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**Investment in Teacher-Education Versus Teacher-Educational
Research for Effective Teacher-Professional Learning**



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Investment in Teacher-Education Versus Teacher-Educational Research for Effective Teacher-Professional Learning

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Abstract

Purpose: This systematic research paper provides a comprehensive review of studies and literature on three terms i.e., teacher education, teacher professional learning and teacher education research more specifically in the context of the Tanzania education system. One of the most important aspects identified in teacher education in recent years is teacher educational research despite being yet overlooked. Teacher educational research creates a better juncture through which a gap between teacher education and teacher professional learning is bridged and the two present well with one another.

Methodology: The analysis used 45 articles related to the three aspects, published in ten years between 2012 and 2022. The findings indicate that through teacher education, teacher professional learning is up-to-date and kept on track by equipping and updating teachers with contemporary knowledge and teaching practices.

Findings: In Tanzania, teacher professional learning is mostly done in form of workshops and seminars that few teachers from various educational institutions are allowed to attend. In addition, the integration of teacher education research content in teacher education is considered one of the approaches to facilitate teachers' (both pre-service and in-service) capacity to draw on a wide knowledge base through teacher professional learning.

Unique Contribution to Theory, Policy And Practice: Generally, the main focus of teacher education research should be to understand how teachers develop and acquire knowledge, and investigate the diversity of experiences in learning to teach, thus contributing to teacher professional learning program design.

Keywords: *Teacher education, Teacher professional learning, Teacher educational research*

1. Introduction

Research has become a popular phenomenon in our civilization and all of us are impacted by it (Cowie et al., 2017; Richmond & Floden, 2018). Professionals from different disciplines engage in research activities. Research is conducted in different settings such as laboratories, classrooms, libraries, and city streets just to mention a few. Since research is concerned with the analysis of facts and the exploration of new dimensions of knowledge, it promotes the quality improvement of already known and also unknown facts (Ary & Ary, 2014). Teaching and research are two inseparable components because research is the measure of the standard of educational development; therefore we need to make the education system more innovative and futuristic to respond to the changing needs of society (Cowie et al., 2017). Teacher education research generally includes all research in policy, practice and programs involved in the teaching and learning process and or developing teachers at all levels of the education system.

This paper explores how Teacher educational research (TER) is a fundamental entity in presenting Teacher Professional Learning (TPL). The discussion of TER presents a rationale for research-rich teacher preparation and teacher professional learning. It then reviews three different types of research such as; pedagogical content knowledge (PCK), professional enquiry (PE), and inventive modes of integrating theory into practice and how capacity building in research enhances teachers' ability to carry out research. The analysis of TER pays particular attention to the understandings gathered into how teachers learn and illustrate how this knowledge informs the content of teacher preparation courses.

The concept of teacher education (TE) is predominantly stated and agreed that the quality and scope of the achievement of the learners are determined primarily by teacher motivation, sensitivity and teacher competence. However, TE is formal training provided for prospective teachers at all levels of education based on the learners' needs at that particular level (Maaranen et al., 2019). According to Floden et al. (2017), teacher education is the framework where teacher trainees are oriented and taken through educational procedures and principles including 'good' or 'bad' 'right' or 'wrong' in the teaching profession. Saroyan and Trigwell (2015) highlight further that in TE, teachers get equipped with the best teaching skills, attitudes, knowledge, competencies and behaviours which are required for them to perform effectively in any learning environment like a classroom or school. Further, TE is also considered to encompass the education acquired by the teachers during pre-and in-service dimensions (Mgaiwa, 2018).

Additionally, TE is regarded as the provision of specialized training and professional education within a fixed period for the preparation of personalities who intend to develop and nurture individuals into responsible and productive citizens (Cowie et al., 2017). Hardman (2017) asserts that enhancing the pedagogical processes and practices of teachers has a vital role in endeavouring to improve the quality of education in an environment where resources are scarce and inadequate as in the case of Kenya, Tanzania and Uganda. The quality of education is mostly dependent on teachers' engagement in a periodical revision of pedagogical processes and practices

in the classroom in which there is a connection between pedagogical approaches and learning outcomes (Jan Hardman, 2017). Equally, Mgaiwa (2018) has raised concerns about the quality of university education which includes the quality of the training university graduates receive. Besides, the lack of continuous teacher professional development for them to reflect, update and refine their teaching and instructional practices inhibit teachers' ability to deliver lesson successfully (Mgaiwa, 2018). To overcome this gap Nsamenang and Tchombe (2011) affirmed that teacher training institutions need to take deliberate efforts to prepare teachers with positive attitudes towards learners as they grow and learn so that learners feel that they are accepted. According to Hardman et al. (2012), continuous professional development provision to trained teachers is characterized by poor quality and few classroom follow-up visits. Thus, it is vital for teacher education institutions to ensure continuous refinement of teacher's professional knowledge and competence.

Furthermore, Teacher Professional Learning TPL is currently considered a transformed form of traditional professional development. Professional development includes all the activities that develop and improve individual teachers' knowledge, skills and other expertise which encapsulates most in-service, school-based staff development, and training events where educators come to associate together (Popova et al., 2022; Prestridge & Main, 2018). This definition implies professional development to still be closely linked with a top-down training prototype (Komba & Mwakabenga, 2020) for in-service teachers based on the assumption that they need direct instruction on how to improve their skills and master new strategies (Prestridge & Main, 2018). Besides, some of the literature has notably shown to use the term 'teacher's professional development interchangeably with 'teacher professional learning' while some consider them to be different. However, teacher professional learning is essentially growth in practice (Earle & Bianchi, 2022), which values teachers' active engagement, teacher's voice creation, inquiry, collaboration, and reflection (Cameron et al., 2013; Conroy et al., 2013). This type of learning occurs through professional learning groups within and beyond schools, through teachers' networks, or structured special interest groups confined in school communities or online (Cameron et al., 2013).

Moreover, teacher educational research has received minimal attention as it should be in the context of TE and TPL. Besides, there have been different opinions and arguments about how, where, by whom, and for what purposes teachers should be prepared and well-informed since the emergence of TE in the mid-19th century (Mgaiwa, 2018). Also, for a long period, debates existed concerning what kind of activities should be included in teaching, and what skills and knowledge teachers need to be equipped or competent with to teach well. However, from the beginning, research has played a prominent role in these discussions and debates, particularly in the difference of opinions about which disciplines are pertinent to the study of education, what will be counted as educational research and how evidence ought to be used to make the case for or against particular approaches to the TPL.

This review makes systematic research which descriptively analyses the relevant literature through a critical association between TPL and TER as the subsets of teacher education, focusing on the Tanzanian context.

2. Methodology

2.1 Research design

This research is characterized as a systematic review of the literature and was developed based on the criteria proposed by (Bacha, 2019) as it addresses a topic from a controversial area of teacher education. As a systematic review, this research develops the metaphor in form of conversation and shows how to put them into practice (Wentzel, 2018).

2.2 Procedures

Literature was obtained through a computer-assisted literature search using various academic search engines such as google scholar, Jstore, ProQuest, Psycho info, Levis Nexis Academic, Eric, Ebhost, Web of Science, Scopus and others. The keywords used were “teacher education”, “teacher professional learning” and “teacher educational research”. The quoted descriptors were accompanied by the Boolean operators “or”, and “and” to precisely direct the search to the searched terms. Additionally, a manual search was used based on the reference lists of the seminal articles limited between 2012 and 2022 (not more than 10 years old). Also, some of the literature that answered the proposed research question highly focused on the research context while others were selected without consideration of geographical limitations. Other criteria for inclusion were like published in well-reputed academic journals or peer-reviewed journals mainly in the English language, related to the field of TE and Social Sciences and addresses TER in the TPL. However, the criteria for exclusion in this research included; publications that were not available in their full scope or could not be accessed as full text, dissertations, theses and books as well as studies outside the educational context and studies not involving the key variables of this research project.

The parameters for the systematic review were established to increase the trustworthiness of the data collected. Besides according to Kyngäs et al. (2020), trustworthiness is identified as one way through which researchers can persuade themselves and readers to verify worthiness of the their research findings. Further, the literature identifies trustworthiness to communicate transferability, credibility, conformability, and dependability similar to the conventional quantitative assessment criteria of reliability and validity (Bacha, 2019; Kyngäs et al., 2020; Snyder, 2019). This research chose to use the original (empirical research), widely accepted reviewed papers from highly reputed journals to demonstrate trustworthiness (Kyngäs et al., 2020). These trustworthiness criteria provided pragmatic choices for researchers regarding the usefulness and acceptability of this research by a variety of stakeholders (Bacha, 2019). On credibility, the research ensured that information obtained from articles is original to enhance the core searchers or readers be confronted with these experience and they can recognize it. Techniques such as prolonged engagement and persistent observation of information from multiple sources as well as,

triangulation of data from multiple sources and methods were used. Also, researcher triangulation was considered as the research involves more than one researcher (Nowell et al., 2017).

Dependability was assured in the review process by ensuring the research process is traceable, logical, and documented (Bacha, 2019). Also, dependability was achieved through critical scrutiny of the research processes in all seminal articles selected for this research work. Furthermore, an audit check of this research (Kyngäs et al., 2020) was considered as another criterion to ensure dependability. In addition, the appropriate number of articles was purposively outsourced for this research work to ensure its credibility due to the richness of data and how the research questions were achieved (Burmeister & Aitken, 2012). The review process ensured enough article texts are reviewed to achieve saturation of information obtained which in turn certifies comprehension and completeness (Creswell & Creswell, 2018). Elo et al. (2014) highlight that Well-saturated data simplifies its categorization and abstraction. Thus, saturation enhanced the categorization of data and creation of concepts which later allowed the completion of analysis and generation of results.

2.3 Analysis Framework

We collaboratively analysed the data obtained through a descriptive analysis where the codes were predetermined before the analysis process as suggested by (Nowell et al., 2017). The abstraction and coding were done based on the information such as topic, authors, years published, type of study, findings and in form of new knowledge contributed (Snyder, 2019). The coding process involved the representation of the data from the seminal articles selected from different sources in tables based on the identified criteria, saved in a digital folder and shared by the researchers. Then, the researchers independently reviewed the sampled literature where the whole process was informed by the identified criteria of inclusion and exclusion, and the criteria for qualitative analysis were set thereafter.

The retrieved papers were reviewed and a literature review matrix summary was generated. The matrix comprised the articles' names, authors' names and affiliations, publication journal and year, DOI number or URL for easy access, the purpose of the study, sample, methods, main findings and recommendations. All the papers included were again taken through the same screening procedure to confirm and increase the authenticity of the research. The literature review matrix was used to generate the PRISMA flow chart in Figure 1 whereas a total of 124 articles were found from the selected databases. After the removal of the papers that were more than 10 years old but related to the research topic, 64 articles remained to be screened. The initial screening which included title screening and abstract screening was conducted and nine articles were excluded. Finally, 55 articles were taken through the eligibility analysis after the full-text screening. Only 45 articles were left for the final analysis after excluding the other 10 articles from the review matrix. All 79 articles were excluded based on the highlighted inclusion and exclusion criteria as well as the aim and scope of this argumentative review.

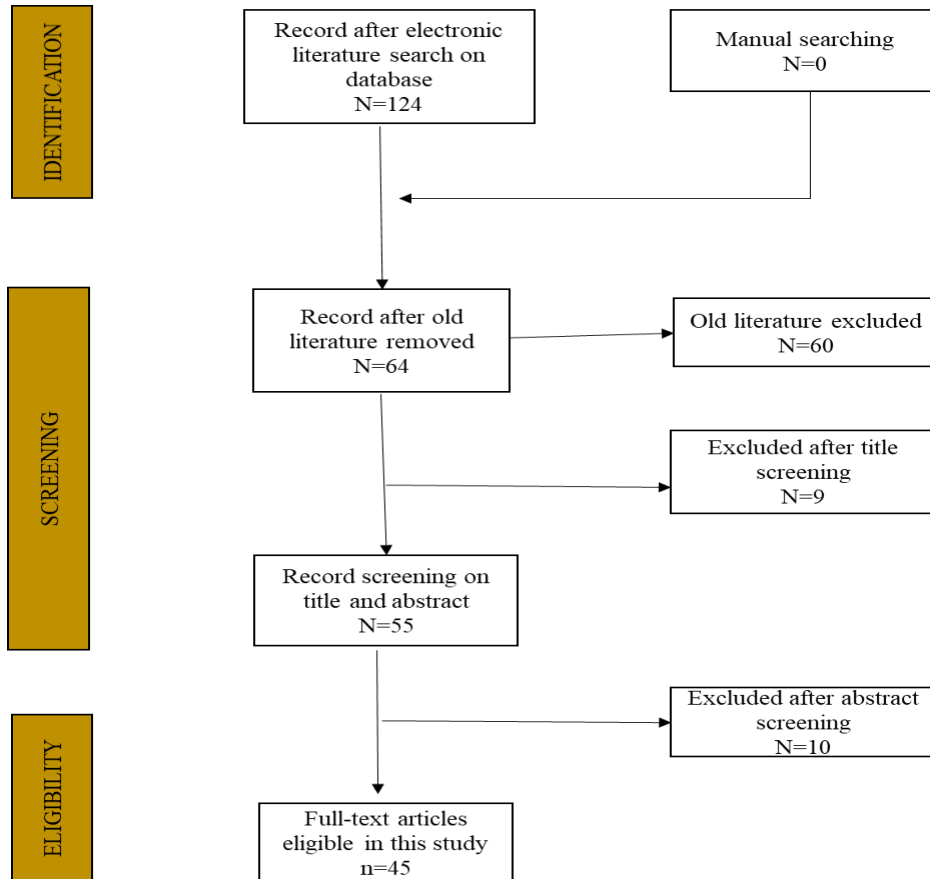


Figure 1: PRISMA flow diagram for this argumentative review

3. Results and Discussion

This section summarizes the literature to answer the proposed research questions.

3.1 Research Question 1: How is teacher professional learning presented in teacher education?

While remaining open to any other additional themes, we identified six core features of how TPL can be presented through TE. The six themes in **Table 1** are used to answer the first research question. Together with the summary in the Table, we then used these themes to provide detailed insights into how TE presents TPL. Indeed between 2012 and 2022, an increase in the number of papers published on TPL is noted although dismal compared to how it is anticipated to be.

Table 1:

Description of the themes generated to answer research question one

| Theme | Aspect | Literature |
|---|---|--|
| Integration of well-grounded theories, principles and practices | The integration in teacher education allows teachers to use the principles interpreted from their theoretical understandings. The integrations are considered the basis for making continuing, principled resolutions about practice. | (Earle & Bianchi, 2022; Goodwin et al., 2014; Menter, Ian et al., 2014; Richmond & Floden, 2018) |
| New professional knowledge integrations | Teacher education provides professional learning approaches that largely focus on building new competencies, knowledge, and skills to enhance teachers' existing understandings that correspond with the new information and therefore can be integrated readily into their current practice. | (Beauchamp et al., 2015b; Earle & Bianchi, 2022; Griffin, 2012; Patfield et al., 2021; Swai et al., 2022; Vangrieken et al., 2015) |
| Meet diverse teacher professional needs | Teacher professional learning is designed by the context in which the teacher practices and it is vital to set up environments that are responsive to the ways that teacher's learning may occur. | (Bates & Morgan, 2018; Evans, 2014; Lay et al., 2020; O'Brien et al., 2022; Patfield et al., 2021; Saroyan & Trigwell, 2015) |
| Linkage with learners' issues | Achievement needs to be well-defined not in terms of teacher mastery of new approaches but in terms of the effect that transformed practice has on esteemed outcomes. Provide specific skills which link with the learning outcomes. | (Evans, 2014; Pereira, 2013; Popp & Goldman, 2016; Prestridge & Main, 2018) |

| | | |
|---------------------------|--|---|
| Activate leadership roles | Mostly in jurisdictions of teacher education, entitled leaders have the obligation for promoting teacher professional learning and developing opportunities for teachers. | (Beauchamp et al., 2015; Claudius Komba & Japhet Mwakabenga, 2020; Griffin, 2012; Maaranen et al., 2019; Mayer & Oancea, 2021; Reeves, 2009) |
| Sustained improvement | Sustained improvement depends on teachers' learning, and self-regulatory inquiry skills to bring together relevant evidence, use it to incorporate into the effectiveness of their teaching and create continuous modifications to their practice. | (Beauchamp et al., 2015; Claudius Komba & Japhet Mwakabenga, 2020; Griffin, 2012; Mayer & Oancea, 2021; Mosweunyane, 2013; Prestridge & Main, 2018) |

3.2 Research Question 2: How are teacher professional learning programs implemented in Tanzania?

Teacher education in Tanzania is featured by the basic issues of recruitment, curriculum, structure, financing, governance, accreditation and standards that are taken into account in making decisions related to the teaching profession. However, the government is mindful that teachers go through TPL programs (Mjege et al., 2019), to enhance the provision of quality education which is the fourth goal among the seventeen stipulated Sustainable Development Goals (SDGs). According to (Swai, 2019), the government's commitment to providing teachers with chances to participate in professional learning is a way of improving teachers' professional practice. This is also stipulated in the current education policy of 2014 that the government affirms categorically that TPL is a priority of the Ministry of Education, Science and Technology (MoEST). Swai et al. (2022) highlight further that the policy document verifies the commitment to provide teachers with opportunities to enhance the teachers' professional growth to achieve meaningful student learning in schools. Additionally, it is noted that MoEST through the Tanzania Institute of Education (TIE) and in collaboration with donors from around the world has implemented several TPL initiatives (Kitta & Fussy, 2013). Thus, with such a commitment it is understood that the nature and practices of teacher professional learning are paramount through the images and relations they convey.

The findings have shown that TPL is mostly done in form of workshops and seminars which few teachers from various educational institutions are allowed to attend (Popp & Goldman, 2016). Mostly University lecturers, officials from institutions like the TIE, and ADEM, and teacher

educators from various colleges, facilitated these workshops and seminars in respective zones and regions, with specified content (Swai, 2019). It is also highlighted that the organizer of the training or workshop decides on the content to be learned during the professional learning program the teachers who are the end users. Not only the content but also the mode of delivery of these seminars and workshops (Mjege et al., 2019) is being decided by the delivering institutions. Besides, literature has revealed that there is still discussion on their efficacy, quality and potential to impact teacher change (Mgaiwa, 2018; Mizova et al., 2021; Swai, 2019). Teacher professional learning programs are also noted to be implemented in remote areas (Kitta & Fussy, 2013).

Another interesting approach of TPL is school-based professional learning. This approach was introduced in Tanzania after being adopted from Chinese literature and it is noted to combine professional learning and teacher research (Mjege et al., 2019). According to them, school-based professional learning involves teachers and researchers whereby they together participate in the procedure of lesson planning, implementation, post-reflection and lesson re-delivery whenever necessary. School-based professional learning is a form of action research whereby its primary goal is to make a better association between theory and practice (Mwakabenga, 2018). In school-based professional learning schools or teachers invite researchers to collaborate with them and discuss topics of a particular subject, and reflect on a specific lesson of their choice meant to develop teachers' knowledge of various theories in education (Sun-Keung Pang et al., 2016). They together participate in observation and revisions of lessons, until targeted skills are mastered through the revised lesson (Çağla, 2017; Mjege et al., 2019). However, school-based professional learning is facing challenges in implementation because teachers cannot decide on their professional learning, rather they mostly follow authoritative orders (Mwakabenga, 2018).

3.3 Research Question 3: How does teacher educational research present teacher professional learning?

Teacher education research is of interest to policymakers, teacher educators and other educational stakeholders. Policymakers are concerned with finding the best evidence to validate a particular model to be used at the macro level and consequently search for the research that can establish cause-effect relationships between pre-service teacher education and teachers' efficiency which is measured in terms of students' achievement (Beauchamp et al., 2015). The main focus of TER in TPL is to understand how teachers acquire and develop knowledge and investigates the multiplicity of experiences in the process of learning to teach, thus contributing to programme design. In making sure that the learning advantages within the community of practice are obtained, TER has stressed the significance of knowledge creation for practice, which is produced when schools and classrooms are treated as the research sites for inquiry while practice is evaluated and interpreted in terms of social, political and cultural issues and theory and research from others (Menter, Ian et al., 2014). TER, therefore, provides the required knowledge that helps to inform TPL program design.

Integrating TER content in TPL is the best approach to facilitating pre-service and practising teachers to draw on a wide knowledge base collected from different perceptions. Beauchamp et al. (2015) argued that when TER is well presented in TPL, it reaches far more than promoting the understanding of teaching and learning theories. It also promotes evidence-based instruction that in reality makes a practical contribution to the TPL of novice and in-service teachers and enhances the performance of students. Furthermore, TER literacy not only produces powerful teachers who become independent evaluators and improves their work performance but also enhances professional identity (Darling-Hammond, 2016).

Nevertheless, the refinement of the structure and content of TPL is suggested to be among the ways that can enhance the use of TER in informing the design, structure and content of the TPL program (Mjege et al., 2019). Bringing the role of TER in TPL, examine the prospective benefits of research-based knowledge and skills in improving students' outcomes and school performance (Sun-Keung Pang et al., 2016). The component which is missing among the pre and in-service teachers and teacher educators is the capacity for critical reflection. Critical reflection provides insight and understanding that comes from interrogating one's practice based on the broader TER evidence and making explicit assumptions and values that underpin it (Çağla Atmaca, 2017). The content design and structure of the programs in TPL may therefore be informed by research-based knowledge.

3.4 Research Question 4: How does investment in teacher education research translate into the effectiveness of teacher professional learning programs?

One of the contributions of TER occurs within the realm of policy to enhance decision-makers in the education sector because of the relevancy and validity of its findings as a basis for designing and evaluating TPL programs. This is as explained by Westbrook and EPPI-Centre (2013), that when TPL is constructed as a policy problem the evidence needed to address this problem comes from correlation or experimental studies with sophisticated statistical analysis. The outcome of these kinds of studies may indicate some faults in TPL programs that do or do not have systematic and positive impacts on students learning or on other teaching and learning outcomes (Çağla, 2017). Besides, the studies may also increase an understanding of content, pedagogy and commitment to a variety of teaching and learning methods, self-confidence and willingness to listen and learn from students and other professionals in education (Sun-Keung Pang et al., 2016). Furthermore, using self-study through TER, individual practices can be evaluated, understand teaching better, change our practice to respond to the learning needs of our students, and most importantly, create practices that stand as an embodied testament to our beliefs (Castanheira, 2016).

TER as a dynamic process in the context of TE illuminates practices by extending the policy regarding TPL programs. In this paper, our focus was on identifying and suggesting the best blend between TER and TPL as a way of strengthening TE. In addition, the former is seen as one of the aspects of enhancing the long-term quality of students' and teachers' learning across the education

spectrum. The need for TER in TPL has raised serious concerns about the need to develop teachers' capacity in TER. The teachers' capacity in TER can be developed through the creation of accessible TER resources which are relevant to TPL. Moreover, building teachers' capacity in TER is considered the initiative created to promote teachers' and teacher educators' professional learning. Not only that but also TER develop individual teachers as experts and members of a larger professional community. Thus, TER further has the potential to strengthen and develop knowledge of practice, policy and identity in the TE field.

4. Conclusion

Conclusively, to incorporate and implement TER effectively, TPL course content needs to be modified in a way that can offer a wide professional knowledge base which will produce teachers as researchers. In addition, it is recommended to invest in TER to attain effective TPL as required. This is a call for the government and other education stakeholders to invest more in TER by developing teachers' and teacher educators' capacity in research, infrastructure development, technology and other related resources. TER should be considered as core to equip 21st-century teachers with subject content, teaching methodology, practical knowledge and skills which will later enable them to give solutions to daily classroom challenges. There is absolutely no way inadequate funding for TE institutions will facilitate the development of quality teachers for the current global competitiveness. Therefore, it is justifiably concluded that investment in teacher education research will make considerable contributions toward TE development in Tanzania.

5. Recommendations

Based on the findings after intensive literature done from various sources it is recommended that TER should be given priority in TE to continuously prepare teachers who are updated with universal skills and competencies through TPL. Professional teachers have the responsibility of searching or finding out answers to questions as well as solutions to challenges or problems that will enhance students learning. Teachers are decision-makers who make several choices daily as regards the selection of textbooks, relevant and appropriate technology integration in the teaching and learning process, teaching pedagogy, assessment activities and measurement of students' achievement. Therefore, TER is important to unlock the secrets of the teaching and learning profession. Moreover, the preparation of teachers as classroom researchers and expert collaborators who can learn from each other through TPL is necessary for the preparation of 21st-century teachers. Hence, serious investment should be made in terms of adequate budgetary allocation and regular provision of funds for TER and TPL programs in Tanzania to strive for the current world-class TE.

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7. References

- Allier-Gagneur, Z., McBurnie, C., Chuang, R., & Habler, B. (2020). *Characteristics of effective teacher education in low- and middle-income countries: What are they and what role can EdTech play?* <https://doi.org/10.5281/ZENODO.4762301>
- Ary, D., & Ary, D. (2014). *Introduction to research in education* (9th ed). Belmont, Calif. Wadsworth Cengage Learning.
- Bacha, N. N. (2019). Writing the Argumentative Literary Review in EFL/ESL Contexts: A Critical Analysis Perspective. *International Journal for Innovation Education and Research*, 7(1), 229–240. <https://doi.org/10.31686/ijer.vol7.iss1.1309>
- Bates, C. C., & Morgan, D. N. (2018). Seven Elements of Effective Professional Development. *The Reading Teacher*, 71(5), 623–626. <https://doi.org/10.1002/trtr.1674>
- Beauchamp, G., Clarke, L., Hulme, M., Jephcote, M., Kennedy, A., Magennis, G., Menter, I., Murray, J., Mutton, T., O’Doherty, T., & Peiser, G. (2015). *Teacher Education In Times of Change*. Policy Press. <https://doi.org/10.1332/policypress/9781447318538.001.0001>
- Burmeister, E., & Aitken, L. M. (2012). Sample size: How many is enough? *Australian Critical Care*, 25(4), 271–274. <https://doi.org/10.1016/j.aucc.2012.07.002>
- Çağla Atmaca. (2017). *Stop at the red light! Determinants of research in teacher education: P.i.s. theory*. <https://doi.org/10.5281/ZENODO.557149>
- Cameron, S., Mulholland, J., & Branson, C. (2013). Professional learning in the lives of teachers: Towards a new framework for conceptualising teacher learning. *Asia-Pacific Journal of Teacher Education*, 41(4), 377–397. <https://doi.org/10.1080/1359866X.2013.838620>
- Castanheira, P. S. P. (2016). Mentoring for educators’ professional learning and development: A meta-synthesis of *IJMCE* volumes 1-4. *International Journal of Mentoring and Coaching in Education*, 5(4), 334–346. <https://doi.org/10.1108/IJMCE-10-2015-0030>

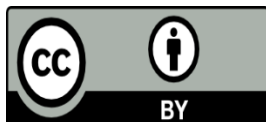
- Claudius Komba, S., & Japhet Mwakabenga, R. (2020). Teacher Professional Development in Tanzania: Challenges and Opportunities. In H. Şenol (Ed.), *Educational Leadership*. IntechOpen. <https://doi.org/10.5772/intechopen.90564>
- Conroy, J., Hulme, M., & Menter, I. (2013). Developing a ‘clinical’ model for teacher education. *Journal of Education for Teaching*, 39(5), 557–573. <https://doi.org/10.1080/02607476.2013.836339>
- Cowie, B., Menter, I., & Peters, M. (Eds.). (2017). *A Companion to Research in Teacher Education* (1st ed. 2017). Springer Singapore : Imprint: Springer.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (Fifth edition). Los Angeles. SAGE.
- Darling-Hammond, L. (2016). Research on Teaching and Teacher Education and Its Influences on Policy and Practice. *Educational Researcher*, 45(2), 83–91. <https://doi.org/10.3102/0013189X16639597>
- Earle, S., & Bianchi, L. (2022). What role can professional learning frameworks play in developing teacher agency in subject leadership in primary science? *Professional Development in Education*, 48(3), 462–475. <https://doi.org/10.1080/19415257.2021.1942142>
- Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs, H. (2014). Qualitative Content Analysis: A Focus on Trustworthiness. *SAGE Open*, 4(1), 215824401452263. <https://doi.org/10.1177/2158244014522633>
- Evans, L. (2014). Leadership for professional development and learning: Enhancing our understanding of how teachers develop. *Cambridge Journal of Education*, 44(2), 179–198. <https://doi.org/10.1080/0305764X.2013.860083>
- Feuer, M. J., Floden, R. E., Chudowsky, N., Ahn, J., & National Academy of Education. (2013). *Evaluation of Teacher Preparation Programs: Purposes, Methods, and Policy Options*.
- Floden, R. E., Richmond, G., Drake, C., & Petchauer, E. (2017). How Teacher Education Can Elevate Teacher Quality: Evidence From Research. *Journal of Teacher Education*, 68(4), 360–362. <https://doi.org/10.1177/0022487117721190>
- Flores, M. A. (2020). Preparing teachers to teach in complex settings: Opportunities for professional learning and development. *European Journal of Teacher Education*, 43(3), 297–300. <https://doi.org/10.1080/02619768.2020.1771895>
- Goodwin, A. L., Smith, L., Souto-Manning, M., Cheruvu, R., Tan, M. Y., Reed, R., & Taveras, L. (2014). What Should Teacher Educators Know and Be Able to Do?

- Perspectives From Practicing Teacher Educators. *Journal of Teacher Education*, 65(4), 284–302. <https://doi.org/10.1177/0022487114535266>
- Goodyear, V. A., Parker, M., & Casey, A. (2019). Social media and teacher professional learning communities. *Physical Education and Sport Pedagogy*, 24(5), 421–433. <https://doi.org/10.1080/17408989.2019.1617263>
- Graham, L. J., White, S. L. J., Cologon, K., & Pianta, R. C. (2020). Do teachers' years of experience make a difference in the quality of teaching? *Teaching and Teacher Education*, 96, 103190. <https://doi.org/10.1016/j.tate.2020.103190>
- Griffin, R. (2012). *Teacher education in Sub-Saharan Africa: Closer perspectives*. Oxford. Symposium Books.
- Hardman, F., Abd-Kadir, J., Agg, C., Migwi, J., Ndambuku, J., & Smith, F. (2009). Changing pedagogical practice in Kenyan primary schools: The impact of school-based training. *Comparative Education*, 45(1), 65–86. <https://doi.org/10.1080/03050060802661402>
- Hardman, F., Abd-Kadir, J., & Tibuhinda, A. (2012). Reforming teacher education in Tanzania. *International Journal of Educational Development*, 32(6), 826–834. <https://doi.org/10.1016/j.ijedudev.2012.01.002>
- Hill, H., Mancenido, Z., & Loeb, S. (2020). *New Research for Teacher Education*. <https://doi.org/10.26300/ZHHB-J781>
- Jan Hardman. (2017). *School-Based Teacher Professional Development in East Africa: Emerging lessons from Kenya and Tanzania*. 517–527.
- Kitta, S., & Fussy, D. (2013). Bottlenecks in Preparation of Quality Teachers in Tanzania. *Time Journals of Arts and Educational Research*, 1(5), 29–38.
- Komba, S., & Mwakabenga, R. (2020). Teacher Professional Development in Tanzania: Challenges and Opportunities. In H. Şenol (Ed.), *Educational Leadership*. IntechOpen. <https://doi.org/10.5772/intechopen.90564>
- Kyngäs, H., Kääriäinen, M., & Elo, S. (2020). The Trustworthiness of Content Analysis. In H. Kyngäs, K. Mikkonen, & M. Kääriäinen (Eds.), *The Application of Content Analysis in Nursing Science Research* (pp. 41–48). Springer International Publishing. https://doi.org/10.1007/978-3-030-30199-6_5
- Lay, C. D., Allman, B., Cutri, R. M., & Kimmons, R. (2020). Examining a Decade of Research in Online Teacher Professional Development. *Frontiers in Education*, 5, 573129. <https://doi.org/10.3389/feduc.2020.573129>

- Losioki, B. E. (2020). Professional development and empowerment among secondary school teachers in Mkuranga District, Tanzania. *Journal of Education and Practice*, 11(24), 92-98.
- Maaranen, K., Kynäslahti, H., Byman, R., Jyrhämä, R., & Sintonen, S. (2019). Teacher education matters: Finnish teacher educators' concerns, beliefs, and values. *European Journal of Teacher Education*, 42(2), 211–227. <https://doi.org/10.1080/02619768.2019.1566317>
- Mayer, D., & Oancea, A. (2021). Teacher educational research, policy and practice: Finding future research directions. *Oxford Review of Education*, 47(1), 1–7. <https://doi.org/10.1080/03054985.2021.1853934>
- Menter, Ian, Hulme, Moira, Murray, Jean, Campbell, Anne, Hextall, Ian, Jones, Marion, Mahony, Pat, Procter, Richard, & Wall, Karl. (2014). *Teacher educational research in the UK: The state of the art*. <https://doi.org/10.25656/01:8593>
- Mgaiwa, S. J. (2018). Emerging Fundamental Issues of Teacher Education in Tanzania: A Reflection of Practices. *Educational Process: International Journal*, 7(4), 246–264. <https://doi.org/10.22521/edupij.2018.74.3>
- Mizova, B., Peytcheva-Forsyth, R., & Gospodinov, B. (2021). *Challenges to the development of teachers' professional digital competences – Bulgarian perspective*. 050012. <https://doi.org/10.1063/5.0041818>
- Mjege, K., Kavenuke, P. S., & Mwakabenga, R. J. (2019). Promoting Teacher Professional Learning in Tanzanian Schools: Lessons from Chinese School-Based Professional Learning Communities. *Journal of Education, Humanities and Science*, 8(1), 47–62.
- Mosweunyane, D. (2013). The African Educational Evolution: From Traditional Training to Formal Education. *Higher Education Studies*, 3(4), p50. <https://doi.org/10.5539/hes.v3n4p50>
- Murray, J., & Vanassche, E. (2019). Research capacity building in and on teacher education: Developing practice and learning. *Nordisk tidsskrift for utdanning og praksis*, 13(2), 114–129. <https://doi.org/10.23865/up.v13.1975>
- Mwakabenga, R. J. (2018). Developing Teacher-Led Professional Learning in a Tanzanian Secondary Schools. *Massey University, Manawatu, New Zealand*. <http://hdl.handle.net/10179/14916>
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, 16(1), 160940691773384. <https://doi.org/10.1177/1609406917733847>

- Nsamenang, B., & Tchombe, T. (2011). *Handbook of African Educational Theories and Practices A Generative Teacher Education Curriculum*. Bamenda, Cameroon. Human Development Resource Centre (HDRC).
- O'Brien, S., McNamara, G., O'Hara, J., & Brown, M. (2022). Learning by doing: Evaluating the key features of a professional development intervention for teachers in data-use, as part of whole school self-evaluation process. *Professional Development in Education*, 48(2), 273–297. <https://doi.org/10.1080/19415257.2020.1720778>
- Patfield, S., Gore, J., & Harris, J. (2021). Shifting the focus of research on effective professional development: Insights from a case study of implementation. *Journal of Educational Change*. <https://doi.org/10.1007/s10833-021-09446-y>
- Pereira, F. (2013). Concepts, policies and practices of teacher education: An analysis of studies on teacher education in Portugal. *Journal of Education for Teaching*, 39(5), 474–491. <https://doi.org/10.1080/02607476.2013.844957>
- Popova, A., Evans, D. K., Breeding, M. E., & Arancibia, V. (2022). Teacher Professional Development around the World: The Gap between Evidence and Practice. *The World Bank Research Observer*, 37(1), 107–136. <https://doi.org/10.1093/wbro/lkab006>
- Popp, J. S., & Goldman, S. R. (2016). Knowledge building in teacher professional learning communities: Focus of meeting matters. *Teaching and Teacher Education*, 59, 347–359. <https://doi.org/10.1016/j.tate.2016.06.007>
- Prestridge, S., & Main, K. (2018). Teachers as Drivers of Their Professional Learning Through Design Teams, Communities, and Networks. In J. Voogt, G. Knezek, R. Christensen, & K.-W. Lai (Eds.), *Second Handbook of Information Technology in Primary and Secondary Education* (pp. 433–447). Springer International Publishing. https://doi.org/10.1007/978-3-319-71054-9_29
- Reeves, J. (2009). Teacher investment in learner identity. *Teaching and Teacher Education*, 25(1), 34–41. <https://doi.org/10.1016/j.tate.2008.06.003>
- Richmond, G., & Floden, R. E. (2018). Leveraging Research for Teacher Education Policy, Design, and Practice. *Journal of Teacher Education*, 69(1), 4–6. <https://doi.org/10.1177/0022487117742131>
- Saroyan, A., & Trigwell, K. (2015). Higher education teachers' professional learning: Process and outcome. *Studies in Educational Evaluation*, 46, 92–101. <https://doi.org/10.1016/j.stueduc.2015.03.008>
- Sleeter, C. (2014). Toward Teacher educational research That Informs Policy. *Educational Researcher*, 43(3), 146–153. <https://doi.org/10.3102/0013189X14528752>

- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Sun-Keung Pang, N., Wang, T., & Lai-Mei Leung, Z. (2016). Educational reforms and the practices of professional learning community in Hong Kong primary schools. *Asia Pacific Journal of Education*, 36(2), 231–247. <https://doi.org/10.1080/02188791.2016.1148852>
- Swai, C. Z. (2019). Teacher professional ‘Development’ in Tanzania: Contesting the orthodoxy. In the proceeding of the 1st International Conference on Innovative Education and Policy Reforms for Industrial Economy in Africa (ICIEPRIEA). *The University of Dodoma, Tanzania.*, 83–100.
- Swai, C. Z., Nkaizirwa, J. P., Hugo, A. K., Mahenge, C. A., & Komba, P. S. (2022). Strengthening Teacher Education in Tanzania: Student-Teachers’ and Tutors’ Satisfaction with College Facilities and Environment. *Cogent Education*, 9(1), 2070053. <https://doi.org/10.1080/2331186X.2022.2070053>
- The Role of Research in Teacher Education: Reviewing the Evidence. Interim Report of the Bera-Rsa Inquiry.* (2014).
- Vangrieken, K., Dochy, F., Raes, E., & Kyndt, E. (2015). Teacher collaboration: A systematic review. *Educational Research Review*, 15, 17–40. <https://doi.org/10.1016/j.edurev.2015.04.002>
- Warnes, M. (2018). *Conducting a Literature Review using NVivo.* <https://doi.org/10.13140/RG.2.2.31849.75360>
- Wentzel, A. (2018). *A guide to argumentative research writing and thinking: Overcoming challenges.* London ; New York. Routledge, Taylor & Francis Group.
- Westbrook, J. & EPPI-Centre. (2013). *Pedagogy, curriculum, teaching practices and teacher education in developing countries.* London. EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.



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