The Impact of Educational Policies on Teacher Professional Development Resilience

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ABSTRACT

Educational policy and professional development for teachers have a mutually beneficial relationship in which each promotes the existence of the other. While institutions remain crucial to educational systems. Teacher professional development (TPD) explains instructors' learning processes in general and aims to understand how these learning processes might help students learn. Through responsive policy measures, this research assists education officials in promoting TPD resilience at this level. From a social-ecological standpoint, teacher resilience is the ability to withstand natural stresses and failures in teaching as a difficult profession that is critical in all educational settings and may yield multiple beneficial effects. Existing quantitative assessments oversimplify the mutualistic character of TPD, in which individual organization failure impacts not only those immediately related but also those indirectly connected. We analyze the robustness of teacher professional growth in this study utilizing quantitative methodologies used to study mutualistic ecological systems. This research aims to create a multidimensional nonlinear model that represents the dynamics of a TPD. We reduce the multidimensional model to a single-dimensional model while retaining the model's capacity to anticipate the moment of collapse. We validated the approach thoroughly using case studies from real-world Teacher Professional Development. We discovered that educational policies and professional factors affect a TPD's resilience. The current study provides a model for building resilient Teacher Professional Development that can adapt to optimum learning situations.

1. INTRODUCTION

Due to its intellectual, emotional, and serviceproviding element, teaching is without a doubt one of the most challenging and demanding occupations in the world. Certainly one of the hardest and most demanding jobs in the world, teaching integrates academic, emotional, and service-oriented aspects.

Teaching is one of the most challenging and complicated professions in the world owing to its intellectual, emotional, and service-providing nature (Mercer, 2020; Sikma, 2021). Teachers as the "pillars of societies," need to know "what to teach," "how to teach," and "cope with educational adversities and challenges" at the same time (Pishghadam et al., 2021; Sikma, 2021). Education has been a top priority for Ghana's post-colonial governments as it is essential to the country's growth. To find the best *How to cite this paper:* Osei Bonsu Constance | Akwer Eva | Yeboah Martha Asamoah "The Impact of Educational Policies on Teacher Professional Development Resilience" Published in

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model to balance the requirements of society, it has gone through several revisions. A few of the committees and changes include the Accelerated Development Plan for Education in 1951, the Educational Act of 1961, the Kwapong Committee of 1967, the Dzobo Education Committee of 1972, the Free Compulsory Universal Basic Education (FCUBE) of 1995, and Educational reform of 2007. These reforms have brought changes in the basic education curriculum, and the structure of the school system in the country (Adu-Gyamfi et al 2016).

From a physical and natural sciences perspective, it implies the 'capacity of a system to absorb disturbance and reorganize while changing to still retain essentially the same function, structure, identity, and feedback' (Walker et al. 2004). Meanwhile, resilience captures the 'autonomous initiative and recuperation', the 'getting by', protection, care, and mutualism that ensure survival.

Resilience generates different positive outcomes for teacher education at the macro level and teachers and students at the micro level. More specifically, it minimizes teachers' stress and burnout and improves their commitment, job satisfaction, well-being, instructional quality, work enjoyment, motivation, professional identity, retention, agency, self-efficacy, and so forth (Brunetti, 2006; Doney, 2013; Richards et al., 2016). Correspondingly, teacher resilience affects students' engagement, motivation, and academic achievement, too (Li et al., 2019). Resilience offers the potential for more effective interventions to occur in both teacher education and the teaching profession (Sumsion, 2003)

A review of the literature indicates a variety of definitions of resilience, although the area of study on teacher resilience is expanding quickly. The majority of research describes resilience as involving a process (Bobek, 2002; Egeland, Carlson & Sroufe, 1993; Masten, Best, & Garmezy, 1990), a "mode of interacting with events" (Tait, 2008, p. 58), an ability or capacity to overcome challenges (Sammons et al., 2007) and a trait or a quality (Brunetti, 2006; Yost, 2006). Many definitions also acknowledge that particular contexts offer risk and protective factors (Cefai, 2007) which can constrain or promote the development and demonstration of resilience. The diversity in such definitions and emphasis on both individual and contextual factors highlights the multidimensionality and complexity of the construct.

Furthermore, the increased use of the word 'resilient' in the media and in the context of the global financial crisis (resilient economies) and natural disasters (resilient flood/earthquake victims), as well as an increased focus on resilience programs for school students (McGrath & Noble, 2003- 'Bounce Back'), may influence how resilience is described by the community and teaching professionals. Some evidence suggests that individuals interpret 'resilience' in varying ways and that 'resilience' may be confused with other characteristics such as 'competence' (Green, Oswald, & Spears, 2007). Interestingly, despite a range of understandings about resilience, there are limited explanations of how teachers view resilience in the context of their profession

Questions then are about how educational policy and professional development for teachers have a mutually beneficial relationship. There are still unanswered questions on how different educational systems and changes affect teachers' resilience. By revealing insights into how educational policies shape Teacher Professional Development, this study aims to offer a distinctive contribution to the literature on teacher resilience. The paper also attempts to heighten awareness of some potential effects these insights may have on Ghana's varied educational policies.

2. Literature Review

2.1. Understandings of Resilience

During the 1970s the term resilience began to be used within fields such as psychology and psychiatry to describe the positive development of children otherwise considered 'at risk' due to their exposure to experiences such as abuse, trauma, and divorce (Garmezy, 1974). Subsequent studies (e.g., Masten, et al., 1990; Werner, 1993, 1995) largely focused on personal qualities of what was termed 'resilient children', identifying individual 'risk factors' that could lead to maladjustment and negative outcomes as well as 'protective factors' that could lead to positive adjustment and outcomes. Further constructions of the term are built on the notion that the development of resilience involves a complex interplay between individual and environment resulting in "successful adaptation despite challenging or threatening circumstances" (Masten, et al., 1990, p. 424). Attention was drawn to the process of developing resilience and to broader environmental factors including friends, family, and community (Luthar, Cicchetti, & Becker, 2000, p. 543). At the same time, other research continued to focus on personal dispositions such as ability to problem solve, flexibility, and agency as important in the development of resilience (Castro, Kelly, & Shih, 2010; Patterson, Collins, & Abbott, 2004). Over the last ten years, research has further contributed to the view of resilience as complex and multifaceted. Rather than being seen as an innate quality, resilience is now more typically portrayed as "relative, developmental and dynamic, manifesting itself as a result of a dynamic process within a given context" (Gu & Day, 2007, p. 1305). While psychological perspectives of resilience have focused on individual traits, environmental factors and the processes and strategies that occur in the dynamic interaction between the two, it is important to note that resilience has been explored using other perspectives. For example, critical and constructionist theorists have called for more explicit understandings of what 'successful' adaptation really means and what 'challenging' and 'threatening' circumstances may be (Luthar, et al., 2000). Ungar (2004) argues that conventional ecological models of resilience are limited and are "unable to accommodate the plurality of meanings individuals negotiate in their selfconstructions as resilient" (p. 345).

Despite the varying approaches to the study of resilience, there is consensus regarding the role played by context in the development and demonstration of resilience. Resilience, for example, in the context of a teacher working in a classroom may require a very different range of skills or dispositions and supporting factors than in other professional contexts, such as nursing or social work. Considering what resilience means in the context of teaching has therefore drawn attention from researchers, teacher educators, and teacher employers.

2.2. The Conceptualizations of Resilience

As pinpointed by Beltman (2021), four conceptualizations exist for the concept of resilience. The first conceptualization is person-focused and considers resilience as an individual trait manifested during traumatic moments. According to this perspective, a resilient person is one who can bounce back in the face of adversity (Doney, 2013).

The second conceptualization is process focus or person-context perspective which considers resilience as the result of person-context interaction. It defines resilience as a process in which a person, actively, utilizes appropriate strategies to maintain their commitment and well-being in the face of challenges.

Context-focused conceptualization of resilience argues that aside from individual capacities and strategies, the given context is also paramount. In this perspective, resilience is the ability to adapt to a tense context and maintain one's ability in a challenging socio-cultural context (Johnson et al., 2014).

The final conceptualization is system-focused which regards resilience as a process with many systems both internal and external to the person which dynamically interact with one another.

2.3. Teacher resilience

Given that teacher resilience is an emerging field of research and in part due to the complex nature of resilience, there is a range of ways resilience in the context of teaching has been defined in the literature. For example, teacher resilience has been described as the "quality of teachers remaining committed to teaching" (Brunetti, 2006), or a "process of development that occurs over time" involving "the ability to adjust to varied situations and increase one's competence in the face of adverse conditions" (Bobek, 2002, p. 201), or "specific strategies that individuals employ when they experience an adverse situation" (Castro, et al., 2010, p. 263), or the "capacity to successfully overcome personal vulnerabilities and environmental stressors" (Oswald, Johnson, & Howard, 2003, p. 50). Others argue that resilience is related to "regulation of emotions and

effective interaction in social environments" (Tait, 2008, p. 72) and involves "a mode of interacting with events in the environment that is activated and nurtured in times of stress" (Tait, 2008, p. 58). Such a range of views is important to address 7 the multidimensional nature of resilience, but also contributes to some ambiguity about the nature of resilience and how to best examine this phenomenon. Despite these varied conceptualizations, however, several key themes emerge. Firstly, researchers for the most part agree that resilience involves dynamic processes that are the result of interaction over time between a person and the environment and is evidenced by how individuals respond to challenging or adverse situations. Secondly, there is evidence that protective and risk factors (both individual and contextual) play a critical role in the resilience process. Finally, the literature indicates that resilient individuals possess personal strengths, including particular characteristics, attributes, assets, or competencies.

2.4. Factors Contributing to Teacher Resilience Resilience is evidenced by individuals' responses to challenging situations and research has identified risk factors within the environment or context of teaching. For example, professional work challenges such as heavy workload, classroom management, being unprepared, lack of support, lack of resources, and poor hiring practices (Jenkins, Smith & Maxwell, 2009; McCormack & Gore, 2008; Sumsion, 2003), also, high workload and stress, limited resources, high workload and stress, teacher professional development, educational policies, and accountability measures are potential risk factors leading to what is characterized as adverse circumstances for many early career teachers.

The educational context and surroundings contain several risk factors that can affect teachers, students, and the quality of the learning process as a whole. Effective teaching and learning may be jeopardized by classroom management issues such as disruptive behavior, low student engagement, and upholding a good learning atmosphere. Diversity in the needs, backgrounds, skills, and learning styles of students might be a danger factor if teachers lack the necessary tools to meet the various demands and guarantee inclusive teaching methods.

Risk factors are important as they illustrate potential threats to the development of resilience and indicate the range of challenges that resilient teachers can productively overcome. Challenges for teachers have been, rather frustratingly, known for some time (Goddard & Foster, 2001) and the focus on teacher resilience, as in this paper, is on what sustains teachers in the face of such difficulties (Gu & Day, 2007). To address these risk factors and establish inclusive, supportive, and conducive learning environments for all stakeholders, educators, school administrators, legislators, parents, and the community must work together holistically.

Recent research has explored factors contributing to teacher resilience including personal strengths. Among these are protective factors that include attributes such as altruism (Brunetti, 2006; Chong & Low, 2009), strong intrinsic motivation (Flores, 2006; Gu & Day, 2007; Kitching, Morgan, & O'Leary, 2009), perseverance and persistence (Fleet, Kitson, Cassady, & Hughes, 2007; Sinclair, 2008), optimism (Chong & Low, 2009; Le Cornu, 2009), sense of humour (Bobek, 2002; Jarzabkowski, 2002), emotional intelligence (Chan, Lau, Nie, Lim, & Hogan, 2008), willingness to take risks (Sumsion, 2003) and flexibility (Le Cornu, 2009). Such attributes may assist early career teachers to 'bounce back' despite the challenges of the first years of teaching. The literature has also identified particular skills associated with teacher resilience. Coping skills involving a variety of proactive problem-solving and help-seeking skills (Castro, et al., 2010; Patterson, et al., 2004; Sharplin, et al., 2011) are important, along with the ability to accept failure, learn, and move on (Howard & Johnson, 2004; Patterson, et al., 2004).

Strong interpersonal skills that enable R the ar development of social support networks (Howard & Johnson, 2004; Tait, 2008) have also been noted. Finally, and perhaps most obviously, teaching skills such as using a range of instructional practices (Bobek, 2002; Klusmann, Kunter, Trautwein, Lüdtke, & Baumert, 2008), knowing students and responding to their needs (Flores, 2006; Kaldi, 2009), professional reflection (Goddard & Foster, 2001; Le Cornu, 2009) and having a commitment to ongoing professional learning (Patterson, et al., 2004; Sumsion, 2004) have been related to teacher resilience. Furthermore, not only having the skills but having high levels of efficacy for teaching (Brunetti, 2006; Gu & Day, 2007) and being confident in teaching abilities (Kaldi, 2009; Woolfolk Hoy & Burke Spero, 2005) also play a role in teacher resilience.

Just as resilience research acknowledges the role played by individual protective factors, environmental protective factors to support teacher resilience are an equally important aspect of conceptualizing resilience and its development. Such factors include mentor support for new teachers (Smith & Ingersoll, 2004; Sumsion, 2003), school and administrative support (Day, 2008; Fantilli & McDougall, 2009), support of peers and colleagues (Le Cornu, 2009; Warshauer Freedman & Appleman, 2008) and support of family and friends (Howard & Johnson, 2004; Yates, Pelphrey, & Smith, 2008). Although specific teaching contexts are not the prime focus of this paper, the research on the role of context in providing affordances or constraints for resilience development may influence how resilient teachers are perceived.

2.5. Development of teacher resilience

Resilience is enhanced by educational policies that place a high priority on the mental health, work-life balance, and well-being of teachers. Educators are more likely to stay motivated, engaged, and resilient in their professional development path when they feel empowered, supported, and respected.

Resilience is strengthened by policies that provide resources and tools for teachers to participate in continuous professional growth. By keeping educators abreast of current developments in technology, best practices, and methodology, professional development programs, workshops, seminars, and online courses help them become resilient to changing student requirements.

Identifying risk and protective factors of individuals and contexts has been useful in understanding how teacher resilience might be viewed in the profession. To enable these factors to be developed in teacher education and the profession more broadly, a framework connecting, rather than listing attributes, beliefs, and skills would be highly beneficial. Some of the resilience literature has grouped qualities of resilience into themes. Knight (2007), for example, proposes a three-dimensional framework to illustrate the "manifestations of resilience" (p. 546), those being social competence, emotional competence, and 'future-oriented'. In Australia, the Mind Matters team also offers a 'Staff Mental Health and Wellbeing at Work' model, in which three components (interpersonal, professional, and organisational) interrelate to "support the Thriving Self through its connection to the School in the Community" (Commonwealth of Australia, 2010). Even so, the development of a framework is highly challenging due to the differences in terminology used in the literature 10 and due to a range of categories of "often overlapping personal strengths" (Benard, 2004, p. 13).

Limited literature has considered how teacher resilience may be developed. Interestingly, characteristics of preservice teacher education programs have been shown to offer both constraints and support for building teacher resilience. Constraints include factors such as workload, lack of support, geographical isolation, balancing family and study, and infrastructure constraints at home (Fleet, et al., 2007). Preservice education supports however, include successful field experience (Sinclair, 2008; Yost, 2006), caring relationships with staff, and high expectations of staff for performance (Yates, et al., 2008).

Such evidence from the research supports the view that initial teacher education experiences can assist intending teachers build resilience for their future professional lives. The literature reveals both the complexity of resilience and the range of personal and contextual factors contributing to teacher resilience.

2.6. Teacher Professional Development:

Initial teacher education is important for ensuring that new teachers are ready for their jobs, but it is only one part of the ongoing process of professional development for teachers. The greatest method to guarantee both your professional progress as an educator and the academic success of your pupils is to invest in yourself. The demands of teaching are always changing, and it is your responsibility to stay current with these changes. Participating in professional development may assist you in developing a curriculum that prepares your students for success, expanding your skill set, and staying abreast of teaching and instructing trends. It's never too early (or too late) in your career to consider professional development, whether you're a seasoned educator or a first-year teacher.

Most people hear the term and think of traditional settings like seminars, college courses, or conferences (Western Governor University, 2021). Professional development, on the other hand, may take place informally through individual research and reading, classroom observation, or peer interactions.

2.7. Government policies

Noting that educational changes are ongoing processes is vital. Free Senior High School (FSHS) Policy: This policy, implemented in 2017, aims to provide free education at the senior high school level to all Ghanaian students. It has significantly increased access to secondary education and reduced financial barriers for students and their families.

National Teacher Education Curriculum Framework (NTECF): The NTECF was introduced to enhance the quality of teacher education programs in Ghana. It provides guidelines and standards for teacher training institutions to follow, ensuring that pre-service teachers receive a comprehensive and relevant education.

Standards-Based Curriculum (SBC): In 2019, Ghana launched the SBC, which is designed to promote a more learner-centered approach to education. The curriculum emphasizes critical thinking, creativity, and problem-solving skills, and seeks to align teaching and learning practices with real-world applications.

School Improvement Grants (SIG): The SIG initiative was introduced to provide financial support to schools for infrastructure development and the provision of teaching and learning resources. The grants aim to improve the overall learning environment and enhance educational outcomes.

Ghana Accountability for Learning Outcomes Project (GALOP): GALOP is a World Bank-supported project that focuses on improving student learning outcomes in early grades. It aims to strengthen the capacity of teachers, school leaders, and education officials through training and professional development programs.

Science, Technology, Engineering, and Mathematics (STEM) Education: Ghana has placed increased emphasis on STEM education to foster skills in science, technology, engineering, and mathematics among students. Efforts have been made to enhance STEM teacher training and provide resources to promote hands-on learning experiences in these fields.

3. METHODOLOGY

Here we set several parameters to describe the teacher's Professional Development. The values are set for the basic form of the policies to form a policy configuration system. In this study, the qualitative policy parameters are set into quantitative values to describe the policies meted on TPD. In this study, we consider a model for TPD resilience within the class of generalized Lotka–Volterra dynamic model with T, r, and S as the Professional Development, intrinsic development rate, and self-regulation, respectively, y, z, and d as the functional response, and D_{ij} is set as the per capita interaction coefficients that is the network effect. Following Matthieu Barbier et al (2017) the LV-model takes the form of;

$$\frac{d}{dx}T_i = T_i \left(r_i - S_i T_i - f\left(\sum_{j=1}^s D_{ij} S_i\right) \right) \quad (1)$$

In this study, we adopt this model structure. The original parameters from lotka- volterra model are the three mentioned above, and in this study, we inculcate the policy parameters into the original parameters, thus; we state the original parameter as a function of the characteristic's parameters.

3.1. MODEL FORMULATION

This study adopts the general theory of complex approach (Matthieu Barbier et al). This theoretical

approach emphasizes nonlinear systems, networked, and adaptive behavior. We therefore developed a new system model for the TPD resilience, based on the Lotka-Volterra model approach.

$$\frac{dT_i}{dt} = T_i \left[r_i \left(1 - \frac{T_i}{k_i} \right) \right] \quad (2)$$

The intrinsic development rate of teacher professionalism refers to the natural and inherent growth and improvement of teachers' professional knowledge, skills, and attitudes over time. Let r be the intrinsic development rate of the TPD and we assumed that, there is an absence of any external contributions to the development in the teacher professionals. We write an equation to the logistics term of the highest potential development rate. We assume that the TPD will increase up to a particular point per the policies made, hence the need to set the highest development rate K_i , which is the carrying capacity set to limit the policy system with intrinsic growth rate. T_i is the Teacher Professional Development.

rate that have an effect on the TPD, there are other external factors that can cause and increase or a $\operatorname{SRD} \frac{dT_i}{dt} = \alpha_i + r_i T_i \left(1 - \frac{T_i}{k_i}\right) - T_i \sum_{j=1}^n FT_j$ (5) decrease in development of the Teacher onal Jourdat Professionalism, we set the external factor which is in Scientific denoted as self-regulation into the model. It is assumed in this study that the self-regulation is influenced by foreign aids and this is expressed as;

Lastly, it is assumed that, TPD are simultaneously influenced by their internal capabilities and by their connectivity with the policies. (REFERENCE). These connections have effect on the TPD; hence, we set D_{ij} as the network effect of policies that exist between the various institutions.

$$\frac{dT_i}{dt} = \alpha_i + r_i T_i \left(1 - \frac{T_i}{k_i} \right) - T_i \sum_{j=1}^n FT_j + D\left(T_i \sum_{j=1}^n D_{ij} T_j \right)$$
(6)

For simplicity, the structure of this topology will be expanded by the use of a saturation functional response and the interaction strength parameter together with applying the Holling type II functional response (Huang, Shi, Wei, and Zhang (2021), Duan 2022

to get;

$$\frac{dT_i}{dt} = \alpha_i + r_i T_i \left(1 - \frac{T_i}{k_i} \right) - T_i \sum_{j=1}^n FT_j + \sum_{j=1}^n D_{ij} \frac{T_i T_j}{q + e_i T_i + h_j T_j}$$
(7)

The saturation function (q,e,h) is a constant which limits the policies that exist in educational systems, (Matthieu Barbier et al), the saturation is set due to power change in Ghana government. We clarify the meaning of the usual saturation half-rate by incorporating it into the general model for the platform;

$$\frac{dT_i}{dt} = \propto_i + r_i T_i \left(1 - \frac{T_i}{k_i} \right) - T_i \sum_{j=1}^n FT_j + \sum_{j=1}^n D_{ij} \frac{T_i T_j}{q + e_i T_i + h_j T_j}$$
(8)

Model Reduction

In Appendix (see Supplementary Material), we detail the steps of our dimension-reduction procedure, which

$$\frac{dT_i}{dt} = r_t T_t \left(1 - \frac{T_i}{k_i} \right) - T_t \sum_{j=1}^n FT_j \quad (3)$$

 F_i is considered as the foreign aid. Where F is the self-regulation term, T_i and T_j as the different aids from country i and j.

Again, the government policies can also enhance T_i (REFEENCES). We adopted the system by adding the government policies parameter to the resilience function $f(x, \gamma)$ (DUAN 2022). We achieved this by incorporating the term $V(x_i)$ into the governing parameter coefficient α_i of government policy in (6). This parameter influences the Teacher Professional development. Thus, the developed model becomes

$$\frac{dT_i}{dt} = \mathbb{V}(x_i) + r_i T_i \left(1 - \frac{T_i}{k_i}\right) - T_i \sum_{j=1}^n FT_j \quad (4)$$

If $V_t(x) = \infty_i$, Equation (7) is then expanded which leads to the resilience function as follows:

leads to the reduced model. The reduced model becomes;

$$\frac{dT_{sff}}{dt} = \alpha + r_{eff} T_{eff} \left(1 - \frac{T_{eff}}{k_{eff}} \right) - T_{eff} \sum_{j=1}^{n} FT_{eff} + \frac{DT_{eff}^2}{(q + (e + h)T_{eff})}$$
(9)

4. Simulation

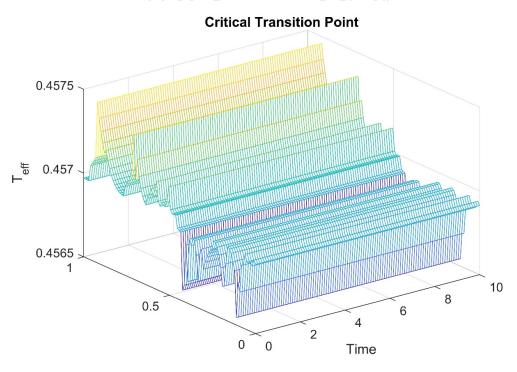
This part stipulates a detailed part of our study on the profitability and accuracy of this method to examine the influence of government policies and foreign aids on Teacher Professional Development. The simulation was conducted by selecting data randomly. The methodology outlined in this study can be applied to implement the simulation procedure in the following steps; developing equation, using MATLAB software, we begin by drawing a set of second derivatives of teacher professional development (T_{eff}) against F_{eff} . This approach determines the threshold values. We then ran other algorithms using threshold values and drew the salient information required.

4.1. Simulation Results

By analysing the results, insights were gained into the resilience of Teacher Professional Development and understanding of the impact of government aid levels on the critical transition points. These insights can inform decision-making processes, such as determining optimal government aid levels to promote teacher professional development effectively and identifying the thresholds that should not be crossed to maintain desired levels of professional growth.

4.1.1. The Effect of Government Policies on Teacher Professional Development

The results s how changes in government aid affect the critical transition points in Teacher Professional Development. The plot helps us understand the sensitivity of the system to different levels of government aid.



Initial Condition (T_{eff}) Figure 1 Government Policies on Teacher Professional Development

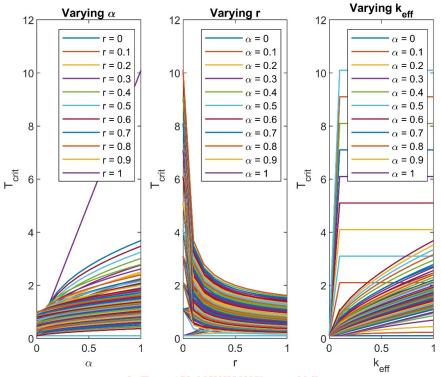


Figure 2 Government Policies on Teacher Professional Development Varying variables

The results show that the Ghanaian government has implemented policies to improve the availability of training opportunity programs for teachers. For instance, the Teacher Education Reform Program (TERP) focuses on providing pre-service and in-service training to teachers. Through TERP, teachers have access to professional development opportunities that enhance their pedagogical knowledge and skills, ultimately improving the quality of education in the country. Support for Continuous Learning: Government policies in Ghana promote continuous learning among teachers. The Teacher Professional Development and Management (TPDM) policy encourages teachers to engage in ongoing professional development activities. This includes participating in workshops, seminars, and conferences, as well as pursuing advanced degrees. By supporting teachers in their continuous learning journey, the government ensures that they remain updated with the latest educational practices and research, benefiting both teachers and students.

Again, the Ghanaian government recognizes the importance of collaboration and networking among teachers. Policies such as the Teacher Community Assistant Initiative (TCAI) facilitate the formation of professional learning communities, where teachers can share experiences, exchange ideas, and collaborate on improving instructional practices. These collaborative efforts foster a supportive network of teachers who learn from each other and collectively contribute to enhancing the quality of education.

The government of Ghana acknowledges and incentivizes teacher professional development efforts. The National Best Teacher Awards scheme recognizes outstanding teachers who have demonstrated exceptional dedication to their professional growth. Additionally, there are financial incentives and career advancement opportunities for teachers who engage in continuous professional development activities. This recognition and incentives serve as motivators for teachers to actively participate in professional development and improve their teaching skills.

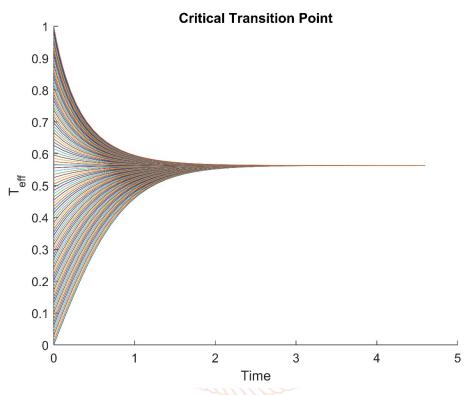
The Ghanaian government supports research initiatives and encourages the adoption of evidence-based practices in education. For example, the Ghana Education Service collaborates with research institutions to conduct studies that inform policy decisions and improve teacher professional development programs. By promoting evidence-based practices, the government ensures that teachers have access to research-backed strategies that positively impact teaching and learning outcomes.

The government of Ghana acknowledges the importance of teacher well-being in supporting effective professional development. Efforts have been made to address teachers' welfare concerns, including salary increments, housing support, and health insurance schemes. By attending to teachers' well-being, the government contributes to creating a conducive environment for professional growth, reducing burnout, and enhancing job satisfaction.

In Ghana, government educational policies have played a significant role in promoting teacher professional development. Through initiatives such as TERP, TPDM, TCAI, and recognition programs like the National Best Teacher Awards, the government has demonstrated a commitment to improving the quality of education by investing in the growth and development of teachers. These policies contribute to building a highly skilled and motivated teaching workforce in Ghana, ultimately benefitting students and the nation's educational system as a whole.

4.2. The Effect of Foreign Aids on Teacher Professional Development

It is important to note that foreign aid can also have an impact on teacher professional development in Ghana and may vary depending on the specific aid programs and implementation approaches. Recognizing these potential challenges can inform policy discussions and encourage a collaborative approach between foreign aid organizations and local stakeholders to mitigate the negative effects and ensure that aid programs align with the long-term goals and needs of Ghana's education system.



The findings demonstrate reliance on external funding. Dependency on outside resources might result from relying on foreign aid for teacher professional development. The independence and long-term viability of educational projects may be restricted by this reliance. The continuation of professional development programs may be disrupted if financing from foreign aid organizations is uneven or discontinued, depriving instructors of the tools and assistance they need.

The misalignment with local needs. International aid initiatives might not always be in line with the unique requirements and circumstances of Ghana's educational landscape. Donor organisations frequently have goals and priorities that may not take the local educational situation into account. Because of this, there may be a mismatch between the desired goals and the real needs of teachers in professional development projects financed by foreign aid and the unique issues and requirements faced by Ghanaian teachers.

An evidence of fragmentation and lack of coordination. Ghana's teacher professional development efforts may get support from several foreign aid organizations, leading to projects that are dispersed and lack coordination. Teachers may become confused about which programs to prioritize as a result of inefficiencies, duplication of effort, and poor coordination. The efficacy and significance of initiatives aimed at professional development may be compromised by this fragmentation.

Donor-funded programmes may provide materials, resources, or procedures that are difficult for local authorities to retain or sustain after financing expires, since certain foreign aid projects for teacher professional development may not be long-lasting. This can impede teachers' long-term growth by making them dependent on outside assistance and leading to program termination when funding is cut.

In some cases, foreign aid programs may prioritize the involvement of external experts and consultants over leveraging local expertise and knowledge. This approach can inadvertently sideline local teachers, who may possess valuable insights and understanding of the Ghanaian educational context. Neglecting local expertise can hinder the development of sustainable and contextually relevant professional development initiatives.

With foreign aid programs, decision-making authority may primarily rest with the donor organizations rather than local educational authorities or teachers themselves. This limited ownership and control can diminish the sense of empowerment and autonomy among Ghanaian teachers, potentially inhibiting their engagement and investment in the professional development process.

5. CONCLUSION

The study's findings highlight an array of potential directions for teachers' professional growth. First, regardless of their level of expertise or length of employment, problem-solving approaches, and tactics must become a fundamental component of all teaching. To hone their problem-solving skills, teachers are required to take part in in-person and recorded training sessions. Teachers should promote more sophisticated problem-solving techniques and be research-oriented.

Teachers may improve their knowledge, skills, and practice by engaging in a lifelong learning process that helps them develop, maintain, and improve their professional and personal characteristics(NTS Guidelines 2018)

Ghana's educational policy has been inconsistent, which has had a significant influence on education. Educational changes in Ghana have been adjusted repeatedly throughout the years as governments have changed.

The Free Senior High School (FSHS) policy in Ghana, which provides free education at the senior high school level, has had both direct and indirect impacts on teacher professional development. Here are some ways in which the FSHS policy has affected teacher professional development in Ghana:

The FSHS policy has led to a significant increase in student enrollment at the senior high school level. This surge in student numbers has created a greater demand for teachers, particularly in public schools. As a result, there has been a need to recruit and train more teachers to meet the growing demand, which has indirectly contributed to professional development opportunities for educators.

To address the increased need for qualified teachers, teacher training institutions have expanded their programs and capacity. This expansion has provided opportunities for more teachers to undergo preservice training and acquire the necessary qualifications for teaching in senior high schools. The expansion of training programs has allowed for the professional development of aspiring teachers.

The implementation of the FSHS policy has also necessitated the improvement of existing teachers' skills and knowledge. To meet the demands of the new educational landscape, professional development initiatives have been introduced to support teachers in adapting to the changing curriculum, teaching methods, and assessment strategies. These initiatives include workshops, seminars, and training programs aimed at enhancing subject knowledge, pedagogical skills, and classroom management techniques.

The FSHS policy has brought together a larger community of teachers working in the senior high school sector. This increased collaboration and interaction among educators have facilitated the sharing of best practices, teaching resources, and innovative ideas. Teachers have had opportunities to learn from one another and engage in peer-to-peer professional development activities, ultimately enhancing their teaching effectiveness.

While the FSHS policy has presented some positive implications for teacher professional development, it is important to note that challenges and limitations may also exist. These can include resource constraints, limited availability of professional development opportunities, and the need for ongoing support and training to effectively implement the curriculum changes. Overall, the FSHS policy has influenced teacher professional development in Ghana by shaping teacher recruitment, training, and the provision of support to meet the educational needs of a larger student population.

In conclusion, how educational policies affect the professional growth of teachers Resilience is a complex and ever-changing topic that has a big impact on how well educational systems teach and learn. The education system's resilience is greatly boosted by educational policies prioritizing, empowering, and promoting teacher professional development. Policies can improve educators' resilience and the education delivery standard by supporting teacher well-being, encouraging flexibility and collaboration, investing in continuous learning opportunities, and adhering to research-based methods.

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