Teacher Education versus Teacher Training: Epistemic Practices and Appropriate Application of both Terminologies

by

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Abstract

In this article, the author presents a practice-based approach, of an analysis of two concepts; teacher education and teacher training, to preparing candidates for quality teaching. The emphasis is on understanding the meaning of the two terms based on what educational thinkers have come to understand and appreciate as the reasoning behind each one of them. Thus, the author delimited himself to what is meant when the two terms are used rather than providing empirical data on the quality of teachers produced as a result of which term is used in teacher preparation. The philosophical stance in this article is that the meaning of these concepts influences the design of learning experiences for prospective teachers, the framing of their curriculum, and the attitudes teacher educators will have in the preparation process. Others may actually be tempted to think anyone can teach since they assume teaching is innate or natural. However, the author explains the necessity and urgency of teacher education and training if quality teachers are to be produced so as to achieve effective curriculum implementation in schools.

Keywords: *Teacher Education, Teacher Training, Teacher Preparation.*

1. Introduction

Teacher training and teacher education are some of the most commonly used terms by researchers, scholars and practitioners who are involved in teacher preparation. However, over the years the two terms have gained a very clear distinction emerging from a deeper and clear understanding of what it means to prepare a teacher especially for the current fast changing and sophisticated educational landscape. In Zambia for instance, colleges that prepared teachers were being referred to as teachers training colleges. However, during the teacher preparation reforms which began in the early 2000 in the Ministry of General Education they were all changed to be called colleges of education. The reforms also raised the qualifications for teacher educators from a minimum of a diploma in education to a relevant bachelor's degree. Although sources that may explain why this was done are scarce, Ministry of General Education documents bear witness to this change in the use of the terms as can be seen in policy documents such as the 1977 Education Reforms, 1982 Focus on Learning and the 1996 Educating our Future education policy documents. In fact, colleges of education that were built at the time when quality in construction was highly respected and adhered to, still have the teacher training marks on their administration front walls since the engraves and metal marks are almost impossible to remove without destroying some parts of the building. But what has changed in the understanding of these two terms since we still hear and read in some current literature the interchanging usage of the terms? Commencing this discussion with an imaginary narrative will help put the two terms, teacher education and teacher training, in their right perspective from the onset.

Mutinta had just completed her secondary school from Njase Girls secondary school in Choma and was interested in becoming a primary school teacher. Her uncle who raised her up was himself a head teacher who tried to persuade her to enrol in a teacher education programme at the University of Zambia. However, Mutinta wanted to simply apply directly to a private primary school that was offering a hands-on teacher training

internship programme to young secondary school leavers and there after employ them directly. A teacher education progamme at the university would take more years, Mutinta told her uncle, since she wanted to quickly start earning some money and help her poor mother in the village and her three siblings. However, if she went to university, she would graduate with a Bachelor's degree in education. This programme would focus on both theory and practice of education, however, it would be costly and time consuming although the benefits are worth it. On the university teacher education programme, Mutinta would not have experience in a classroom until in third year during school experience and then after graduation. If Mutinta entered a teacher training programme at the private school, she would immediately be immersed in the practice of teaching. The programme would take a shorter period of time and would be cheaper for her. However, the training would be subject to the mentor teacher and school together with classroom dynamics. Which route should Mutinta take to become a primary school teacher, Teacher Education or Teacher Training?

2. **Conceptualization of the Terms**

Education is a field that is subject to many fads, and what counts as a good idea and definition of the term may vary over time and across locations. It is for this reason that we will need to define the term, education, in the context of teacher preparation since we cannot adequately do a meta-analysis of the term which has existed for as long as humanity itself. Darling-Hammond et al. (2017), Hammerness, Tartwijk and Snoek (2012) provided a framework for the definition of teacher education by pointing to aspects such as being wide and encompassing both the theory and practice of teaching. However, scholars such as Rowntree (1981) had earlier made a very clear and elaborate distinction between teacher education and teacher training which resonate with the Mutinta story in the earlier paragraphs. Rowntree (1981:313) explained that;

> *The term teacher education is wider than teacher training in that it includes not simply a teacher's vocational training but also whatever general post-*

> *secondary education he has that contributes to this growth as a person regardless of his future profession. Thus, teacher education courses include the study of one or more academic disciplines as well as educational subjects and supervised teaching practice.*

This is exactly what we see student teachers spending time doing in universities and colleges of education. Student teachers spend three to four years studying academic disciplines in the liberal arts, in pedagogy and in the profession of being a teacher. Mulenga (2015), Mulenga and Luangala (2015), Darling-Hammond and Lieberman (2012), Banja and Mulenga (2019), Muzata and Ndonyo (2019), all explained that every teacher education programme regardless of the model consists of educational theory, skills and knowledge types relating to the content area of the subjects and pedagogical content knowledge of the methodological knowledge and skills or competencies relating to classroom techniques. These three areas are covered whether the programme follows a concurrent or serial model of teacher education. In recent years, scholars such as Heikkinen et al. (2018) alluded to some distinction of the two terms by referring to training being more of the job specific. However, in making a distinction between the two concepts Rowntree (1981:327) earlier had a clear description of training as;

> *The systematic development in a person of the knowledge, attitudes and skills necessary for him to be able to perform adequately in a job or task whose demands can be reasonably well identified in advance and that requires a fairly standardised performance from whoever attempts it.*

From Rowntree's explanation we can deduce that training refers to acquisition of concrete skills for meeting specific goals in a real-life situation. In other words, we are refereeing to the development of what we might call "closed skills," that would require mastery so as to improve the efficiency and accuracy of doing a specific job. Although the two terms teacher education and teacher training have been used interchangeably in some literature

and ordinary discourses, education theorists and scholars clearly distinguish the terms. Teacher education scholars such as Salleh and Tan (2013)., Sahlberg (2007) and Darling-Hammond (2000) have all mentioned that in the context of teacher preparation, training is linked to acquiring real classroom competencies while education refers to more abstract as well as practical knowledge, skills, attitudes and values about teaching and learning. When referring to the process of preparing future teachers, education specialists find "teacher education" more consistent with the idea of developing versatile, reflective practitioners with a wealth of professional competencies. This resonates with what Mwanza and Mulenga (2018:76) explained the key position that teachers occupy in the education when they explained that 'teachers form an integral part of the education system of any country since they are the vehicles through which the curriculum and by extension the whole education policy is translated and interpreted to the learners' Thus, teacher education provides a wider understanding of what it is that teacher educators intend to produce as the final product of the teacher preparation programme. Because teacher education includes both the theoretical and practical components of teacher preparation, it gives a heard start to a student teacher upon graduation. On the contrary, teacher training is confined to more well-defined instructional activities which require fairly prescribed performances as Mukeredzi and Manwa (2019); Darling-Hammond et al (2017) and O'Neill (1986) actually puts it. O'Neill (1986) further elaborated that teacher training is meant to focus on 'on-the-job' internships. In teaching for instance, such internship may best be accompanied by activities related to preparation of standardised lessons, classroom management strategies, marking learners' work, field supervision, supervising learners in co-curricular activities and some administrative duties. Additionally, Hills (1982:273) provided another dimension to this conceptualisation. He viewed the two concepts as one more about knowledge acquisition while the other one is about the application of knowledge as follows; 'education deals a great deal with the acquisition of knowledge while training is more with the application of knowledge'. While this may hold water the case with teacher education however is such that apart from acquiring

knowledge, skills, values and attitudes are also acquired and all these are meant to lead to their application otherwise one would have no competencies to actually teach. This same idea was supported by Heeralal (2014) and Hudson (2013).

Mulenga (2015) gave a brief analysis of the two terms and some of his thoughts are shared in the paragraphs that follow. As we have mentioned earlier on, in everyday use of the concepts; teacher education and teacher training are frequently used interchangeably but while this is also noted in some literature regarding teacher preparation, the term teacher education has evolved through historical development from the term teacher training. According to Turney (1977), the evolution from teacher training to teacher education commenced when it was realized that preparing teachers involved much more than training since teacher preparation should be commensurate with both the quality and the standards of the profession. Thus, there has been a long standing and ongoing debate about the most appropriate terminology to describe the period that student teachers spend in college or university. The term 'teacher training', which gives the impression that the period involves preparation of persons who will undertake relatively routine tasks, has lost ground to 'teacher education' with its focus on preparing staff for a professional role as intellectuals and reflective practitioners who have mastered their subject matter not only for the level that they are to teach but for a wide understanding of education as a discipline.

Additionally, Giroux (1983) asserted that, if a teacher education programme really strives to develop teachers who qualify as transformative intellectuals, teachers' criticality which comes from their mastery of the subject matter and the philosophy and psychology of education must be given a high priority since action without understanding and critical reflection results in mindless activism (Freire, 1972). Thus, the term 'education' in the context of teacher preparation should not be confused with the humanist classist theory that was propounded by Greek scholars such as Aristotle, Socrates and others as being for the cultivation of cognitive skills only. The humanist classist theory meant that an educated teacher would be one who is able to describe principles behind a teaching skill but

is unable to perform the skill itself, and on the other hand the trained teacher would be one who is able to perform the skill but unable to explain the principles underpinning it. Training has a likelihood of preparing personnel who do things that they do not actually understand. This is not the type of a teacher that we what. Additionally, Richards and Nunan (2012) have also made a clear distinction between the two terms (education and training) when explaining teacher preparation. They stated that teacher education is preferred for teacher training since training implies unthinking habit formation while the professional teacher needs to develop theories, awareness of options, decision-making abilities and application of skills – a process which is better defined by the term teacher education. Hence, teacher education is consciously used to describe an all-round development of a student teacher who is an intellectual, skilled and reflective practitioner of the teaching and learning process. If teachers were to be skilled intellectuals, Giroux (1988) argued that the teacher education curriculum should be designed in such a way as to enable student teachers to integrate their academic subjects with the professional studies that are undertaken in the college or university so as to produce teachers who are reflective scholars and practitioners. Thus, teacher education prepares student teachers not only for the classroom but for all contexts that are related to effective teaching and learning. As Masumba and Mulenga (2019:93) observed that 'the purpose of teacher education is to equip individuals with the personal and professional skills needed in schools and other learning contexts'. One would then ask why some sections of educational practitioners still interchange the two terms.

3. Teacher Education and Training; A Misunderstanding not only Confined to our Times

We do know more about what holds education and teacher education back and also what compromises its quality. There is the force of poorly funded education systems, lack of teaching and learning resources, dilapidated rural schools, demotivated teachers, shortage of well qualified teacher educators and lack of real educational data to facilitate decision making.

However, our own definitions of teacher education and teacher training preclude our practice since definitions influence practice. In Zambia like in most southern and east African countries, great strides have been made in revising the curriculum to a competency-based. Mulenga and Kabombwe (2019:118-119) explained that in a competency-based curriculum 'learners will be expected to acquire three critical educational elements namely; worthwhile skills, appropriate attitudes and applicable knowledge which make up competences'. And yet we seem to be lost in our own educational maze. Making definitions such as the ones done in this article helps to reduce the misunderstanding at least from the conceptualization point of view. But is teacher education and training one of the confusions of our times? Literature suggests that it is indeed one of the educational confusions where the use of terminologies is concerned since we still read the terms teacher education and teacher training still being used by refereeing to teacher preparation in a college and in universities (Muzata and Penda, 2014). This kind of thinking has even lead to some people thinking that they can effectively teach even without having any education in teaching. This kind of thinking has been tried and we have seen its effects in some institutions of higher learning where lecturers have claimed to teach without any or with limited skills in the field of teaching.

As Felman (1992) cautioned that one might be tempted to dismiss the question as just another burden as to whether teacher education and training is one of the confusions of our time. This is simply because we have come to accept the status quo that anyone can teach so why the question. Page and Thomas (1977) stated that the oldest educational complaint has been that there is not enough time to address existential, political, or even ontological breakdown of terms. Yet, what is it that we do with our time as scholars and researchers that we can do without these difficulties and deep reflections on our practice and what it means to theory? If we take Felman's caution seriously, it is crisis that inaugurates the work of education, even as education makes new forms of crisis. However, when one looks at what counts as crisis in teacher education, it could be the lack of understanding of what we do as teacher educators and as educational practitioners.

There is nothing easy about confronting histories of woeful disregard for proper definitions. In this century, teacher education has yet to even acknowledge the confusion of our times although we have advanced so much in terms of science and technology. It is what we would call an academic trauma in the application of knowledge as Gardner (1997) actually put it. This however does not mean that traumatic knowledge cannot be worked through. On the contrary, it does mean that many of the arguments in teacher education are not irrelevant to new ways of conceptualizing our worldly obligations. If teacher education is to join the world, be affected by its participation in world making, and question the "goodness" of its own passions, we must rethink not only past practices and what goes on, but also the very imagination and experience of what we think it is. The challenge of defining these two terms today is unfortunately that the literature past and present remains loaded with the phrase teacher training, just as we still have terms such as head master (instead of head teacher) and mistress (referring to a lady teacher) still found in recent literature. In fact, the two terms teacher education and teacher training continue to be used synonymously and interchangeably in most professional documents, magazines, scholarly journals and newsletters. One may ask, why? What is it that makes education administrators, researchers and teacher educators fail to make this critical difference? It is because many earlier scholars did not make clear distinctions until in the early 80s. But if we read literature of the early twentieth century, we cannot blame all earlier sources and scholars for the present-day confusion since as early as the 1940s, Rivlin (1943:793) made a clear distinction of the two terms that;

> *Teacher education refers to the whole range of activities that constitute preparation for and improvement of members of the teaching profession. It includes pre-service education for those who have not had teaching experience and in-service education for those who are actually engaged in teaching. The elevation of quantitative and qualitative standards for the profession is reflected in the use of the term 'teacher education' rather than the older term 'teacher training'. Whereas*

> *teacher training suggests the development of a rather narrow proficiency in the skills of methods of classroom teaching, teacher education connotes the broad professional preparation needed for the highly complex task of teaching in the modern world.*

Interestingly, even Munroe (1950:1374) also made this clear distinction that;

> *... teacher education refers to the total educative experiences which contribute to the preparation of a person for a teaching position in schools, but the term is more commonly employed to designate the programme of courses and other experiences offered by an educational institution for the announced purposes of preparing persons for teaching and other educational service and for contributing to their growth in competency for such service.*

O'Neill (1986) explained that the term teacher education as early as the 1940s and 1950s remained the major term and it continued throughout the years. This position was also supported and alluded to by Hewitt (1985), Charalambous (2016) and Mukeredzi and Manwa (2019). The successive editions of the Encyclopaedia of Educational Research by Ebel (1969), Harris (1960) and Mitzel (1982) all referred to the preparation of teachers as teacher education and not teacher training. It would seem, therefore that the continuous misuse of the phrase teacher training is just a confusion of our times which has somehow been perpetuated by some scholars who indiscriminately abused the two concepts. O'Neill (1986) for instance gave evidence of scholars such as Knowles (1977), Dejozka and Kapel (1982), Page and Thomas (1977) who used the two terms loosely and in a confusing manner to the extent that they referred to student teachers as trainee teachers, a concept we still find being used today. The term teacher education therefore is appropriate if what we are thinking of as we see it done in university and college teacher preparation programmes is the total intellectual, social and emotional development of the student teacher. Teacher education is made up of the content knowledge, pedagogical

content knowledge, professional and philosophical components of a teacher preparation programme which renowned teacher education thinkers and scholars such as Shulman (2004), Darling-Hammond and Bransford (2005), Manchishi (2013), Zeichner (1993), Biggs (1999) and Hattie and Jaeger (1998) have all propounded and authenticated as vital components of teacher preparation. Therefore, the ability to produce a good teacher effectively requires education. For instance, for a teacher to focus on the national goals of education in teaching they need a holistic understanding of their profession as Zulu and Mulenga (2019:277) explained that 'the pedagogical content knowledge helps the teacher to guide learning in ways which are appropriate as prescribed by the curriculum in order to achieve the aspirations for education of a nation'. What then is the necessity of teacher education when we seem to have sections of society believing that anyone can teach regardless of having been educated in the science and art of teaching, as long as they have been through secondary school or have acquired a degree in arts or science?

4. The Necessity of Teacher Education

Teaching has never been an easy career choice or job. Although in the recent past we have seen mushrooming colleges of education in every corner of Zambia and a number of young people flocking there most of them as their last resort. Though at face value one would argue that it is good for the nation, researchers and evaluators would really need to expose the actual intentions of the proprietors of these institutions. Additionally, almost all new universities in Zambia have a school or faculty of education. Logically, the teacher education curriculum should be dense; and, given the tendency of most schools to give new teachers a dog's breakfast of odds and ends, beginning teachers are assumed and expected to become curriculum experts especially if they are seen to have graduated from a university. However, doubts about the quality of teachers graduating from all these mushrooming colleges of education have not left the minds of school administrators and researchers. But what is the necessity of teacher education? At this point we can learn from some countries

around the world that have turned their education system to an admiration of almost all other nations. Darling-Hammond and Lieberman (2012) have explained that international comparisons have shown that schools in Finland and Singapore are leading the way to the provision of quality education. But why is this the case? What new policies and practices in teacher education have they developed? Referring to the success that has been realised in teacher education in some countries, Darling-Hammond and Lieberman (2012: xii) explained in their preface section that;

> *In a few countries there is almost a seamless connection between policy and practice and an insistence that teachers be well educated with a master's degree in order to teach (Finland and Singapore), while in other places, people can teach with a minimum of preparation, yet with a new set of expectations for what education should be in the 21st Century times are telling us that mediocrity in teacher education has no place.*

While we see living examples of countries improving their education systems by ensuring that policy and other factors which contribute to quality in education go hand in hand with focused and uncompromised teacher education, other countries are taking teacher education to be a field of every one who feels like. Thus the problem is further complicated in teacher education because the noble profession of teaching has been viewed with scepticism outside the field. The received wisdom among policy makers and the lay public is that teaching is a self-evident practice, learned mainly in the doing. All one needs are subject matter knowledge and experience. Kennedy (1997) called this kind of thinking the received wisdom model of teacher learning, in which teachers must learn the subject matter they will teach, typically by studying liberal arts in college, and then must develop and refine their techniques, typically through their own experience. Teacher education is what it is because it is loaded with the philosophy, psychology and practice of teaching which liberal arts cannot provide. Scholars of teacher education such as Zeichner and Liston (1987), further explained that the assumption that a teacher's effectiveness will improve over time with repetition

is an untested hypothesis. Teacher education provides for improvement of teaching teachers and student teachers, how to formulate plans for teaching and evaluate the resulting classroom experiences based on the tested philosophical and psychological realms of learning (Nkhata et al, 2019). Are we saying that there are no excellent teachers among those who have never been to a college of education or university? No clear-thinking teacher educator, researcher or scholar of teacher education would say that such teachers are incompetent. Those who have not been through an effective teacher education programme are not necessarily incompetent, but neither is it professional to assume their competency. The academic community lives, moves and has its being in research and scholarship. Thus, it is not scholarly to assume competency of those teachers who have not been through the teacher education programme because they have been teaching. Finland's success story in education is not only attributed to the prospective teacher's personal attributes and intelligence but to what they became after having gone through a teacher education programme which is highly competitive. Explaining as to how Finnish colleges and universities select its candidates to enter teacher education Sahlberg (2012:5) stated that;

> *Only Finland's best and brightest are able to fulfil those professional dreams. Successful candidates must also possess the highest scores, positive personalities and excellent interpersonal skills. Annually only about one of every ten of such students will be accepted to prepare to become a teacher in Finnish schools. Finnish teacher education is highly selective and only the most capable candidates are admitted.*

What point are we trying to make here? The point is that even the most intelligent and well socially and emotionally developed humans need to go through a well-planned teacher preparation on a teacher education programme. But one may argue that history is dotted with exceptional teachers like Socrates and countless others in medicine, engineering, law and architecture who did not study 'how to teach.' Although these possessed such skills, Socrates for instance mostly used questions to teach but teacher

education could have enriched Socrates one dominated teaching method since he could have been helped to identify many other teaching strategies that could have worked for a variety of learners since his class did not have only one type of a student. Further, it is reasonable to ask: how many of such medical, law and engineering professors would be better lecturers and teachers if they had pedagogical education? Ball and Forzani (2009) further elaborated that most adults do not naturally develop the ability to perform the tasks required of teachers. It is clear from research that the special knowledge, skills, and orientations that underlie and enable the work of teaching are not typically mere by-products of intelligence or of academic talent or success. They Ball and Forzani (2009:500) gave an example that they noted from their studies that;

> *Doing well at mathematics in school, for example, does not readily equip one to understand or be interested in others' mathematical thinking or to understand ideas or solutions in multiple ways. In studies of the mathematical work of teaching, researchers have identified forms of mathematical problem solving and ways of understanding mathematics that are special to the work of teaching and not involved in other forms of mathematical work.*

In this case what the duo are saying is that one needs the competencies of mathematics education in order to teach learners mathematics more effectively and sustainably. The same may be said of teaching learners language skills of writing, reading, speaking and listening. These will require one to learning the science and art of applied linguistics in a college of education or university so as to teach learners more effectively. Therefore, the common view of good teaching as something that is mostly learned through experience, our argument rests on a conception of teaching as unnatural work (Jackson, 1986; Murray, 1989). Because it is, we argue, not natural, carefully designed learning is necessary and it should eminent from a psychological, social and philosophical understanding of teaching and learning which is best acquired through teacher education. The notion that

teaching is natural is difficult to grasp because of the ubiquity and complexity of teaching and learning. Despite the familiarity of teaching, many key aspects of this deliberate practice are not innate; making the transition to becoming a teacher requiring learning to do things and think in ways that are not common in daily life and that most competent adults cannot do well without teacher education. In their study on the teaching of social studies in Zambia, Moobola and Mulenga (2020:29) observed that even with the availability of qualified teachers the implementation of the newly created subject at junior secondary school was chaotic and ineffective simply because teacher education was not provided to such teachers in the subject. The duo mentioned that 'the teacher that was prepared to teach History was tasked to teach the History component of Social Studies, Geography trained teachers taught, the Geography and Civic Education trained teachers handled the Civics component respectively. This situation largely contributed to the poor performance of learners in Social Studies. It is clear from this experience that teacher education either at in-service or pre-service is a necessary process for effective curriculum implementation at school and classroom levels. Thus, teacher education is necessary so as to give a head start to anyone who has the passion for teaching while teacher training can continue to be used in the teacher focused continuous professional development that are mostly organised, in the case of Zambian schools, at school level, district or province levels. In all these levels teachers through their structure of the Ministry of General Education teacher education sections identify need areas of their pedagogical content knowledge in which they share skills on how to improve their practice.

5. Conclusion and Implications

Despite this daunting challenge of making the understanding of these two terms, teacher education and teacher training, preoccupying our academic discourse today, teacher educators, scholars and researchers in the 21st century, however, are not the first to have faced them as indicated in this paper. While it is

the legacy of previous attempts to build academic understanding around teacher education and teacher training, surely, by now, the phrase teacher training is an antiquated concept which should not be applied to how we intend to prepare a novice teacher for this century. Yet, ironically the term still remains part of the educator's so-called professional vernacular. A scholarly unanimous decision is long overdue so as to put the confusion to rest. Learning to teach is a continuum that is effectively initiated with a teacher education programme and extends throughout one's career (Feiman-Nemser, 2001). As teacher education scholars, we do an inadequate job of communicating this reality to our students and to the general public. Our failure to make this point clear leads to unrealistic expectations by policy makers, novice teachers and society who some may think that anyone can teach anyway.

Due to lack of cutting edge research among some teacher educators in most underfunded education systems like the one in Zambia, most of the educators have slipped badly in this regard and unless there is an immediate about-face they are likely to be ranked as second or third-class citizens in scholarly and scientific communities. Kelly-Gangi and Patterson (2001:37) wrote that 'education is not the filling of the pail, but the lighting of a fire. Teacher education helps make the teacher turn the classroom a more combustible place'. Thus a well prepared teacher is critical to curriculum implementation as Lubasi and Mulenga (2019) clearly pointed out that 'the problem of most curriculum programmes are mostly clearly noticed at the implementation stage. The focus of curriculum developers therefore, should not only be concentrated on the quality of design and development but also on the implementation process'. On the other hand, a critical condition for attracting the most able young people to teacher education is that teacher's work should become an independent and respectful profession rather than merely a technical implementation of externally mandated standards, mindless assessment tests and unquestionable administrative burdens (Sahlberg, 2012).

References

Ball, L. D. and Forzani, M. F. (2009). The Work of Teaching and the Challenge for Teacher Education. J*ournal of Teacher Education*, 60(5), 497-511. doi: 10.1177/0022487109348479.

Banja, K. M. and Mulenga, I. M. (2019). *Teacher Education at the University of Zambia and Teacher Quality with Specific Reference to English Language. Makerere Journal of Higher Education,* 10 (2), 171-190. doi: http://dx.doi.org/10.4314/majohe.v10i2.13.

Biggs, J. (1999). What the Student Does: Teaching for Enhanced Learning. *Higher Education Research and Development*, 18 (1), 57-75. https://doi.org/10.1080/0729436990180105.

Charalambous, C.Y. (2016). Investigating the Knowledge Needed for Teaching Mathematics: An Exploratory Validation Study Focusing on Teaching Practices. *Journal of Teacher Education,* 67(3), 220–237. https://doi.org/10.1177/0022487116634168.

Darling-Hammond, L. et al. (2017). *Empowered Educators: How High-Performing Systems Shape Teaching Quality Around the World.* San Francisco: Jossey-Bass.

Darling-Hammond, L. and Lieberman, A. (Eds.), (2012). *Teacher Education around the World: Changing Policies and Practices.* New York: Routledge.

Darling-Hammond, L. and Bransford, J. (Eds) (2005). *Preparing Teachers for a Changing World: What Teachers Should Learn and be able to Do.* San Francisco: Jossey-Bass.

Darling-Hammond, L. (2000). *How Teacher Education Matters. Journal of Teacher Education,* 51(3), 166-173. https://doi.org/10.1177%2F0022487100051003002.

Dejnozka, E. L. and Kapel, D. E. (1982). *American Educators' Encyclopaedia.* Westport, CT: Greenwood Press.

Ebel, R. L. (Ed). (1969). *Encyclopaedia of Educational Research.* 4th Edition. London: Macmillan.

Gardner, M. R. (1997). *On Trying to Teach: The Mind in Correspondence*. Hillsdale, NJ: Analytic Press.

Feiman-Nemser, S. (2001). *From Preparation to Practice: Designing a Continuum to Strengthen and Sustain Teaching.*

Teachers College Record, 103 (6), 1013-1055.
Felman, S. (1992). Education and crisis, or the Vicissitudes of Teaching. In S. Felman & D. Laub (Eds.), *Testimony: Crises of witnessing in literature, psychoanalysis, and history.* New York: Routledge.
Freire, P. (1972). *Pedagogy of the Oppressed.* New York: Penguin Books.
Giroux, H. A. (1988). *Teachers as Intellectuals: Towards a Critical Pedagogy of Learning.* South Hadley, Mass: Bergin and Garvey Publishers.
Giroux, H. A. (1983). *Theory and Resistance in Education.* South Hadley, Mass: Bergin and Garvey Publisher.
Hammerness, K., Tartwijk, J. and Snoek, M. (2012). Teacher Preparation in the Netherlands: Shared Vision and Common Features. In. L. Darling-Hammond & A. Lieberman (Eds.), *Teacher Education Around the World: Changing Policies and Practices.* New York: Routledge.
Harris, C. W. (Ed). (1960). *Encyclopaedia of Educational Research. 3rd Edition*. New York: Macmillan.
Hattie, J. and Jaeger, R. (1998). *Assessment and Classroom Learning: A Deductive Approach. Assessment in Education.* 5 (1), 111-122. https://doi.org/10.1080/0969595980050107.
Heeralal, P.J.H. (2014). *Pre-service Teacher's Reflections of Lessons Taught during Practice Teaching.* Kamla-Raj International Journal Educational Sciences, 7(3), 789-793. https://doi.org/10.1080/09751122.2014.11890242.
Heikkinen, H.L.T., Wilkinson, J., Aspfors, J., and Bristol, L. (2018). Understanding mentoring of new teachers: Communicative and strategic practices in Australia and Finland. *Teaching and Teacher Education*, 71, 1-11. https://doi.org/10.1016/j.tate.2017.11.025
Hewitt, M. (Ed). (1985). *Education Index. Vol. 35*. New York: H. W. Wilson.
Hills, P. J. (Ed). (1982). *A Dictionary of Education.* Boston: Routledge and Kegan Paul.
Hudson, P. (2013). Mentoring as professional development: 'growth for both' mentor and mentee. *Journal Professional Development in Education,* 39(5), 771–783. https://doi.org/

10.1080/19415257.2012.749415.

Jackson, P. (1986). *The Practice of Teaching.* New York: Teachers College Press.

Kelly-Gangi and Patterson, J. (2001). *Celebrating Teachers: A Book of Appreciation.* New York: Barnes and Noble, Inc.

Kennedy, M. M. (1997) *Shifting Perspectives: The Influence of Preservice Teacher Education.* New York: Teachers College Press.

Knowles, A. S. (Ed). (1977). *The International Encyclopaedia of Higher Education. Vol. 9*. Washington, DC: Jossey-Bass.

Manchishi, P. C. (2013). *Reforming Zambian Pre-Service Teacher Education for Quality Learning. Lusaka: The University of Zambia Press.*

Masumba, C. K. and Mulenga, I. M. (2019). Teachers' Pedagogical Content Knowledge for Teaching Computer Studies in rural Zambian Secondary Schools of Northwestern Province. *Zambia Journal of Library and Information Science.* 3 (1 &2), 90-106.

Mitzel, H. E. (Ed). (1982). *Encyclopaedia of Educational Research.* 5th Edition. Vol. 4. New York: The Free Press.

Moobola, L. and Mulenga, I. M. (2020). Social Studies Curriculum at the Crossroads: Implementation of the Secondary School Social Studies Curriculum in Chingola District of Zambia. *European Journal of Education Studies,* 7 (3), 13-34. http://dx.doi.org/10.5281/zenodo.3750518.

Mukeredzi, G. T. and Manwa, L. (2019). Inside Mentor-Mentee Meetings in Pre-service Teacher School-Based Teaching Practice in Zimbabwe. *Australian Journal of Teacher Education,* 44(7), 31-53. http://dx.doi.org/10.14221/ajte.2019v44n7.3.

Mulenga, I. M. (2015). *English Language Teacher Education Curriculum Designing: A Mixed Methods Analysis of the Programme at the University of Zambia.* PhD Thesis. The University of Zambia.

Mulenga, I. M. and Kabombwe, Y. M. (2019). Competency-Based Curriculum for Zambian Primary and Secondary Schools: Learning from Theory and Other Countries in the World. *International Journal of Education and Research*, 7

(2), 117-130. http://www.ijern.com/journal/2019/

Mulenga, I. M. and Luangala, J. R. (2015). Curriculum Design in Contemporary Teacher Education: What Makes Job Analysis a Vital Preliminary Ingredient? *International Journal of Humanities Social Sciences and Education*. 2 (1), 39-51.

Mulenga, I. M. and Lubasi, I. M. (2019). Teachers Present in School but Absent in Class: Utilization and 'Silent Erosion' of Learning Time in the Implementation of the Curriculum in Mongu district of Zambia. *European Journal of Education Studies*, 6(2), 61-79. http://dx.doi.org/10.5281/zenodo.2678061.

Munroe, W. S. (Ed). (1950). *Encyclopaedia of Educational Research. Revised Edition.* New York: Macmillan.

Murray, F. (1989). Explanations in Education. In M. Reynolds (Ed.), *Knowledge Base for the Beginning Teacher*. New York: Pergamon.

Muzata, K. K. and Ndonyo, T.M. (2019). ''The Practice based Model: A Proposed Training Package for Special Education Trainee Teachers in Zambia' In: M.K. Banja (ed.). *Selected Readings in Education Volume 2* (pp. 23-41), Lusaka: Marvel Publishers.

Muzata, K. K. and Penda, A. (2014). Pedagogical Experiences of Students on School Teaching Practice – A Study of Two Teacher Training Institutions on the Copper belt and Central Provinces of Zambia. *The International Journal of Sciences: Basic and Applied Research,* 14 (1), 187-204.

Mwanza, C. and Mulenga, I. M. (2018). Voices Confined to Classrooms: The Marginalised Status of Teachers in Curriculum Development in Lusaka, Zambia. *Multidisciplinary Journal of Language and Social Sciences Education,* 1 (2), 63-83.

Nkhata, B., Mkandawire, S. B., Nachiyunde, K., Phiri-Nalube, P., Kaani, B., Mulenga, I. M., Phiri, C., Chileshe, B., Sichula, N., Sikayomya, P., Munachaka, C. J., Banda, D., Mulauzi, F., Serenje-Chipindi, J., & Chipindi, F. M. (2019). Exploring selected theories applicable to educational disciplines and social sciences research. *International Journal of Humanities, Social Sciences and Education,* 6 (12), pp.97-

116
O'Neill, G. P. (1986). Teacher Education or Teacher Training: Which is it? *McGill Journal of Education,* 21 (3), 257-265.
Page, G. T. and Thomas, J. B. (1977). *International Dictionary of Education.* New York: Nichols Publishing.
Richards, L. P. and Nunam, S. M. (2012). *How Teachers Learn and Develop.* San Francisco: Jossey – Bass.
Rivlin, H. N. (Ed). (1943). *Encyclopaedia of Modern Education*. New York: The Philosophical Library of New York City.
Rowntree, D. (1981). *A Dictionary of Education.* New York: Harper and Row.
Turney, C. (1977). *Innovation in Teacher Education.* Australia: Sydney University Press.
Sahlberg, P. (2012). *The Most Wanted Teachers and Teacher Education in Finland. In L. Darling-Hammond and A. Lieberman (Eds.), Teacher Education around the World: Changing Policies and Practices.* New York: Routledge.
Sahlberg, P. (2007). Education Policies for Raising Student Learning: The Finish Approach. *Journal of Education Policy,* 22(2), 147-171. http://dx.doi.org/10.1080/02680930601158919.
Salleh, H. and Tan, C. H. P. (2013). Novice Teachers Learning from Others: Mentoring in Shanghai Schools. *Australian Journal of Teacher Education,* 38(3), 152-165. http://dx.doi.org/10.14221/ajte.2013v38n3.1.
Zeichner, K. M., and Liston, D. P. (1987). Teaching Student Teachers to Reflect. *Harvard Educational Review,* 57 (1), 23-48.
Zeichner, K. M. (1993). Traditions of Practice in U.S. Pre-service Teacher Education Programmes. *Teaching and Teacher Education,* 9 (1), 1-13.
Zulu, J. and Mulenga, I. M. (2019). Teachers' Pedagogical Content Knowledge, Curriculum Designing, and Students' Comprehension of Secondary School Ordinary Level Physics in Lusaka, Zambia. *UNESWA Journal of Education,* 2 (1), 273-288.