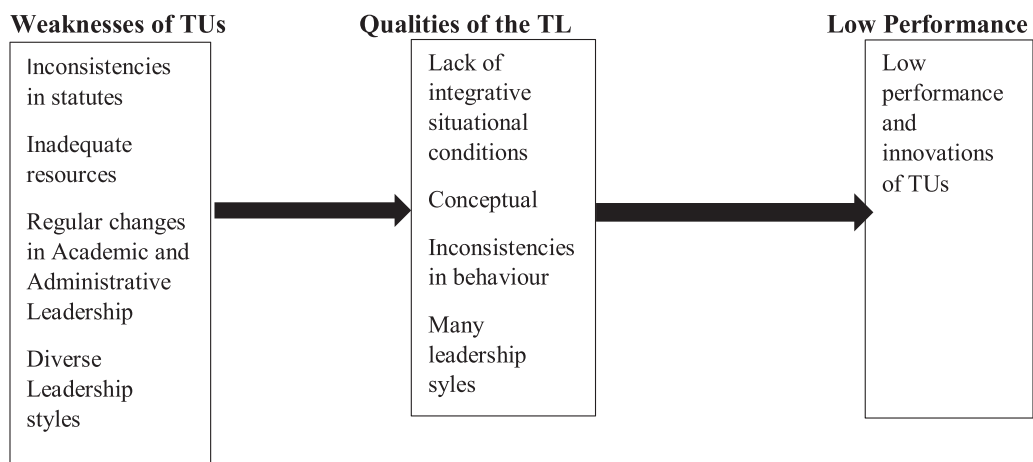

Figure 3.
Weaknesses of TUs in relations to TL. Source: Author's Construct (2021).

4.3 Opportunities of TUs in relation with TL

Opportunities exist for leaders of TUs who practice transformational leadership styles. **Table 3** shows the opportunities that exist for TL in TUs. TL are able to establish collaborations in the organization and externally [55]. They support the idea of working together to achieve a common goal. Leadership of the TUs form collaborations and partnerships with institutions both nationally and internationally for industrial attachment, scholarships, research and development of projects. All the TUs have collaborations with industries and international institutional linkages.

In creating a new future, TL sets new goals and select different behaviours for diverse followers for continuous improvement of their institutions [11]. The TUs, began as technical institutes involved in trades and craftsmanship programmes, and in technical and vocational education training (TVET), and later introduced the entrepreneurship education concept in their curriculum [2]. All the 10 TUs have entrepreneurship centres established to offer entrepreneurship training to the students for skills development.

Opportunities of transformational leadership	Author, year	Opportunities of technical universities
Establish collaborations	Korejan and Shahbazi, 2016; Asabri et al., 2020	Collaborations Partnerships Industrial attachments
Create a new future	Yang, 2014; Korejan and Shahbaz, 2016	Entrepreneurship education
Persistent communication with diverse stakeholders	Gupta et al., 2012	Language centre Consultancy services
Creating an enduring organization	Ramalingam et al., 2021	Strategically positioned-good location Global, national, regional, and local impact based on their programmes offering and have created a niche

Source: Author's Compilation (2021).

Table 3.
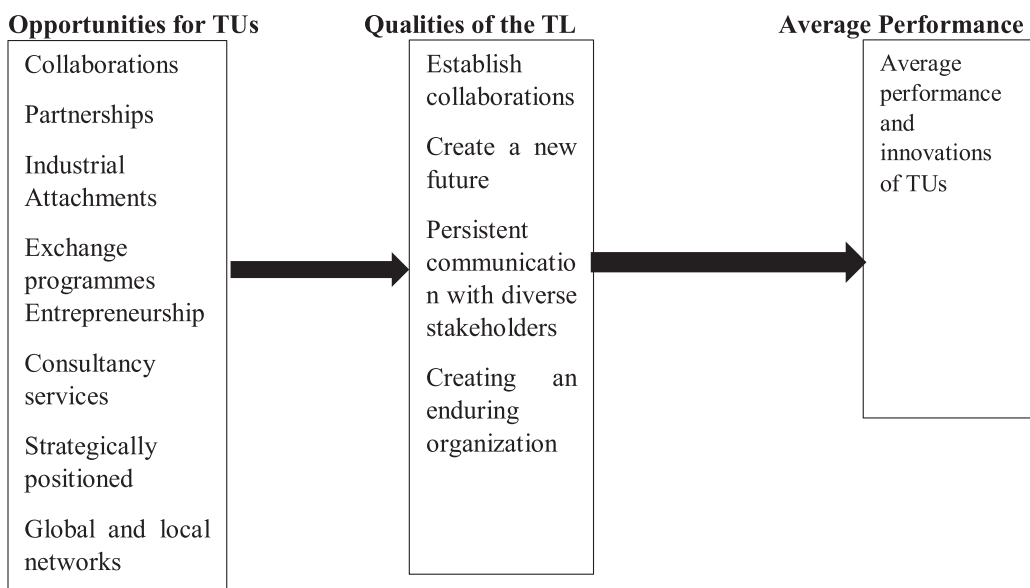*Opportunities of transformational leadership in technical university education.*

Figure 4.
Opportunities of TUs in relations to TL. Source: Author's Construct (2021).

For the TL, links with the external environment is critical for innovation. The actors in the external environment include the governmental, non-governmental organizations, the private sector, and the general public. The TUs therefore have established language centres and offer consultancy services for stakeholders. The TU's websites and portals have been made accessible to the general public for the needed information.

Creating an enduring organization is meant to ensure sustainability of the performance for the institution [56]. The TUs are strategically positioned for easy accessibility and attraction to many clients. Each of the TUs have a niche in their programme offerings, and makes them unique and desirable to potential students, industry, institutions at the local, national and international level and have a global impact (**Figure 4**).

4.4 Threats of technical universities in relation to TL

TL are faced with threats that hinder them from exhibiting all the behavioural qualities for continuous improvement and innovations in the organization. **Table 4** shows the key threats which affects the TL in TUs. Issues of leadership bias, low transformational behaviours, no meaningful changes in strategy of the organization [11, 57]. In the TUs, there are threats of lopsided perceptions about the concept of the TUs by government giving more attention to traditional public universities than the TUs. There is discriminating against the TUs in terms of remuneration, resources, programme offerings and job placement [2]. Due to this, there is instability in the TUs due to the many strikes. The TUs have been inhibited by accreditation challenges for some of their programme offerings from the Regulators. Furthermore, the low transformational behaviours of the TU leaders make it difficult to compete with other tertiary institutions both nationally and internationally for students and projects. The poor public perception about TVET and the TUs has been one of the major threats of the TUs, which accounts for the low enrolment of students as compared to the traditional public universities (**Figure 5**).

4.5 SWOT analysis of TUs

Figure 6 presents the SWOT analysis of TUs on two main themes on the strengths, weaknesses, opportunities and threats of the TUs. On the strengths of the TUs, the two key features identified in the strategic plans were experienced and qualified staff and flexible academic programmes.

The weaknesses in the TUs were inadequate teaching and industrial experienced staff resulting low research output and innovation. These weaknesses affect the number of staff required in attaining the goals of the university. Many of the TU staff after training leave to the traditional public universities. Inconsistencies in the TU statues and policies affected the stability of staff.

Threats of transformational leadership	Author, year	Threats of technical universities
Leadership bias	Meindl et al., 1985	Skewed perceptions of the TU concept by government
Low transformational behaviours	Lieven et al., 1997	Competition from other tertiary institutions Nationally and internationally
No meaningful changes in strategy of the organization—low ability and achievement	Yang, 2014	Low public perception about TVET

Source: Author's Compilation (2021).

Table 4.
*Threats of transformational leadership in technical university education.*

Threats for TUs	Threats of the TL	Poor Performance
Skewed perceptions of the TU concept by government Competition from traditional and private universities for students and resources Negative public perception about TVET and TUs	Leadership bias Poor transformational behaviours No meaningful changes in strategy of the organization- low ability and achievement	Poor performance and innovations of TUs
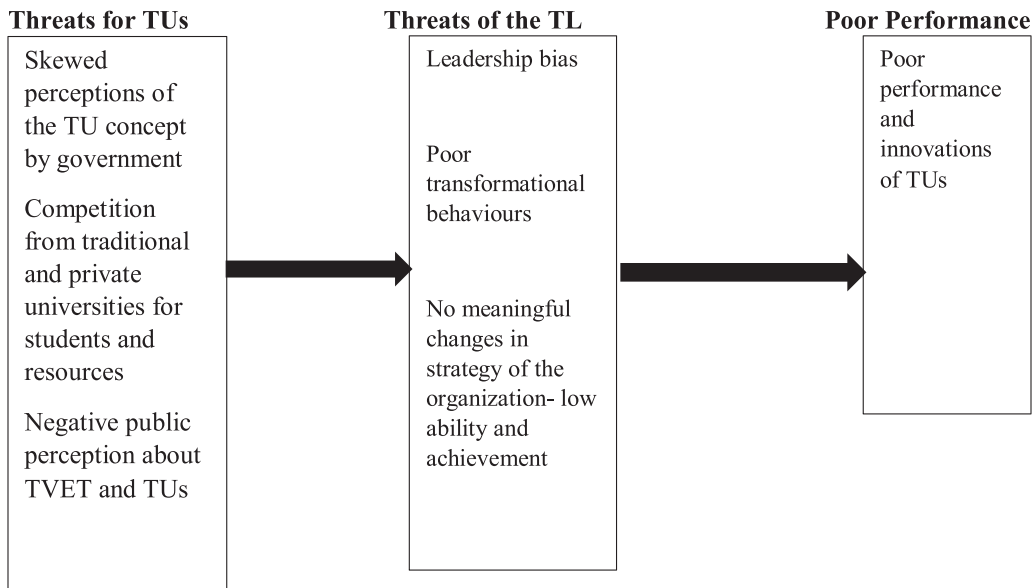
Figure 5.
Threats of TUs in relations to TL. Source: Author's Construct (2021).
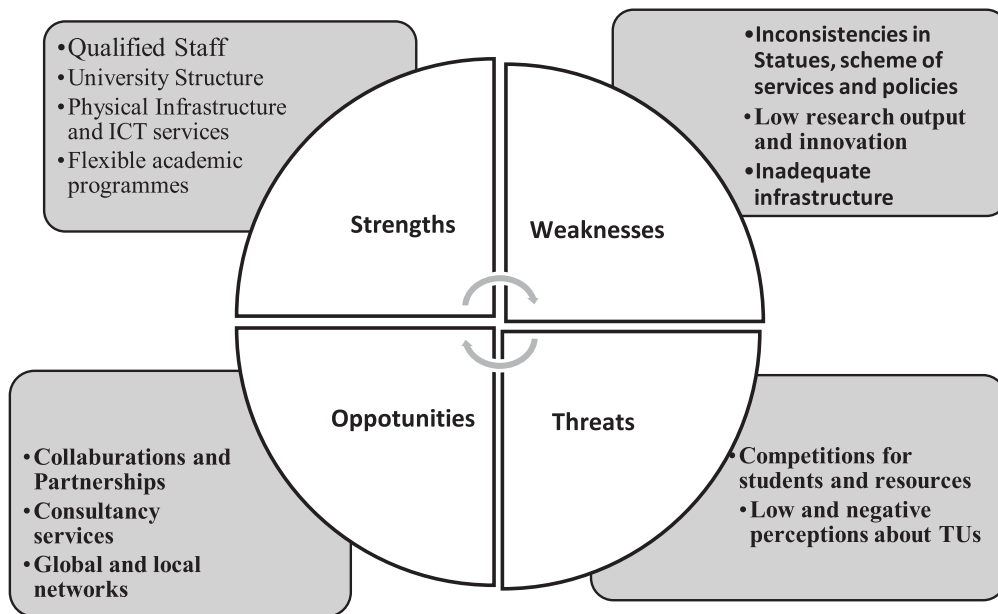
Figure 6.
SWOT analysis of the TUs. Source: Author's Construct (2021).

Opportunities which exists in the TUs are the collaborations and partnerships with institutions and industry and offering of consultancy services to the public. The opportunities include sponsorships and skills development for staff and students.

On threats, the TUs, are faced with competitions with other public tertiary institutions for students. The negative public perceptions of the TUs was revealed as one of the main threats for the TUs (**Figure 6**).

5. Conclusion

TU transformational leadership is key to the prompt development of tertiary technical education. By linking the TL to the TU leadership, a model of the technical

university transformational leadership (TUTL) concept was developed for the weaknesses and threats of the TUs as well as the strengths and opportunities that exist were identified for the internal and external conditions that would enhance performance for innovation. The TUTL concept must be adopted by the TUs. The TU leaders should critically consider and apply the strengths and opportunities that exist and link them up with the TL qualities available. The SWOT analysis of the TUTL provides a clear direction for all leaders at the TUs which would enhance performance for innovations.

Major findings on the strengths for the TUs include qualified staff, university structure, physical infrastructure and information and communication and technology (ICT) services and flexible academic programmes. The performance of the TUs would greatly increase when TLs utilize these strengths of the TUs. This would encourage new ideas, creativity and innovations and initiative [7, 58]. These strengths are deepened and facilitated by the opportunities that exist for the TUs. Major findings of the opportunities include the collaborations and partnerships, consultancy services, global and local networks, exchange programmes and entrepreneurship education. Hill and McShane [34] and Ramalingam et al. [56] argue that the features of TL are capable of churning the strengths and opportunities for an improved environmental conditions and performance of the TUs. Though all the 10 TUs had similar strength, the document reviews revealed more strengths and opportunities in the southern than the northern part, in areas of many qualified and experienced staff and high student numbers.

Comparatively, weaknesses and threats do exist in the TUs for which TL should be able to mobilize followers or employees to address the problems and minimize the negative conditions. This finding confirms a study on evaluation on the weaknesses of transformational and charismatic leadership theories [59, 60]. Major findings for the TU weaknesses include inadequate infrastructure; frequent changes in leadership and staff; inconsistencies in statues, scheme of services and policies and high turnover. These weaknesses are aggravated by the threats which exist among the TUs, which are low and negative public perception of TUs; national and international competition for students and resources. The weaknesses and threats were more pronounced in the northern area of the TUs than the southern area in the areas of high turnover and inadequate facilities, national and international competition for students and resources.

This study highlights on the documentary review of the TUs in relation to the characteristics of the TL based on their strategic plan, reports from management and websites. This study contributes to the technical tertiary education in the area of environmental factors that could enhance performance. The content and SWOT analysis added another strategy to the qualitative document case study for the TUs.

6. Limitations

The study employed one leadership theory for the study. Other leadership theories such as situational, transactional and charismatic leadership styles were not adopted as part of the study. In addition, the study was limited to the qualitative conceptual model and documentary analysis concept. The SWOT analysis provided an examination into the environmental conditions of the TUs. Subsequent research could include interviews and direct observations from participants. Further limitations are that, the SWOT analysis may not prioritize issues, may generate many ideas for which not all may be important to solve the problem [61, 62]. However, the content analysis and the SWOT of the TUs in relation to the TL provided robust results in determining the environmental conditions which could influence or inhibit performance in the TUs.

7. Implication for policy and future research

Management and staff of the TUs could focus on the SWOT analysis model to develop policies that will enhance the environmental conditions of the TUs for performance and innovations. The conceptual model can be used in future researches, by testing and explaining the relationships between the SWOT analysis of the TUs. The relationships could be empirically tested in private and traditional universities. In addition, academicians and administrators in the TUs can use the additional knowledge in the theory of TL and SWOT to enhance creativity and innovations in the TUs.

Author details

Elizabeth Addy[1*], Audrey Addy[2] and James Addy[3]

1 Faculty of Built and Natural Environment, Koforidua Technical University, Koforidua, Ghana

2 Department of Management and Organizational Development, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

3 Eye Care Unit, Ghana Health Service, Accra, Ghana

*Address all correspondence to: elizabethaddy160@gmail.com

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