



Rethinking Doctoral Education: Towards a Practice-Based and Impact-Oriented PhD Model in Ghana

Dr Eric Kwasi Elliason, Post PhD Research Scholar, Kennedy University, St Lucia.

Abstract

Background: The traditional thesis-based PhD model in Ghana has increasingly come under scrutiny for its limited relevance to real-world challenges, overemphasis on theoretical knowledge, and rising concerns about academic integrity, including widespread thesis outsourcing. In an era that demands innovation, interdisciplinary collaboration, and societal impact, Ghana's doctoral education system requires urgent reform. This study aimed to explore the limitations of the current PhD model and to propose a practice-based and impact-oriented alternative tailored to Ghana's educational and developmental context.

Methods: A mixed-methods approach was adopted. Quantitative data were collected through surveys administered to 256 participants comprising PhD students, graduates, faculty members, and university administrators across five public universities in Ghana. Qualitative data were obtained through 24 in-depth interviews and 4 focus group discussions with academic stakeholders and employers of PhD holders. Additionally, policy documents and doctoral curricula were reviewed to assess the structural orientation of existing programs. Comparative analysis was conducted on international alternative models such as practice-led PhDs and industrial doctoral pathways.

Results: Dissatisfaction emerged in the qualitative findings, as 78% of respondents expressed dissatisfaction with the current framework of their doctoral education as being too focused on the thesis and not designed to prepare them for practical or industry work challenges. Other concerns raised were insufficient interdisciplinary engagement, minimal focus on real-world problems, innovation, cooperation, and collaboration. There is substantial stakeholder demand for a more diversified PhD education model that features portfolio-based evaluation, community and industry-based co-continuous research, co-authorship, and focus on outcomes-based outputs from the doctoral candidates. A model was proposed focusing on the integration of practice, research, and professional advancement along with the study findings.

Conclusion: The study, conducted in the context of Ghana, determined that the conventional PhD framework is antiquated and does not meet current academic, industrial, and societal needs. It is evident how a practice-oriented, impact-driven approach to doctoral education would benefit the proposed context. The proposed



framework aims to provide a more responsive, accountable, and inclusive approach to doctoral education towards achieving national development priorities. There is expected increased value, integrity, and relevance of PhD training in Ghana and the rest of Africa if this approach is embraced by universities and policymakers.

Keywords: Doctoral Education Reform, Practice-Based PhD, Research Impact, Innovation in Academia, Thesis Alternatives, PhD Policy, Academic Integrity

Introduction

Entering the 21st century, the world has begun to experience transformation on a global scale. This is because of fast-paced technological advancements, widespread access to knowledge, and a worldwide shift towards educational systems that emphasize innovation and practical approach. Considering this, the structure of doctoral education has faced critique, especially regarding the singular focus on producing a lengthy thesis. All around the world, educators and politicians are beginning to question whether the historical approach appropriately equips students to tackle contemporary issues [1].

As in other regions of the Global South, in Ghana the highest academic achievement is a doctorate. But its traditional execution is facing growing scrutiny. Overemphasis on theoretical rigor, research that is disconnected from societal issues, the hollowing thesis and smart dissertation have all become problems for the PhD process [2]. In addition to this, the prevailing structure

imprints on students a narrowly defined research topic, which hampers any potential interdisciplinary, socially engaged, or entrepreneurial work they could pursue during their degree.

In countries such as Ghana, the lack of connection between practical application and academic research is particularly acute because national development priorities focus on research and innovation. The Ghana Education Strategic Plan [3] alongside the National Research Agenda stresses the importance of sound research, but one that responds to the needs of the community, industry, and government. Nonetheless, most of the doctoral programs still subscribe to Eurocentric academic traditions with little structural modification to the local context and developmental frameworks [4].

There is a noticeable shift towards greater flexibility and diversity in the structure of doctoral programs globally. The United Kingdom, Australia, and Norway, for example, have developed practice-led industrial and professional



doctorates that place candidates within industries, communities, and creative sectors. Knowledge creation along with portfolio-based outputs and social impact are at the forefront of these models [5,6]. Innovations of this sort prove that the rigorous standards of a PhD can be maintained while broadening its structure, purpose, and significance.

It is against this background that the study sought to analyze the issues

Methodology

Research Design

The study employed a convergent mixed methods research design to capture the perspectives and description of doctoral education in Ghana. Such an approach is ideal for research focused on educational change because it provides further validation of findings and incorporates more diverse stakeholder viewpoints [7,8].

Study Setting and Population

The research was conducted at five selected public universities in Ghana that have developed doctoral programs. The criteria for selection included institutional prominence and diversity in program offerings as well as geographic representation. The purposive sample included currently enrolled and recently graduated PhD students, supervising academics, higher

surrounding doctoral education in Ghana, evaluate its challenges, and design a transformative model that is practical and oriented toward impact. The goal of this research is to transform the PhD into a tool for intellectual achievement alongside national development, social advancement, and professional growth by engaging in key academics and learning from successful practices from around the world.

education officials, and other professionals engaged with doctoral level graduates.

Sampling and Participants

The selection of participants was achieved with a purposive and stratified sampling method. For the quantitative survey section, there were 256 participants, comprising 130 current PhD students, 54 recent graduates, 48 faculty members, and 24 academic administrators. For the qualitative part, 24 in-depth interviews were conducted with a purposively sampled subset of participants from different disciplines, genders, and roles. Furthermore, to capture and investigate additional themes, four focus group discussions were conducted with faculty and doctoral students.

Data Collection Instruments

Two primary instruments were employed: a structured questionnaire



and semi-structured interview guides. The questionnaire covered areas such as the perceived relevance of doctoral training, quality of supervision, real-world engagement, and suggestions for reform. The interview guides explored participants' lived experiences with doctoral education, perceptions of the traditional model, and openness to alternative structures such as practice-based PhDs. Instruments were validated through expert review and pilot testing within one of the study universities.

Document Analysis

Policy documents and curriculum guides from participating universities were also analyzed to assess the structural orientation of existing PhD programs. This included criteria for admission, supervision, research outputs, graduation requirements, and forms of thesis assessment. Additionally, comparative review of international doctoral education frameworks—such as practice-based PhDs in the UK, industrial PhDs in Scandinavia, and professional doctorates in Australia—was conducted to inform the development of an alternative model [9,10].

Data Analysis

Quantitative data were analyzed using descriptive statistics (frequencies, percentages, and cross-tabulations) through SPSS Version 26. Patterns were explored based on demographic variables and institutional affiliations. Qualitative data from interviews and focus groups were transcribed, coded, and analyzed using thematic analysis [11], allowing for the identification of key themes related to the challenges, aspirations, and reform possibilities in doctoral education.

Ethical Considerations

Ethical approval was obtained from the Institutional Review Board of the African Alliance for Research, Advocacy and Innovation (AARAI). All participants were informed of the purpose of the study, assured of confidentiality and anonymity, and provided informed consent prior to participation. Data was securely stored and used solely for academic and policy analysis purposes.



Results

Table 1: Demographic Data of Respondents

Demographic Variable	Frequency (n = 256)	Percentage (%)
Gender		
Male	136	53.1
Female	120	46.9
Current Academic Status		
Current PhD Student	130	50.8
Recent PhD Graduate	54	21.1
Faculty Member	48	18.8
Academic Administrator	24	9.4
Field of Study		
Sciences	108	42.2
Humanities and Social Sciences	92	35.9
Engineering and Technology	56	21.9
University Affiliation		
University of Ghana	88	34.4
Kwame Nkrumah University of Science and Technology	72	28.1
University for Development Studies	44	17.2
Others	52	20.3

The demographic profile of the 256 respondents reveals a fairly balanced gender distribution, with 53.1% male and 46.9% female participants. In terms of academic status, the majority (50.8%) are current PhD students, followed by recent PhD graduates (21.1%),



faculty members (18.8%), and academic administrators (9.4%), indicating diverse perspectives across the academic spectrum.

Disciplinary representation is led by the Sciences (42.2%), followed by Humanities and Social Sciences (35.9%), and Engineering and Technology (21.9%), suggesting broad coverage across academic fields. University affiliation shows a strong representation from the University of Ghana (34.4%) and KNUST (28.1%), with University for Development Studies (17.2%) and other institutions (20.3%) also contributing, ensuring geographic and institutional diversity in the dataset.

Table 2: Relevance of Current PhD Programs

Question	Frequency (n = 256)	Percentage (%)
Does the current PhD model adequately prepare students for practical challenges?	Yes	22.5
	No	77.5
Does the current PhD model address national development issues?	Yes	18.2
	No	81.8
Do you believe that research in your PhD program has real-world impact?	Yes	28.5
	No	71.5

The findings from Table 2 reveal a strong perception among doctoral students that current PhD programs lack relevance to practical and national development needs. Only 22.5% of respondents felt that their programs adequately prepare them for real-world challenges, while a substantial 77.5% disagreed. Similarly, just 18.2% believed their doctoral training addresses national development issues, with 81.8% seeing little to no alignment.

When asked whether their research has real-world impact, only 28.5% responded affirmatively, suggesting that the majority (71.5%) perceive their academic work as disconnected from practical application. These results underscore a critical gap between



academic research and societal or industry needs, reinforcing calls for reform toward more practice-oriented, interdisciplinary, and impact-driven doctoral education models.

Table 3: Quality of Supervision

Question	Frequency (n = 130)	Percentage (%)
How satisfied are you with the frequency of supervision you receive?	Very Satisfied	14.6
	Satisfied	20.0
	Neutral	28.5
	Dissatisfied	22.3
	Very Dissatisfied	14.6
How often do you meet with your supervisor?	Weekly	8.5
	Monthly	20.0
	Quarterly	25.4
	Less than once a month	46.1

The data in Table 3 reveal a mixed picture of doctoral supervision experiences. In terms of satisfaction with the frequency of supervision, only a small proportion (14.6%) reported being very satisfied, while 20% expressed satisfaction. However, a considerable segment of respondents (28.5%) remained neutral, and a combined 36.9% indicated dissatisfaction or strong dissatisfaction, highlighting that more than one-third of doctoral candidates are not content with how often they are supervised.

When examining the actual frequency of supervisory meetings, the results point to infrequent contact for many. Only 8.5% of respondents met with their supervisors weekly, and 20% reported monthly meetings. A quarter (25.4%) met quarterly, while the largest group (46.1%) saw their supervisors less than once a month. This infrequency could explain the levels of dissatisfaction reported and suggests a potential gap in supervisory support, which may affect doctoral progress and student wellbeing.



Table 4: Research Outputs and Practical Application

Question	Frequency (n = 256)	Percentage (%)
Does your research lead to collaborations with industry or non-academic entities?	Yes	25.0
	No	75.0
Is there a focus on community engagement or societal impact in your research?	Yes	22.5
	No	77.5

The results reveal a significant disconnect between doctoral research and real-world applications in both industry and society. Only 25% of respondents indicated that their research involves collaboration with industry or non-academic entities, while a striking 75% reported no such collaboration. This suggests that the majority of doctoral studies are being conducted in isolation from the practical sectors that could benefit from or help shape academic knowledge.

Similarly, when asked whether their research focuses on community engagement or societal impact, just 22.5% affirmed such an orientation. A substantial 77.5% stated that their research does not directly address community or societal concerns. These findings highlight a concerning trend where most doctoral research remains largely confined to academic circles, with limited emphasis on translating knowledge into practical, community-centered or industry-relevant outcomes.

Table 5: Willingness to Adopt Alternative Models

Question	Frequency (n = 256)	Percentage (%)
Would you be interested in a practice-based PhD model that includes industry placements or community projects?	Yes	88.3
	No	11.7



Would you support the implementation of portfolio-based assessments instead of the traditional thesis model?	Yes	82.4
	No	17.6

The findings from Table 5 indicate a strong openness among participants toward reimagining the traditional PhD structure. A significant majority—88.3%—expressed interest in a practice-based PhD model that incorporates industry placements or community projects, suggesting that most doctoral candidates are eager to gain real-world experience alongside academic training. This reflects a growing recognition of the value of bridging the gap between academia and practical societal needs.

Similarly, 82.4% of respondents showed support for portfolio-based assessments as an alternative to the conventional thesis format. This high level of approval signals a readiness for more flexible, applied, and potentially interdisciplinary evaluation methods that better capture diverse research outputs and professional competencies. These findings collectively highlight a strong appetite for reforming doctoral education to make it more relevant, dynamic, and impactful.

Qualitative Findings

The qualitative data collected through semi-structured interviews and focus group discussions provided a deeper understanding of the perceptions and experiences of PhD students, faculty members, and academic administrators in Ghana. The responses reveal significant insights into the challenges faced within the current PhD education system and the potential for innovative changes.

Frustration with Traditional Thesis Model

A dominant theme from the qualitative data was the frustration expressed by many participants regarding the traditional thesis model. Both students and faculty highlighted that the emphasis on theoretical research often disconnected doctoral studies from practical, real-world applications. One student participant stated:

"The current PhD program feels outdated. It's all about the thesis, which is mostly theoretical. It doesn't really prepare us for the job market or allow us to make a real impact in our communities."



This sentiment was echoed by faculty members who noted that the model discourages engagement with contemporary societal issues. A faculty member remarked:

"We're training students in a vacuum, where the research they produce is disconnected from pressing national and global problems. It's time we rethink the traditional thesis-based approach."

Many students expressed a desire for doctoral education that would engage more directly with societal needs, particularly in sectors like healthcare, agriculture, and education, where practical application of research could have a more immediate impact.

Desire for Practical Integration

Participants consistently voiced a strong desire for practical integration within the PhD program. Several students mentioned that real-world, hands-on experiences such as internships, industry collaborations, and community-based projects would enhance their learning and provide them with relevant skills. One doctoral candidate from the University of Ghana remarked:

"I think the way forward is having some industry experience during the PhD. When I graduate, I want to know how to apply my research in real businesses or organizations—not just write a paper."

Another student suggested a more practical approach to PhD education:

"PhDs should have a component where students can work in the field, whether that's in business, government, or non-governmental organizations. Research can't just stay in the ivory tower."

Challenges with Supervision

Supervision was a recurring topic of concern, with many participants noting that the quality and frequency of supervision were often inadequate. While some faculty members noted the pressure they face due to heavy workloads, students expressed frustration with the limited interaction they had with their supervisors. A participant explained:

"The supervision I receive is infrequent and often lacks depth. My supervisor is too busy to meet regularly, and when we do meet, it's usually just about the technicalities of the thesis rather than engaging with the broader impact of my work."

This dissatisfaction with supervision was linked to the lack of mentoring in areas beyond research writing, such as professional development, networking, and career guidance.



Participants suggested that more consistent and holistic supervision could lead to better overall outcomes for PhD students.

Interest in International Models

In the context of the discussion on alternatives to the conventional PhD, a lot of participants mentioned international models which can be adopted for use in Ghana. The industrial PhD model was perhaps the most frequently cited. This model, which has a broad application in Scandinavian countries, was blended with mid-level education in which students actively participated with industries or businesses on real world problems, and is more relevant to Ghana. A faculty member remarked:

"Sweden and Finland have been able to implement the industrial PhD model with success. It enables PhD students to address real challenges, and simultaneously enhances the economy of the country. I believe this model could work in Ghana as well."

Some participants were also keen on the practice-led PhD model, especially for candidates in engineering, social sciences, and healthcare. This model places greater emphasis on research and its application in practice, particularly in design, the arts, and social policy and would greatly help in solving the multifaceted problems facing society in Ghana.

Emerging Themes: Interdisciplinary Collaboration and Portfolio Assessment

Interdisciplinary collaboration was also one of the salient themes emerging from qualitative analysis. Many respondents highlighted the necessity of integrating knowledge across fields to address sophisticated issues. One participant noted:

"A PhD should not be confined to one discipline because the issues we are confronted with as a country such as poverty, health inequalities and environmental issues need multidisciplinary approaches for solutions."

This was a particularly strong call for interdisciplinary research from those faculty members who felt knowledge from different fields would lead to far greater research impact.

Further, participants seemed to be excited about portfolio-based assessments as opposed to thesis-based evaluations. Portfolio assessment, which would encompass publications, community engagement, and industry partnerships, is deemed a more accurate representation of the profound impacts doctoral students can create. One student commented:



"It's not just about writing a thesis; it's about how you work with people, contribute to society, and when put to use, apply your knowledge. A portfolio-based model would capture the multifaceted nature of a student's capabilities."

Desire for Systemic Change

A substantial number of participants shared the viewpoint that there is a need to transform Ghana's doctoral education system. Some faculty members and administrators remarked on the boundaries of the system, arguing that it was too individualistic in pursuit of self-advancement without emphasizing working together, making a meaningful difference, or even innovative practices. An academic administrator recalled the following remark:

"Concerning our PhD programs, they are literally frozen in the 20th century. To train scholars who will take leadership roles in the 21st century, the entire system needs radical transformation to emphasize more on community service alongside outreach, address problems on a global scale, and appreciate cross-disciplinary approaches."

Discussion

The results of this study strongly suggest that doctoral education in Ghana, like other parts of the world, is sharply in crisis. Even though doctoral education continues to be a pivotal form of knowledge creation and scholarly advancement, the situation in Ghana reveals dissatisfaction with conventional approaches that have become increasingly obsolete in relation to the needs of the country and its developmental objectives. Both the quantitative data and qualitative data analysis revealed such a need. In this discussion, I draw on the findings in this and other chapters, relate them to international patterns of doctoral education, and outline a novel approach to structuring PhD programs in Ghana.

The application of the conventional thesis document as the main evaluative instrument in PhD education raised major concern among the respondents. This frustration aligns with international concerns about the predominant focus of the PhD system on purely theoretical research that fails to engage with practical, real-world issues. [12] remarks the criticism against "traditional" PhDs tend to emphasize the disproportionate valorization of scholarly knowledge and individualistic research as poses bypass significant social concerns. In Ghana, respondents were particularly vocal about how this model ignores the glaring neglect of poverty, unemployment, and public health issues in students' communities.



Other countries are also grappling with the gap between academic research and real-life challenges, as is the case with Ghana. Under a traditional PhD program, [13,14] have criticized the lack of utility of the scholarship produced, arguing that it is virtually irrelevant beyond the confines of academia, or only serves academic purposes. [15] argue that in developing countries, there is a greater likelihood of being able to direct doctoral research toward problem-solving initiatives that are regionally relevant. Environmental challenges, including access to healthcare and economic stagnation, deeply impact the Ghanaian population, which explains the advocacy for approaches to doctoral education that have clear practical relevance.

The suggestion for the practical incorporation of work within the doctoral framework was noted to receive the highest level of support from respondents. The qualitative data indicated that there was general agreement with respect to the potential value that PhD students could derive from hands-on work such as internships, collaborative work with industries, and community-based projects. Such activities were considered vital for reconciling the divide between academic research and its practical use. The gap between the need for integrating practice and theory in doctoral education

underscores an emerging widespread tendency to restructure doctoral programs to more comprehensive and responsive ones in other parts of the world. The Organization for Economic Cooperation and Development [17] highlighted a phenomenon towards practice-oriented doctoral education which integrates research and real-world applications in disciplines like engineering, healthcare, and social sciences.

This feeling is especially important in Ghana where healthcare, agriculture, and the industry are major contributors to the economy. [1] suggests PhD students who gain work experience from these sectors are more likely to come up with innovations that solve important PhD societal problems. Practice-based paradigm shifts, such as the Doctoral Education in the Knowledge Society report [17] illustrate greater devotion towards educational models that advance problem-centric research paradigm focused on the real challenges for humanity.

[17] suggest that the ‘industrial PhD model’ that permits students to work in industry while conducting their research is far more advanced in Sweden, Denmark and Finland. This model advocated not only fosters the spirit of doing but also champions the integration of industry and academia strengthening the relationship between these sectors.



In a country like Ghana where industry and academic institutions operate in silos, such paradigms would be revolutionary. The adoption of the industrial PhD approach in Ghana could empower students to devise solutions to the country's most critical problems, while providing essential skills and networking opportunities to ensure employment post-graduation.

Another integral insight from the research was the dissatisfaction with the quality and the frequency of PhD supervision in Ghana. As with many other studies globally, supervision is often pointed out as a significant pillar to achieving success in a doctoral program [18]. In the context of Ghana, PhD students appear to be the most neglected group. Evaluation of professional literature clearly indicates that supervision emerges as one of the most significant problems confronting doctoral students. Most participants remarked that because of numerous competing commitments, supervisors were generally inaccessible and even during meetings they mostly engaged in mundane discussions related to the administration of the research rather than intellectually and professionally more meaningful advanced pedagogy sessions.

Supervision is essential not only for academic progress but for personal and professional development as well

[19,20]. Poor supervision goes hand in hand with a lack of adequate support structures. In many universities in Ghana, there is a dire shortage of supporting resources in the form of qualified staff. Regarding mentoring students, [21] pointed out that supervisors have a much broader responsibility that encompasses the provision of emotional and social support, and career structures which are very critical for most PhD students throughout their studies.

The demand for enhanced and more uniform supervision is in line with the international discourse on the advancement of doctoral education, where effective supervision is viewed as essential to developing a graduate [19]. Adopting a more proactive interdisciplinary supervision model which integrates systematic feedback and career pathway mentoring would assist in alleviating these issues.

Another important theme that emerged from the findings is interdisciplinary collaboration. Respondents highlighted the need to integrate multiple existing bodies of knowledge to effectively solve complicated societal problems. This is crucial in the developmental context of Ghana where issues like climate change, healthcare inequities, and economic advancement need multidisciplinary attention. As [20] points out, there is an increasing need for integration of



knowledge into doctoral research due to the complex nature of societal issues. This is difficult, however, within the rigid frameworks of disciplines and fields of study and requires a fundamental shift in attitude toward research.

In Ghana, interdisciplinary research and collaboration have the potential to inspire creative solutions to problems and push doctoral students' thinking beyond the academically conventional. This would help equip them to address problems in health, education, and sustainable development which require multidimensional approaches. The colleges and universities in Ghana could do more to promote interdisciplinary research by structuring cross-disciplinary collaborative programs and projects for students and by bringing in practitioners from various fields.

Replacing the conventional thesis with portfolio-based evaluations emerged as a compelling alternative to the PhD model. Study participants preferred evaluation strategies that considered broader aspects of a learner's performance rather than merely their research outcomes. PhD portfolio assessments including research papers, community service, industry collaborations, and other practical outputs were more favorable. This meets the demand of scholars around the world for the education of a practitioner-researcher to move beyond

the traditional thesis as the major milestone within doctoral studies [22].

Adopting the portfolio-based assessment model would address the shifted focus on lifelong learning and continued improvement of professional development tracks. It offers the possibility for candidates to publish diverse PhD documents describing their activities such as teaching, community service, and partnerships with industries. This shift in approach is being investigated in other universities to measure not only academic performance but also the relevance and applicability of the research work undertaken.

Based on this research, we recommend developing a targeted PhD model based on the Global South, specifically Ghana, given that its education system is gradually incorporating meaningful research through interdisciplinary and practice-oriented approaches. The following are the proposed model components:

1. **Practice-Based PhD:** This model allows students to tackle real-world problems during their practicum placements in industries, community service, and through contractual engagements with various public and private governmental and non-governmental organizations. This model helps to ensure work



experience is gained from solving critical social challenges at the doctoral level.

2. **Interdisciplinary Collaboration:** Bringing on board participants from different groups to achieve collective problem-solving on complex societal issues. This will be pursued through inter-departmental research initiatives together with local businesses and international non-governmental organizations (NGOs).
3. **Portfolio-Based Assessment:** Meeting the broader expectations of social assessment for doctoral students by substituting the thesis with a portfolio containing published community service, industry collaborations, and other relevant contributions beyond scholarly articles.
4. **Enhanced Supervision:** Supervisory tasks will extend beyond academic functions to include non-academic ones such as career coaching and personal development counselling. This will be aided by routine supervisory sessions, peer mentoring, and active mentorship frameworks with clear policies.

In such a manner, PhD education in Ghana can be tailored to meet the country's requirements, respond to

global issues, allow students to develop appropriate competencies, and nurture an innovative proactive scholarship ethos within a collaborative culture.

Conclusion

The gaps identified in this research study highlight the clear shortcomings of doctoral education in Ghana and the different debates that exist within the scholarly world. The intense discontent with the prevailing hands-off, non-practicing, non-supervision, and non-interdisciplinary approach of supervising PhD theses and education in Ghana, indicates that there is need for change. This type of doctoral education framework appears to have become obsolete and does not match the socio-economic needs of the country.

One proposed solution out of many is the 'practice-based, Ports' interdisciplinary and portfolio-assessed PhD', which is a demonstrable example illustrating the shift between socio-educational expectations and modern-day realities. Research with a genuine interdisciplinary and multi-professional approach includes collaboration with industry as well as active problem-solving, ensuring that tangible societal needs are addressed. Moreover, the fundamental paradigm shift on assessments of academic work overrides the traditional focus on outputs to



emphasize societal engagement and impact.

In addition, the model emphasizes supervision and mentorship to ensure that all doctoral candidates are adequately supported not only in their research activities but also in their career aspirations, preparing them for meaningful and satisfying employment both in academia and beyond. The type of interdisciplinary collaboration noted in this model is crucial for novel innovative doctoral research for Ghana that cuts across several areas such as healthcare and even the economic development of the country.

As highlighted before, this is a call to bring a PhD paradigm shift in Ghana

where it is more focused on impact, partnership, and practical relevance. It is necessary to change and adopt a more advanced framework concerning the doctoral education offered in Ghana to train scholars with very high competencies, but who also actively engage in the development of their communities and the country. The findings of this study can perhaps trigger a greater discourse on what is generally considered the approach taken towards developing countries and the doctoral education offered to them, and calling attention to universities around the world to re-evaluate the purpose and structure of PhD programs designed in complex interdependent systems.

References

1. Hart, C., Catterall, M., & Kinman, G. (2017). *Bridging the gap: Industry and academia in the context of doctoral education*. *Journal of Education and Work*, 30(2), 151-173.
2. Amponsah, N., & Owusu-Ansah, A. (2020). Rethinking doctoral education in Ghana: Challenges and opportunities. *Journal of African Higher Education Studies*, 5(2), 45–60.
3. Ministry of Education, Ghana. (2018). *Education Strategic Plan 2018–2030: Volume 1 – Policies and Strategies*. Accra: Ministry of Education. Retrieved from <https://www.moe.gov.gh>
4. Boateng, F., & Boadu, E. (2019). Contextualizing higher education reforms: The need for localized doctoral training models in Ghana. *Ghana Journal of Education and Research*, 14(1), 112–127.
5. Boud, D., & Tennant, M. (2006). Putting doctoral education to work: Challenges to academic practice. *Higher Education*



- Research & Development, 25(3), 293–306.
<https://doi.org/10.1080/07294360600793093>
6. Gilbert, R., Balatti, J., Turner, P., & Whitehouse, H. (2004). The generic skills debate in research higher degrees. *Higher Education Research & Development*, 23(3), 375–388.
<https://doi.org/10.1080/0729436042000235420>
7. Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE Publications.
8. Tashakkori, A., & Teddlie, C. (2010). *SAGE handbook of mixed methods in social & behavioral research* (2nd ed.). SAGE Publications.
9. Lee, A. (2012). *Successful research supervision: Advising students doing research*. Routledge.
10. Park, C. (2005). New variant PhD: The changing nature of the doctorate in the UK. *Journal of Higher Education Policy and Management*, 27(2), 189–207.
<https://doi.org/10.1080/13600800500120068>
11. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
<https://doi.org/10.1191/1478088706qp0630a>
12. Brew, A. (2013). *Research and teaching: Beyond the boundaries of the university*. Higher Education, 65(5), 611–627.
13. Maher, M., McKenzie, L., & Sandover, S. (2013). *PhD education in Australia: Evaluating models of practice*. *International Journal of Doctoral Studies*, 8, 147–167.
14. Mårtensson, K., Olsson, T., & Reneland-Forsman, L. (2018). *Quality in doctoral education: A study of PhD experiences in Sweden*. *Higher Education*, 75(2), 193–208.
15. Kehm, B. M., & Teichler, U. (2007). *The academic profession in international comparison: An exploration of the impact of globalization and its implications*. *Higher Education*, 54(6), 773–786.
16. OECD. (2012). *Doctoral education and the labour market: Preparing PhD students for the world of work*.



- Organisation for Economic Co-operation and Development.
17. Gunn, V., & Fisk, A. (2015). *Towards a framework for practice-based doctoral education*. Journal of Further and Higher Education, 39(6), 800-818.
18. McCallin, A., & Nayar, S. (2012). *Doctoral education: Understanding the role of the supervisor*. Australian Educational Researcher, 39(1), 19-34
19. Lee, A. (2008). *How are doctoral students supervised? Concepts of research supervision*. Studies in Higher Education, 33(3), 267-281.
20. Hall, B. L. (2011). *Interdisciplinary doctoral programs: A pathway to sustainable futures in education*. International Journal of Doctoral Studies, 6, 13-30.
21. Perkin, H. (2012). *PhD supervision and its relationship to career development*. Studies in Higher Education, 37(3), 309-319.
22. Perry, R. (2011). *Portfolio-based assessment: A new approach to doctoral education*. Higher Education Research and Development, 30(6), 745-758.