Examining the Effectiveness of Teacher Education in the Lesotho Context: Implications on Teachers' Efficacy

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Abstract—Teacher education provides the initial step in the professional development of preservice teachers introducing them to new viewpoints while providing them with information and skills. This knowledge is but not limited to subject and pedagogical content knowledge that form the basis of quality teaching. However, studies have seldom evaluated the effectiveness of teacher education in producing more skilled and thoughtful teachers. This study examines preservice teachers' opinions about the effectiveness of their initial training and how it affects their self-efficacy. Using semi-structured interviews with open-ended questions, data was gathered from ten preservice teachers purposively selected for the study. The results showed that the effectiveness of teacher education depends on the strength of micro-teaching, good supervision; pedagogical content; and ability to manage classrooms. Consequently, the study highlights deficiencies in teacher education resulting from the following: teaching practice as a component of teacher education was too short to give them time to practice; their mentors did not allow them to practice most of the time, allowance to teach teaching subjects, they are sometimes misused by their mentors in that they do a lot of their work; they are forced to take several courses of which when they fail, due to clashing time-tables they have to repeat courses; they miss tests, lack of pedagogy by some of their lecturers. This implies that even though teacher education is significant in developing preservice teachers' professionalism, it can highly decrease their efficacy. Providing effective teacher education to preservice teachers prolongs their stay in the teaching profession.

Keywords—micro-teaching, inadequate training, teaching practice, mentors, self-efficacy, pedagogical content knowledge, teacher education

I. INTRODUCTION

Teacher education is habitually the initial stage in preservice teachers' professional growth, introducing them to new viewpoints while also providing them with information and skills [1]. This knowledge is but not limited to, subject and pedagogical content knowledge,

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that is, or knowledge of how to teach, which is essential for effective teaching. Studies show that quality teaching is dependent on the quality of teachers, workplace learning, or the professional experience that they gained as part of teacher education [2, 3]. Teaching is regarded as a very complex stage that requires a highly skilled person who can apply various methods such as integration or incorporation of various knowledge, allowing the construction of a range of pedagogical knowledge as well as adapting to learners' diversity in the classroom [4]. According to Hoveid and Conroy [5], the success of teacher education programmes and their ability to effectively train future teachers largely depends on the professional competence of teacher educators and how they reinforce these programs. This means that wellprepared teachers stay longer in the teaching profession than teachers who do not. This implies that key people in the institutions of education must provide educational experiences that lead preservice teachers from the state of lacking knowledge to the light of knowledge. Hence, they have to be more knowledgeable in terms of content because they are responsible for implementing changes in education at any stage [6]. Therefore, it is crucial to provide them with quality training that will put students at risk in the future. Training of preservice teachers for effective teaching requires pedagogical knowledge and interpersonal teaching skills for them to play their teaching role while on the other hand helping them feel like teachers who can achieve [7].

Traditional teaching methods used in such programs have been criticized for being outdated and ineffective, resulting in preservice teachers learning theoretical concepts without practical application. This means that newly trained teachers are unable to use newly developed tactics in their classrooms, leading to low teacher efficacy and insufficient training [8–10]. To address this, it is important to familiarize preservice teachers with the actual local school culture and provide effective training that contributes to improved learning outcomes for students, including access to resources, student participation, and effective school management Role plays a significant part in determining the success and failure of learners. Jadhav [11] suggests that teacher education needs to be revised to

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improve the quality of education. The current study examines the effectiveness of teacher education in Lesotho and how it impacts teachers' efficacy.

Chere-Masopha et al. [8] show that the quality of pedagogical contributions in teacher education programmes and their effective use for training preservice teachers depend mainly on the professional capability of teacher educators and how it is applied to reinforcing the teacher education programmes. The ineffective teacher education is criticized as traditional because lecturers use obsolete teaching methods to train teachers. In this way, preservice teachers learn theoretically, they neither put into practice effective teaching-learning methods during their training nor their teaching because the teaching skills and tactics inculcated in them are already ineffective [9]. So, this implies that teacher education remains ineffective when newly trained teachers are not able to use newly developed tactics in their classrooms.

It also displays low teacher efficacy that preservice teachers do not achieve their intents. This is what is considered insufficient training which at times makes teachers seem unwilling to recognize and acknowledge their roles [8, 10]. They further argue that it becomes significant to familiarize them with actual local school culture rather than the foreign culture that does not work in reality. Improving the value of teacher education is one of the inputs that contribute to learner's learning outcomes such as curriculum resources, students' participation, leadership, and management of the school. They all play a significant role in determining the success and failure of a learner. Jadhav [11] articulates that teacher education needs to be revised to advance quality education. This calls for the current study which examines the effectiveness of teacher education in the context of Lesotho and how this affects the teachers' efficacy.

II. LITERATURE REVIEW

Teacher education encompasses the process and procedures designed to equip prospective teachers with skills, knowledge, curriculum, teaching materials, and equipment [12]. Feuer *et al.* [13] describe teacher education as the combination of teaching skills, pedagogical theories, and professional skills that enable preservice teachers to develop the appropriate knowledge, attitude, and skills for comprehensive professional development. Therefore, teacher education must be effective to train preservice teachers adequately for teaching.

Teaching skills involve training and practice using various techniques, approaches, and strategies to help teachers plan and impart instruction, provide appropriate reinforcement, and conduct effective assessments while at work [1]. It also includes classroom management skills, preparation, and use of instructional materials, and communication skills that preservice teachers need to use in their classrooms. The pedagogical theory encompasses philosophical, sociological, and psychological considerations that enable teachers to have a sound basis for practicing teaching skills in the classroom [14]. Professional skills include techniques, strategies, and

approaches that help teachers grow in the profession and work towards its growth. It also includes soft skills, counseling skills, interpersonal skills, computer skills, information retrieval and management skills, and lifelong learning skills [15].

Darling-Hammond et al. [16] attest that teacher education is indeed a crucial aspect of the education system. Teachers play a vital role in shaping the future by educating and guiding students. Ensuring that teachers are well-educated and equipped with the necessary skills is essential for maintaining high academic standards and meeting the diverse needs of learners. In today's rapidly changing world, teachers face evolving demands and challenges. They need to be prepared to adapt to new teaching methods, technologies, and student needs. Teacher education programs help educators stay current with these changes and develop the skills needed to foster a positive learning environment for their students. By enhancing the skills and abilities of teachers, we are not only investing in the present but also the future. Teachers are not just transmitters of knowledge; they are facilitators of learning who help shape the minds of future citizens. Providing them with quality education and training is key to ensuring that they can effectively prepare students for the opportunities and challenges of the globalized world [17].

The combination of theoretical knowledge gained in teacher education programs and practical classroom experience through teaching practice, classroom experiences, and micro-teaching is crucial for the development of preservice teachers [13]. This blend of theory and practice allows them to not only understand the principles of pedagogy and subject matter but also to apply this knowledge in real-world teaching situations [18]. Support, supervision, and monitoring are essential components for the successful transition of preservice teachers into their roles as educators. The first year of teaching can be particularly challenging as new teachers are not only responsible for teaching students but also continuing their learning and development. By providing ongoing support, mentorship, and guidance, educational institutions, and experienced educators can help preservice teachers navigate the complexities of the classroom and build confidence in their teaching abilities [3, 18]. This means they never stop learning even when they are teaching. The other factor that contributes to the quality of teacher education is the number and significance of the courses that they undergo while still in their initial training because they determine the teachers' professional competence which fails them [4]. This is due to the preservice teacher education program and the training they received that are parallel and do not match classroom practices and responsibilities that they will face in real teaching. This enables the concerned parties to close the gap between students who have access to quality education and those who do not.

Extended periods of teaching practice provide preservice teachers with the opportunity to immerse themselves in the teaching profession, leading to a deeper understanding of the challenges and rewards it entails.

This immersion can have a positive impact on their career longevity, job satisfaction, and level of engagement in their teaching roles [19]. Additionally, Solanki and Patel [18] stress that the reflective practices that accompany field experience enable preservice teachers to critically evaluate their teaching methods and adapt to meet the evolving demands of the education sector. Another aspect that contributes significantly to teacher education is microteaching in the early years of training. Micro-teaching is a teacher training method that provides preservice teachers the opportunity to implement their teaching skills by refining various simple tasks known as teaching skills and it is the current practice worldwide [15, 16]. Exposing preservice teachers to micro-teaching enables them to experience and execute appropriate instructional strategies before the real task of teaching which comes last in the training period. The significance of exposing preservice teachers to appropriate and relevant instructional strategies creates and molds them as effective teachers in their teaching profession [18].

Other studies also stated the value of microteaching as the best platform of practice where preservice teachers develop a satisfactory level of mastery in the use of various teaching skills and behaviours [16, 20, 21]. Additionally, microteaching is regarded as another aspect of effective teacher education that promotes effective teaching strategies and reflective practices among preservice teachers during teacher training. Solanki and Patel [18] add that it is perceived by preservice teachers as a very effective means of giving them a chance to assess their strengths and weaknesses during teaching practice. This forms the foundation that influences teachers' beliefs about teaching during their initial training and those beliefs are held for a long time thus becoming very difficult to change.

Furthermore, Solanki and Patel [18] argue that having a longer teaching practice in the program provides more opportunities for preservice teachers to exercise their teaching skills as well as improve their content knowledge. Teacher education reaches out to preservice teachers by providing the relevant knowledge, attitude, and skills to function effectively in their teaching profession. It serves to equip the preservice teachers with the conceptual and theoretical framework within which they can understand the intricacies of the profession. It aims to create the necessary attitude in preservice teachers towards the stakeholders of the profession so that they approach the challenges posed by the environment in a very positive manner [5]. This means empowering the preservice teachers with the skills (teaching and soft skills) that would enable them to carry on the functions in the most efficient. There is a bad attitude between university supervisors and coop teachers (school mentors) against the pre-service teachers' strengths and weaknesses during their practicum practice [6]. This is evident by many studies that mentors and supervisors fail to play their roles so much that they fail to empower and support preservice teachers to gain the expected competence putting teaching practice on the bad side. Prince [6] indicates that both parties agreed that the failure of the pre-service teachers to give clear instructions to their students results from poor coordination of lecturers and school mentors. This is reflected when preservice teachers fail to give a good command of the language and tend to make long explanations in the class.

One other significant aspect of teacher education is the role played by lecturers at the university. Teacher education is dependent upon the quality of lecturers [5]. The quality of pedagogical inputs in teacher education programmes and their effective utilization to prepare preservice teachers depend largely on the professional competence of lecturers and how it is utilized for strengthening the teacher education programmes. Teacher education, thus, first deals with the preparation of effective teacher educators. This is also evident in Chere-Masopha et al. [8] that teacher educators have limited knowledge about the current reforms in Lesotho, subsequently, their training does not target preparing teachers to effectively teach in schools. This explains why many studies have found teachers to be ill-prepared for any curriculum reforms in Lesotho. As curriculum developers, they should be engaged in the development of courses that prepare teachers through professional development [22]. This means that teacher educators should collaborate with the government and schools to prepare teachers for curriculum reforms. Teacher educators are supposed to be responsible for preparing and supporting the continuous professional development of teachers.

Bandura's self-efficacy theory, proposed in 1977, serves as the framework for this investigation. According to him, self-efficacy is a component of the self-system, which includes a person's attitudes, abilities, and cognitive capabilities. He thinks that self-efficacy influences how people see and respond to various situations. He believes that people may identify objectives and changes they wish to make, but that putting these ideas into action is rarely as straightforward. He believes that self-efficacy plays an important part in how objectives, tasks, and obstacles might be tackled. According to him, persons with high self-efficacy might acquire a deeper interest in the activities in which they participate, resulting in a strong feeling of commitment to those interests. On the other side, inadequate self-efficacy may lead people to shun difficult jobs because they think they are beyond their skills. This type of person focuses on their failures and unfavorable consequences, eventually losing faith in their skills [23]. Because they lack confidence in their abilities, they are more prone to experience emotions of failure and sadness. Stressful situations can be particularly difficult to deal with, and people with poor self-efficacy are less resilient and less likely to recover. He has identified four key sources of self-efficacy: mastery experiences (doing a task successfully enhances self-efficacy), social modeling (observing similar individuals accomplishing a task raises self-efficacy), and social persuasion (good comments boost self-efficacy); and stress levels can affect individual self-efficacy.

All these can minimize stress and elevate mood when one faces challenging tasks, so they can improve their sense of self-efficacy. This theory was selected because it relates to the effectiveness of teachers in the classroom after receiving initial training. It shows directly that when has some attitudes and beliefs about him or herself can set high objectives to accomplish. The teacher preparation had to shift from training to education if it had to have a positive influence on teachers in a real situation. However, studies have seldom evaluated the effectiveness of teacher education in producing more skilled and thoughtful teachers. One of the reasons for the lack of such studies is that most of the preservice teachers' practices are still in the development stage, requiring careful exploration of design and initial implementation as well as adjustments based on these observations that include participant feedback [3].

III. MATERIALS AND METHODS

This study is qualitative adapting interviews that are semi-structured. It is qualitative research as it deals with the opinions of teachers as knowledgeable people to give their opinions about the teacher education they have been offered, therefore, it is considered a person-centered and holistic perspective to understand the human experience. The population consists of pre-service teachers who have joined the profession in Maseru. Ten teachers were selected from five schools from different proprietors. These proprietors are; Anglican Church Schools, Roman Catholic Schools, Private Schools, Government Schools, and Evangelical Church Schools [24]. These schools were selected to make generalizations about teachers' opinions in these schools. These teachers were selected because they are knowledgeable about teacher education as they have been initially trained at one of the teachers' training institutions and convenient for the researcher to reach them [24]. The study used semi-structured interviews as a method of collecting data from these teachers with openended questions to help research and, when necessary, probe for more details on an issue [25]. Open-ended questions were also used to give teachers a chance to give all information without restrictions [26].

Interviews lasted for 30 minutes on a school premise, in a place cool for recording. The researcher transcribed the interviews promptly to ensure that the information was still fresh in their memory. After transcribing and reviewing the material several times, codes were created and developed into themes [27]. Conducting interviews with individuals from diverse backgrounds can enhance the validity of the results. One of the greatest strengths of qualitative methods is that they have the potential to generate rich descriptions of the participants' thought processes and tend to focus on reasons "why" a phenomenon has occurred [28]. The data collected from the interview is analyzed through descriptive analysis by examining and recording patterns and trends emerging from the data. This helped the researcher make informed decisions about the effectiveness of teacher education towards teacher efficacy.

IV. RESULTS AND DISCUSSIONS

This study examines the effectiveness of teacher education and its implication on teachers' self-efficacy. The results of the study revealed that teachers face challenges during their initial training, the teacher education. The challenges of inadequacy of training received by preservice teachers include Teaching Practice (TP) which is very short as it lasts for a few months. According to these teachers, this teaching practice does not allow them to fully experience the actual teaching because they only do it for assessment purposes. This means they can forge teaching to impress their observers to obtain good marks. When preservice teachers do not feel competent about their teaching, it implies that they have low self-efficacy because they do not have the capabilities to accomplish their targets or it is either level of stress is high for them to perform their roles in real practice. It also proves the ineffectiveness of teacher education to make a positive influence on the quality of training received by teachers which ultimately, impacts the quality of curriculum transaction in classrooms thereby affecting pupil learning and the larger social transformation. It also aligns with Solanki and Patel [18] that teaching practice is one of the important components of teacher education that bridges theory and practice experiences allowing learning knowledge in real teaching for the first time. Hence it has to be lengthened and handled with care for it to build strong beliefs about a teacher from the beginning of teaching. It should also include a year of reflections on the practices so that they are strengthened before one gets to real teaching. It also concurs with Solanki and Patel [18] that exposing preservice teachers for a longer period in the field prolongs teachers' engagement in their teaching career developing deep thinking and engagement in reflective practices as well as increasing self-efficacy. Schools and educational institutions need to create a supportive and nurturing environment for preservice teachers, where they feel valued, respected, and encouraged to grow. Mentorship should be a collaborative effort where both parties benefit from the relationship. Preservice teachers should be allowed to learn and practice their skills in a safe and supportive environment, rather than being used to doing their mentors' work because it decreases teacher efficacy.

The results of the study further show that teacher education is weakened by the number of courses they have to take some are not even relevant to the actual teaching of the subject. They showed that while training, preservice teachers are forced to take a certain number of courses to make up a full programme. Some of these courses are taken from different faculties taught by lecturers who have not gone through education courses. This means that when it comes to teaching strategies, these lecturers are not wellinformed and cannot be effective in teaching or developing teachers. They say that sometimes they have to drag these courses to the following year when they do not perform well on them. This increases their workload and affects their performance on their teaching subject. The dragging of courses is caused by missing test days simply because timetables from these faculties clash and impact negatively on student-teachers. This implies that mastery experience is missing because they are not succeeding in whatever they do [22]. This implies that teacher education is not effectively preparing these teachers for their teaching profession.

Subsequently, the pedagogical part of teacher education is crucial in teaching in the future. Similarly, Chere-Masopha et al. [8] showed that the quality of pedagogical inputs in teacher education programmes and their effective utilization to prepare prospective teachers depend largely on the professional competence of lecturers and how it is utilized for strengthening the teacher education programme. So, it implies that low self-efficacy in teachers is the consequence of lecturers with limited knowledge as they are ill-prepared to train these teachers. As indicated earlier, the level of and quality of subject matter knowledge need to be sharpened for teachers to meet the needs of the diverse learners in class. It also has to increase the level of motivation and commitment of teachers proving the quality of teachers they are, hence, effective teacher education.

Concerning micro-teaching, teachers showed positive comments that they were satisfied with micro-teaching as it is direct, relevant, and gives immediate feedback on preservice teachers' teaching performance by their lecturers could potentially improve drastically their teaching performance. This means they will be effective in transferring knowledge to their students and that they feel highly self-esteemed. They also showed that high achievement in teaching theory and high aptitude in teaching practice both contributed synergistically to higher levels of teachers' self-efficacy which they believe contributes to more effective teaching. This concurs with Ramesh [29] that micro-teaching enables preservice teachers to experience and execute appropriate instructional strategies before the real task of teaching which comes in the early stages of the training period.

Additionally, as microteaching is regarded as another aspect of effective teacher education that promotes effective teaching strategies and reflective practices it determines whether a teacher is or is not effective at doing his or her job. When teachers feel inadequacy in their training and knowledge, they transfer that inadequacy to their students. This also concurs with Bandura [30] that when people observe similar others succeeding in the same task, teachers feel motivated that they also have to succeed similarly. It also minimizes teachers' stress and mood which may impact students. This implies self-esteem has played a crucial role in moderating teaching effectiveness if teachers feel high self-efficacy.

V. CONCLUSION

Teacher efficacy comprises a set of beliefs that teachers possess due ability and inability to perform a certain task, helping teachers reflect on themselves and whether teacher education impacted them. The results of the study showed that teacher education is embedded in micro-teaching, a schedule of teaching practice that has to be longer to make teachers self-esteemed about their teaching profession.

Results showed that teaching practice exposes teachers to real teaching during the last year of training which holds countless prospects for providing pre-service teachers with chances to exercise decision-making in their teaching profession. Similarly, micro-teaching also contributes to a high level of self-efficacy of teachers because they learn how to impart their knowledge at an early stage of teaching. The ineffectiveness of teacher education is due to the number of courses that preservice teachers enroll in some of them are irrelevant since they have to take them from different faculties because of the structure of the institution. This makes them miss classes because of timetabling and they end up failing and have to drag these courses to the following year. This impedes the effectiveness of teachers in their roles in the classrooms.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHORS CONTRIBUTIONS

Both authors contributed to the writing and editing of the paper and agreed to publish it. Mamosa Thaanyane was responsible for the conceptualization, drafting, and writing of the manuscript; Thuthukile Jita provided critical revisions, edited the manuscript, and covered the publication fees; both authors had approved the final version.

REFERENCES

- [1] X. Yu, M. An, and X. Zhao, "Development of preservice teachers' competence beliefs: Career values and perceptions of teaching as a profession: A longitudinal study," *Heliyon*, vol. 9, no. 3, pp. 1–9, 2023. https://doi.org/10.1016%2Fj.heliyon.2023.e13918
- [2] C. H. Hill, Z. Mancenido, and S. Loeb, "Effectiveness research for teacher education," Ed WorkingPaper, pp. 21–252, 2021. https://doi.org/10.26300/zhhb-j781
- [3] S. L. Dias-Lacy and R. Guirguis, "Challenges for new teachers and ways of coping with them," *Journal of Education & Learning*, vol. 6, no. 3, pp. 265–272, 2017. http://doi.org/10.5539/jel.v6n3p265
- [4] F. Evangelou and L. Fykaris, "Teaching practices in teacher education department as a factor of professional development of teacher candidates: A proposed project," *Journal of Education Society and Behavioural Science*, vol. 36, no. 6, pp. 53–63, 2023. https://doi.org/10.9734/jesbs/2023/v36i61229
- [5] M. H. Hoveid and J. C. Conroy, "Research in teacher education," European Educational Research Journal, vol. 7, no. 4, pp. 451–458, 2008. http://dx.doi.org/10.2304/eerj.2008.7.4.451
- [6] F. B. Prince, "Effectiveness of teacher preparation: From theory to practice," Ph.D. thesis, Capella University, p. 14, 2010.
- [7] NCTE Manual on Teacher Education and Teacher Training, National Council for Teacher Education, New Delhi, 1998.
- [8] J. Chere-Masopha, T. Tlali, T. Khalanyane, and E. Sebatane, "The role of teacher educator in curriculum reforms in Lesotho schools," *International Journal of Learning, Teaching and Educational Research*, vol. 20, no. 6. pp. 386–402, 2021. http://dx.doi.org/10.26803/ijlter.20.6.20
- [9] M. H. Ullah, M. N. U. Khan, A. Murtaza, and M. N. U. Din, "Staff development needs in Pakistan higher education," *Journal of College Teaching & Learning (TLC)*, vol. 8, no. 1, 2011. https://doi.org/10.19030/tlc.v8i1.982
- [10] M. Raselimo and M, Mahao, "The Lesotho curriculum and assessment policy: Opportunities and threats," *South African Journal of Education*, vol. 35, no. 1, pp. 1–12, 2015. https://doi.org/10.15700/201503070025
- [11] V. Jadhav, "ICT and teacher education," *International Educational E-Journal*, vol. 1, no. 1, pp. 64–69, 2011.

- [12] P. Agarwal and I. Naaz, "Teacher development and teacher education," *Journal of India research*, vol. 8, no. 3–4, pp. 44–51, 2020
- [13] M. J. Feuer, R. E. Floden, N. Chudowsky, and J. Ahn, Evaluation of Teacher Preparation Programs: Purposes, Methods, and Policy Options, Washington, DC: National Academy of Education, 2013, p. 79.
- [14] S. Blomeke, A. Felbrich, C. Muller, and C. Kaiser, "Effectiveness of teacher education," *International Journal on Mathematics Education*, vol. 40, no. 3, 2008. https://doi.org/10.1007/s11858-008-0096-x
- [15] U. T. Sa'ad, S. Sabo, and A. D. Abdulaah, "The impact of microteaching on the teaching practice performance of undergraduate agricultural education students in college of education, Azare," *Journal of Education and Practice*, vol. 6, no. 6, pp. 109–115, 2015.
- [16] L. Darling-Hammond, L. Floor, C. Cook-Harvey, B. Barron, and D. Osher, "Implications for educational practice of the science of learning and development," *Applied Developmental Science*, vol. 24, no. 2, pp. 97–140. 2019. https://doi.org/10.1080/10888691.2018.1537791
- [17] A. Fhaeizdhyall, A. Nazamud-din, F. Sabbir, and F. D. S. Ibrahim, "The effectiveness of teacher education program: Identifying the difficulties and challenges faced by the pre-service English teachers," *International Journal of English Language Teaching*, vol. 6, no. 1, pp. 1–17, 2018.
- [18] M. M. Solanki and A. Patel, "Micro-teaching: For the teaching practice performance," *International Journal of Research in all Subjects in Multi Languages*, vol. 5, no. 5, pp. 1–4, 2017.
- [19] C. L. O. Jehovah, "Microteaching process and its impact on teacher training programs in the University of Bamenda," *Journal of Education and Teaching Methods*, vol. 1, no. 2, pp. 32–46, 2022. https://doi.org/10.58425/jetm.v1i2.95
- [20] C. Boakye and J. G. Ampiah, "Challenges and solutions: The experiences of newly qualified science teachers," SAGE Open, pp. 1–10, 2017

- [21] L. M. D. Santos, "The relationship between teachers' beliefs, teachers' behaviors, and teachers' professional development: A literature review," *International Journal of Education and Practice*, vol. 7, no. 1, pp. 10–18, 2019. https://doi.org/10.18488/journal.61.2019.71.10.18
- [22] J. Dengerink, "Teacher educators' competencies: What is needed in a multi-faceted and contested profession," in *New Aspects in European Teacher Education*, I. Falus and J. Orgovanyi-Gajdos, Eds., Eger: Líceum Kiadó, 2016, pp. 45–67.
- [23] P. Leavy, Quantitative, Qualitative, Mixed Methods, Arts-Based, and Community-Based Participatory Research Approaches, New York: The Guilford Press, 2016, p. 163.
- [24] M. M. V. Wyk and M. Taole, "Research design," Educational Research: An African Approach, pp. 164–184, 2015.
- [25] J. W. Creswell, Research Design, 4th edition, London: SAGE, 2018
- [26] C. W. Creswell and P. V. Clark, Designing and Conducting Mixed Methods Research, 3rd edition, London: SAGE., 2018, p. 215.
- [27] A. I. Johnson and D. S. Glenwick, Handbook of Methodological Approaches to Community Based Research, New York: Oxford Express, 2016, pp. 466–479.
- [28] A. W. Edmonds and T. D. Kennedy, An Applied Guide to Research Designs 2nd edition London: SAGE, 2017
- [29] A. Ramesh, "Microteaching, an efficient technique for learning effective teaching," *Journal of Research in Medical Sciences*, vol. 18, no. 2, pp. 158–163, 2013. http://www.ncbi.nlm.nih.gov/pmc/articles/pmc3724377/
- [30] A. Bandura, "Self-efficacy: Towards a unifying theory of behavioural change," *Psychological Review*, vol. 84, no. 2, pp. 191 –215, 1977. https://psycnet.apa.org/doi/10.1037/0033-295X.84.2.191

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