Turkish Journal of Teacher Education

Volume 11, Issue 2, 2022 ISSN: 2147-5156

# Research into Teachers Self-Efficacy in Ethiopian Secondary Schools

[1*] Abera Abate, [2] Aynalem Tesfaye, [1] Mekbib Alemu, [1] Kassa Michael

[1]*Addis Ababa University, Ethiopia*
[2]*Hawassa College of Teacher Education, Ethiopia*

**Keywords**

*Teachers' Self-Efficacy, Student Engagement, Instructional Strategies, Classroom Management*

**Article History**

Received
May 12, 2021
Accepted
Dec 23, 2022
Published
Dec 30, 2022

**Abstract**

*This paper aimed to critically comment on one research into teachers' self-efficacy entitled 'Gender and School Type Differences in Self-efficacy (SE) in Teaching' focusing on students' engagement, instructional strategies, classroom management, and overall efficacy by Butucha (2013). Butucha's research is commented based on the definition of self-efficacy explained by Bandura (1982), influencing factors of teachers' self-efficacy (TSE) by (Farrell & Weitman, 2007; Jones, 2011), efficacy measurement scale introduced by Tschannen-Moran and Hoy (2001), Framing teacher preparation research stated by (Cochran-Smith & Villegas, 2015) and Critiquing teacher preparation Research stated by Cochran-Smith et al. (2015). The major finding of Butucha's research that we commented: beginning teachers' in Ethiopia claim an average level of self-efficacy, efficacy in student engagement, instructional strategies, classroom management, and overall efficacy, as well as female beginning teachers in Ethiopia and those teaching in public school, tend to have a lower level of self-efficacy. Thus, our major comments are making an efficacy judgment comprehends an assessment of personal competence and an analysis of the task in terms of the resources, ways of teachers' training systems, and constraints that exist in particular teaching contexts (Tschannen-Moran, Hoy, & Hoy, 1998). So, the researcher has to analyze and conclude the findings based on the Ethiopian school context otherwise it may affect the credibility of the research findings. To generalize the findings as Ethiopian beginning teachers' self-efficacy, the researcher has to take a representative sample from different regions of Ethiopia. Otherwise, he has to generalize the finding for the Oromia region only based on the data collected. Moreover, any conclusions and reasons for findings should be supported by authorized evidence.*

*Correspondence to Abera Abate, Addis Ababa University, Ethiopia, Email: aberaabate32@gmail.com

## Introduction

The concept of self-efficacy (SE) was initially developed by Albert Bandura (Gavora, 2010), and has been defined as a personal decision of one ability to perform ways of action required to deal with approaching situations (Bandura, 1982). Then, SE is a system in an individual that guides most of his/her activity, including the ability to proper implementation of professional knowledge and skills. Hence, teachers' self-efficacy (TSE) is the belief that teachers have about their abilities and skills as teaching professionals.

TSE is related to the behavior that they show in the classroom when they act in their teaching profession: their persistence, interest, and commitment (Hoy & Spero, 2005; Tschannen-Moran & Hoy, 2001). Hence it affects students' achievement (Ross, 1992) and their motivation (Ford, 2012). Additionally, Pendergast, Garvis, and Keogh (2011) argued that TSE is an important motivational construct that can shape teachers' effectiveness in the classroom. Therefore, examining TSE is important to determine influencing factors of the instructional process, hence the quality of education, and to adjust teachers' teaching environment based on the findings. In line with this, Butucha (2013) conducted survey research on secondary school beginning teachers' perceptions of self-efficacy in Ethiopia. In his study, Butucha argued that beginning teachers in public schools have a lower level of SE. In this commentary paper, we discussed Butucha's finding about the definition of SE explained by Bandura (1982), the influencing factors of teachers' SE by (Farrell & Weitman, 2007; Jones, 2011), the efficacy measurement scale introduced by Tschannen-Moran and Hoy (2001), Framing teacher preparation stated by (Cochran-Smith & Villegas, 2015) and Critiquing teacher preparation stated by (Cochran-Smith et al., 2015).

## The Nature and Sources of Teacher Self Efficacy

SE exists in many aspects of human activity, including both professional and personal behavior (Ormrod, 2006). TSE is the teacher's personal belief in his/her ability to plan instruction and accomplish instructional objectives (Gavora, 2010). It is a belief that the teacher has about his/her ability to teach students efficiently and effectively. This means that one's sense of efficacy affects personal feelings, thoughts, and motivations. Therefore, TSE shapes the way teachers are motivating student learning, understanding the subject matter, managing the classroom, engaging students, apply instructional strategies, and increase their academic performance. It also builds their confidence to teach and the belief that all students can learn (Bogler & Somech, 2004). In addition to that, research revealed that high SE perception positively affects both teacher behaviors and student outcomes (Anthony & Kritsonis, 2006; Bandura, 1977; Bembenutty, 2006; Ware & Kitsantas, 2007).

The overall significant impact of strong positive TSE on students' learning outcomes and overall quality of education is one crucial area where serious attention is needed from the very beginning of teachers' professionalism. Therefore, it can be said that during the process of teacher education, attempts should be made not only to impart teaching competencies to student teachers but also to improve their SE beliefs.

Different literature indicated four sources of efficacy information. These are; mastery experience, explicit learning or observing others, feedback on performance, and emotional state in a teaching situation (Bandura, 1997; Tschannen-Moran, Hoy, et al., 1998). The major influences on efficacy beliefs are assumed to be related to these four sources of efficacy information.

## Factors Affecting Teachers' Self Efficacy

TSE can be influenced by many factors and the major influences on TSE are related to the sources of efficacy information. Hence, motivation, beliefs, administrative support (Hensley, 2008), level of teacher power (Farrell & Weitman, 2007), teacher morale (Jones, 2011), and teacher education preparation system (Cochran-Smith et al., 2015) are possible factors that affect TSE. Therefore, teacher self-efficacy is dependent on the context of the school and the teaching environment.

## Theory and Measurement of Teachers' Self-Efficacy

According to Zee and Koomen (2016), the foundational tenets of TSE have fallen between the two stools; the theory developed by Rotter (1966) from Social Learning Theory; the attribution-based theory of locus of control, and the social cognitive theory (Bandura, 1977). Rotter's theory consists of an Internal-External rating scale. That is; through learning, process individuals will develop the belief that certain outcomes are a result of their actions (internals) or a result of other forces independent of themselves (externals). Based on Rotter's theory, Bandura argued that individuals' behaviors are biased not only by generalized expectancies for control but also by these individuals' perceived capabilities (self-efficacy) to execute those behaviors in particularized domains.

Gibson and Dembo (1984) found modest evidence for two independent factors (self-efficacy and response–outcome expectations) to develop a new measure of TSE. These factors are categorized as personal teaching efficacy (PTE) and general teaching efficacy (GTE) respectively. PTE, in the classroom teaching context, can be considered as a teacher's belief in his/her skills and abilities to positively impact student achievement, while GTE is a teacher's belief that the educational system can work for all students, regardless of outside influences such as socio-economic status and parental influence (Swackhamer, Koellner, Basile, & Kimbrough, 2009). Different studies identify that TSE is reflected in multiple specific components of teachers' profession (Tschannen-Moran & Johnson, 2011). Tschannen-Moran and Hoy (2001) treated TSE in domains: instructional practices, classroom management, and student engagement.

## The Overall Summary of the Article

The study conducted by Butucha (2013) was motivated by the observation of high attrition in the initial years of teaching in Ethiopia and declining interest in the teaching profession (Tesfaye, 2003) aggravated by the low status of the profession. The study was focused on domain-specific TSE based on Tschannen-Moran and Hoy's (2001) three dimensions: student engagement, instructional strategies, and classroom management. A descriptive comparative research design was employed in the study with a focus on two purposes. These are: assessing secondary school beginning teachers' perceptions of SE in Ethiopia, and discovering how the demographic variables (gender and school type) impact secondary school beginning teachers' perceptions of SE. Based on these purposes 381 secondary school teachers (n=339 (89.0%) Male and n=42 (11.0%) Female) were selected with stratified random sampling methods from the east Shewa and west Arsi zones of the Oromiya region. Respondent teachers were drawn from 23 public (n=268, 70.3%) and 11 privet schools (n=113, 29.7%) from the two towns and surrounding rural settings. In data collection, beginning teachers were provided with Tschannen-Moran and Hoy's (2001) teachers' self-efficacy scale (TSES) with 24 items and made to rate each item concerning a five-scale Likert

scale. Data were analyzed with descriptive statistics (mean and standard deviation) to determine the secondary school beginning teachers' perceptions of SE concerning students' engagement, instructional strategies, classroom management, and overall TSE levels. In addition, inferential statistics (independent sample t-test) was used to compare groups concerning gender and school types.

The analysis of data resulted in uniform averages in all three dimensions of the TSE measured. The mean on the five-level Likert scale for instructional strategies was 4.17 (SD=0.85), for classroom management it was 4.02 (SD=0.92), and for student engagement, it was 3.96 (SD=0.95). Butucha interpreted these means as the same level of efficacy as the teachers think that they can do "quite a bit" concerning all the three TSE dimensions and confirmed that there were no statistically significant differences among the means. The overall self-efficacy of the secondary school teachers from the two East Shoa and West Arsi zones of the Oromiya regional state was calculated by taking the mean scores of the beginning teachers for all of the 24 items and the mean was found to be at 4.05, (SD = 0 .90). Even though there was no level for "average" efficacy on the original Tschannen-Moran and Hoy (2001) scale, the overall mean score of the beginning teachers was interpreted as average.

In an analysis for differences in TSE by groups, comparisons only between sex groups (male and female) and between school types (public and private) were conducted. The comparison between male and female secondary school beginning teachers revealed that females had consistently and significantly lower SE than their male counterparts. This was both for the three components of TSE as well as for the overall TSE. Butucha interpreted this as a result of a higher preference of males for the teaching profession and consequently a lower female-to-male teacher ratio in Ethiopia. It was suggested that the latter made female teachers suffer from a lack of peer support or isolation in Ethiopian secondary schools. Privet school teachers were found to have higher SE concerning one of the three TSE dimensions, in instructional strategies (MD=0.21, SED=0.05, $p<0.001$) and in overall TSE (MD=0.13, SED=0.05, $p<0.001$). This result was explained in terms of smaller class **sizes** in private than public secondary schools in Ethiopia.

## Analysis of the Article and Reflection

The attractiveness of a title of a given study for readers is one quality of a good research study (Bavdekar, 2016). The title of a study should be capturing the attention of the readers by expressing what the study is all about and by introducing the research work as a whole in a precise manner. In light of this, Butucha's article tells that the study is all about TSE and that comparison will be done concerning gender and school types. A little more improvement to the title would have been desirable if the context of the study, that is the level of education and the place was included in the title. In Butucha (2013) teachers' attrition was taken as a valid motivation for the research. This was remarkably different from the common attribution of teachers' attrition to low payment and low social status of the teaching profession in the Ethiopian education system by other researchers (Joshi & Verspoor, 2013; Semela, 2014; Shibeshi, Mekonnen, Semela, & Endawoke, 2009). As it is commonly expressed in the vast TSE literature, Butucha considered SE as one of the contributing factors for teachers' attrition which results from teachers' emotional burnout (Caprara, Barbaranelli, Steca, & Malone, 2006; Lauermann & König, 2016; Le Fevre, 2014; Maslach, 2003). It is a good beginning to look at Ethiopian teachers' attrition problem from a psychological perspective in addition to the common social and economic views.

Following Tschannen-Moran, Woolfolk Hoy, and Hoy (1998) one can classify TSE research into the following three categories: 1) determining the TSE beliefs and their relationships with teachers' background variables (gender, school types, experience, teacher training, etc); 2) impacts of TSE Beliefs on teachers behaviors and consequently on students learning outcomes; and 3) to what can be done to improve and to what extent TSE beliefs can be affected by different intervention strategies. The two research questions in Butucha's study put the current study within the first Tschannen-Moran et al category. So, it can be said that Butucha took the first step in describing Ethiopian secondary school teachers' SE by measuring the strength (Dellinger, Bobbett, Olivier, & Ellett, 2008) and comparing it concerning the two demographic variables.

In a quantitative study, a theoretical framework is very important (Creswell, 2013), however, the researcher did not put the theoretical framework for the study. Since different educators have varied points of view on the concept of self-efficacy, it is difficult to understand the researchers' perception of self-efficacy, this also determines the whole process of the research. Even though the theoretical context of the study could be inferred from the choices and decisions the researcher made in the study, a much stronger limitation in Butucha's work is the understanding of the local conditions. A researcher's familiarity with the local context of a study is critical to identify a significant problem, deciding what data to gather and where to find the data, and also in the analysis and interpretation of the data (Creswell, 2013; Kumar, 2011). The only local literature Butucha used in the study was a doctoral dissertation (Tesfaye, 2003) and even that resource was used to justify the existence of high teacher attrition in Ethiopia like it is the case elsewhere. As will be seen later in this section, Butucha's uninformed assumptions about the local context seriously flowed the study in data analysis, interpretation, and conclusions.

In Ethiopia, there are ten independent regional states with different administrative systems including independent education systems (FDGE, 1994; Joshi & Verspoor, 2013; MOE, 2015),. This systemic difference coupled with the cultural diversity in the country resulted in teachers' diversity. Hence, educational research aspiring to deal with such psychological descriptions to generalize at a country level should be based on appropriate sampling reflective of the diversity (Creswell, 2013). However, Butucha's research was based on two conveniently chosen localities from one region near the place Butucha was teaching. Due to this erroneous sampling, it is impossible to generalize to the region, let alone to the country.

Besides the research problem and research questions, the methodology of the research is determined by the researcher's preference and ability (Creswell, 2013). However, methodologists like Ormrod (2006), advise against the use of purely quantitative approaches in researching such psychological constructs as belief. There seems that there is a consensus to use both quantitative and qualitative approaches when researching belief, such as TSE belief (Smith, 2014). Nevertheless, Butucha's decision to use a quantitative method that enabled him to benefit from the well-developed research work over the past several decades (Bandura, 1982; Dellinger et al., 2008; Tschannen-Moran & Hoy, 2001) is acceptable.

By 2013 there were already several survey instruments for measuring TSE beliefs (for example see Gibson and Dembo (1984) and Dellinger et al. (2008) beside Tschannen-Moran and Hoy (2001). While proposing a new TSE measuring tool, Dellinger and co-workers did not hesitate to acknowledge its usefulness of (Tschannen-Moran & Hoy, 2001) even if they laid two minor criticisms (Dellinger et al., 2008) against it. The first criticism was about the fact that items in the survey instrument are not explicitly associated with teaching effectiveness research and the second one is that 'the measure did not explicitly reflect the context under

which self-efficacy beliefs about teaching are formed'. Therefore, as Butucha's concern was teachers' attrition rather than teaching effectiveness, the choice to use Tschannen-Moran and Hoy's (2001) survey instrument which is a frequently used one and whose psychometric characteristics are well established is to be appreciated. However, as Butucha used the TSE survey as it is used elsewhere and as the research questions did not demand it, the validation report in the article was unnecessary.

In general, correct analysis procedures and statistical tools were used in Butucha's (2013) secondary school teachers' SE determination. Due to the suspected lack of familiarity with the context of education in Ethiopia, either the demographic information was not appropriately collected or was not appropriately used in the analysis. For example, by policy, secondary school teachers in Ethiopia were required to have a Bachler degree. But, as it is common in places where there is a shortage of teachers, teachers with lesser qualifications were available in Butucha's sample. Most of these teachers, if not all, must be those experienced teachers from at least upper primary schools who are working to earn the Bachler degree in continuing education (MOE, 2015) to bring them up to the policy-demanded level. Therefore, there might be some experienced teachers in the 22.0% of college diploma teachers in the sample who reported themselves as beginning teachers maybe because they were assigned to secondary school recently. Furthermore, those BA/BSC holders may be divided into two, as trained and untrained, because it is a common practice to hire untrained teachers to the teaching profession, while training for secondary school teachers is for one year after they graduated with BA/BSC. Unfortunately, Butucha seems unaware of these subtilities since no reference was made to the facts in the article.

Apart from the above limitations, Butucha's results were obtained and reported in a fairly precise manner. Of course, the comparison part was limited to two of the variables, gender, and school type, without providing any justification for the delimitation. The inclusion of data about the teachers' age, level of education, and school setting were without reason. But, dropping them from the analysis limit (MOE, 2015)d the depth of the analysis. For example, which male/female teachers showed a certain level of SE, those from rural or urban schools, or where are most of the privet schools with favorable TSE beliefs? Such detailed analysis would have given a deeper and more realistic picture of TSE among the beginning secondary school teachers.

There were three major findings reported by Butucha (2013). The first one is that the secondary school teachers from the two zones have fairly uniform TSE concerning the three dimensions and overall score (M=4.05, SD=0.90) comfortably within the second highest level, "Quite a bit = 3.40 to 4.19", on a 5-point Likert scale. The second is that female teachers have consistently lower SE compared to their male counterparts in the overall TSE and the three dimensions. And the third finding is that teachers from privet schools have a small but statistically significantly better perception of their TSE in the "instructional strategy" dimension and the overall TSE. Due to the sampling issues with the data, there are two limitations of the findings in Butucha's study. On one hand, as the data was obtained from just two zones from one of 10 vast and diverse regions, generalizability is a problem. In the second place, not enough sample size was used concerning some of the demographic background variables such as sex to further disaggregate the data and analyze it to see which sub-group contributed to the observed differences. Further, it is known that efficacy beliefs are dynamic traits of individuals that will evolve with experience (Dellinger et al., 2008). For example, Lauermann and König (2016) demonstrated that TSE beliefs and competencies can substantially change across teachers' professional lifetime citing research works by others (for

example Klassen and Chiu (2010); Klusmann, Kunter, Voss, and Baumert (2012). Klassen and Chiu (2010) obtained a developing teachers efficacy reaching its pick around 23 years of teaching experience and then decreasing. However, Butucha presented the findings for those teachers with no regard to the teaching experience differences among teachers which is apparent to exist at least between those with a college diploma and university degree holders.

Butucha's findings are further limited by weak interpretations. Butucha did not go deeper by comparing the results with findings in the literature except by mentioning very few of them from US and Australia. Therefore, it missed consensus among research findings for instance on the influence of gender on TSE (Klassen & Chiu, 2010; Odanga, Raburu, & Aloka, 2015; Tenaw, 2013). It was also unconvincing to try to interpret the observed gender differences in terms of the lack of female interest in the teaching profession and lack of peer support due to the scarcity of female teachers and isolation without providing evidence from the local context. This lack of a local literature base was also observed in Butucha's article in the discussion where the shallow comparison was made with literature from US and Australia, whereas according to (Mansour, 2009), the relationship between teachers' beliefs and their practices is complex and context-dependent. It would have been even better if the researcher had explained the reason for the similarity of finding between Ethiopia and those contexts. The favorable TSE beliefs of privet schools over public schools were explained with lesser class size, even though there was no data regarding class size nor literature support. The sad thing about the article was that those weakly analyzed shallow findings were taken as conclusion verbatim.

## Conclusion

The negative attitude to the teaching profession and the high teacher attrition in Ethiopia were attributed to insufficient salary and the lower status of teachers in society. However, Butucha's study appropriately tried to re-orient this perspective by including TSE as one contributing factor to the teachers' attrition. As TSE literature demonstrates lower TSE not only results in undesirable student learning outcomes but also in teachers' professional burnout and job attrition (Klusmann et al., 2008; Swider & Zimmerman, 2010). Therefore, researching TSE in the Ethiopian context is a well-justified endeavor. In this research, the first step is to measure the existing level of TSE belief with a valid instrument such as (Tschannen-Moran & Hoy, 2001), within the local context. However, to conclude at a country level as Butucha tried, large enough and appropriate sampling which takes the diversity of the teaching population in the country is mandatory. The weakness of Butucha in this respect raises the basic issue of familiarity of the researcher with the research subject context which should be realized by critically analyzing policy documents, reports, and local research articles. Ethiopia is the second most populated country in Africa with varied cultures and economic levels. Oromia is the largest of the regions in Ethiopia with several urban, rural, and nomadic areas. East Shoa and West Arsi zones are just two neighboring zones in the region with more than 20 zones. Therefore, a conclusion based on such a narrow sample size will not be fair and significant to either the country level or the local level education as it cannot reflect the diversity of the teachers concerning TSE beliefs. Research to capture and describe TSE in Ethiopia needs to be conducted again with proper samples and the data need to be analyzed in much more detail based on the demographic variables for a profoundly accurate description of teachers in the country. Such a study will have a significant contribution to educational policy and teachers' appraisal efforts with a consequence of improving the education quality in general or enabling the alleviation of training and working conditions of teachers at regional and local levels.

## Reference


Anthony, T. D., & Kritsonis, W. A. (2006). A mixed methods assessment of the effectiveness of strategic ementoring in improving the self-efficacy and persistence (or retention) of alternatively certified novice teachers within an inner city school district. *Online Submission, 4*(1).

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*(2), 122.

Bandura, A. (1997). *Self-efficacy: The exercise of control*: Macmillan.

Bavdekar, S. B. (2016). Formulating the right title for a research. *Journal of the Association of Physicians of India, 64*(2), 53-56.

Bembenutty, H. (2006). Teachers' self-efficacy beliefs, self-regulation of learning, and academic performance. *Online Submission*.

Bogler, R., & Somech, A. (2004). Influence of teacher empowerment on teachers' organizational commitment, professional commitment and organizational citizenship behavior in schools. *Teaching and Teacher Education, 20*(3), 277-289.

Butucha, K. (2013). Gender and school type differences in self-efficacy in teaching. *Sky Journal of Educational Research, 1*(4), 23-31.

Caprara, G. V., Barbaranelli, C., Steca, P., & Malone, P. S. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level. *Journal of School Psychology, 44*(6), 473-490.

Cochran-Smith & Villegas. (2015). Framing teacher preparation research: An overview of the field. *Journal of International Technology and Information Management, 66*(1), 7-20.

Cochran-Smith, M., Villegas, A. M., Abrams, L., Chavez-Moreno, L., Mills, T., & Stern, R. (2015). Critiquing teacher preparation research: An overview of the field, part II. *Journal of Teacher Education, 66*(2), 109-121.

Creswell, J. W. (2013). *Educational research: Planning, conducting, and evaluating*: W. Ross MacDonald School Resource Services Library.

Dellinger, A. B., Bobbett, J. J., Olivier, D. F., & Ellett, C. D. (2008). Measuring teachers' self-efficacy beliefs: Development and use of the TEBS-Self. *Teaching and Teacher Education, 24*(3), 751-766.

Farrell, J. B., & Weitman, C. J. (2007). Action research fosters empowerment and learning communities. *Delta Kappa Gamma Bulletin, 73*(3), 36.

FDGE, F. D. G. o. E. (1994). *The education and training policy*. Addis Ababa: Ministry of Education, Ethiopia.

Ford, I. R. (2012). Teacher self-efficacy and its influence on student motivation. ETD Archive. 99. https://engagedscholarship.csuohio.edu/etdarchive/99

Gavora, P. (2010). Slovak pre-service teacher self-efficacy: Theoretical and research considerations. *The New Educational Review, 21*(2), 17-30.

Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76*(4), 569.

Hoy, A. W., & Spero, R. B. (2005). Changes in teacher efficacy during the early years of teaching: A comparison of four measures. *Teaching and Teacher Education, 21*(4), 343-356.

Jones, N. (2011). *Structural impact*: Cambridge university press.

Joshi, R., & Verspoor, A. (2013). *Secondary education in Ethiopia: Supporting growth and transformation*: The World Bank.

Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology, 102*(3), 741.

Klusmann, U., Kunter, M., Trautwein, U., Lüdtke, O., & Baumert, J. (2008). Engagement and emotional exhaustion in teachers: Does the school context make a difference? *Applied Psychology, 57*, 127-151.

Klusmann, U., Kunter, M., Voss, T., & Baumert, J. (2012). Emotional exhaustion and job satisfaction of beginning teachers: the role of personality, educational experience and professional competence. *Zeitschrift Fur Padagogische Psychologie, 26*(4), 275-290.

Kumar, R. (2011). *Research methodology: A step-by-step guide for beginners. (3rd ed.)*. London: SAGE Publication Ltd. .

Lauermann, F., & König, J. (2016). Teachers' professional competence and wellbeing: Understanding the links between general pedagogical knowledge, self-efficacy and burnout. *Learning and Instruction, 45*, 9-19.

Le Fevre, D. M. (2014). Barriers to implementing pedagogical change: The role of teachers' perceptions of risk. *Teaching and Teacher Education, 38*, 56-64.

Mansour, N. (2009). Science teachers' beliefs and practices: Issues, implications and research agenda. *International Journal of Environmental and Science Education, 4*(1), 25-48.

Maslach, C. (2003). Job burnout: New directions in research and intervention. *Current Directions in Psychological Science, 12*(5), 189-192.

MOE, M. o. E. (2015). *Education Sector Development Program V (ESDP V) 2015/2016 - 2019/2020.* Addis Ababa: MOE.

Odanga, S. J., Raburu, P. A., & Aloka, P. J. (2015). Influence of gender on teachers' self-efficacy in secondary schools of Kisumu County, Kenya.

Ormrod, J. E. (2006). *Study Guide and Reader to Accompany"Educational Psychology-Developing Learners"*. Pearson, Merrill Prentice Hall.

Pendergast, D., Garvis, S., & Keogh, J. (2011). Pre-service student-teacher self-efficacy beliefs: An insight into the making of teachers. *Australian Journal of Teacher Education, 36*(12), 4.

Ross, J. A. (1992). Teacher efficacy and the effects of coaching on student achievement. *Canadian Journal of Education/Revue canadienne de l'education*, 51-65.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological monographs: General and Applied, 80*(1), 1.

Semela, T. (2014). Teacher preparation in Ethiopia: A critical analysis of reforms. *Cambridge Journal of Education, 44*(1), 113-145.

Shibeshi, A., Mekonnen, D., Semela, T., & Endawoke, Y. (2009). Assessment of science education quality indicators in Addis Ababa, Bahir Dar, and Hawassa Universities. *Quality of Higher Education in Ethiopian Public Institutions*, 161-264.

Smith, N. J. (2014). Vagueness, uncertainty and degrees of belief: Two kinds of indeterminacy—one kind of credence. *Erkenntnis, 79*(5), 1027-1044.

Swackhamer, L. E., Koellner, K., Basile, C., & Kimbrough, D. (2009). Increasing the self-efficacy of inservice teachers through content knowledge. *Teacher Education Quarterly, 36*(2), 63-78.

Swider, B. W., & Zimmerman, R. D. (2010). Born to burnout: A meta-analytic path model of personality, job burnout, and work outcomes. *Journal of Vocational behavior, 76*(3), 487-506.

Tenaw, Y. A. (2013). Relationship between self-efficacy, academic achievement and gender in analytical chemistry at Debre Markos College of teacher education. *African Journal of Chemical Education, 3*(1), 3-28.

Tesfaye, S. K. (2003). *Teachers' working conditions and their impact on plan to stay in their career in sub-Saharan Africa: The case of Southern Ethiopia* (Unpublished doctoral dissertation). Eberhard-Karls-Universität Tübingen.

Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*(7), 783-805.

Tschannen-Moran, M., Hoy, A. W., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*(2), 202-248.

Tschannen-Moran, M., & Johnson, D. (2011). Exploring literacy teachers' self-efficacy beliefs: Potential sources at play. *Teaching and Teacher Education, 27*(4), 751-761.

Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*(2), 202-248.

Ware, H., & Kitsantas, A. (2007). Teacher and collective efficacy beliefs as predictors of professional commitment. *The Journal of Educational Research, 100*(5), 303-310.

Zee, M., & Koomen, H. M. (2016). Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A synthesis of 40 years of research. *Review of Educational Research, 86*(4), 981-1015.