

## PERCEPTIONS OF ALTERNATIVE CERTIFICATION PROGRAMS' IMPACT ON THE TEACHER SHORTAGE IN TEXAS

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### Abstract

Alternative Teacher Certification Programs have aimed to address teacher shortages for over a decade, yet the demand for teachers remains high. Teacher candidates enter Alternative Certification Programs and may be placed in classrooms of undesirable positions and insufficiently prepared for the realities of the classroom such as diverse learners and behavior challenges. Due to that lack of sufficient preparation and lack of ample support, the result is teacher frustration and high teacher attrition rates. Alternative Certification Programs, commonly known as fast track programs, aim to address high need specialty areas, but the question of quality tenured educators is of utmost concern for the survival of the education field. This qualitative study sought to determine the perceived impact of Alternative Teacher Certification Programs on the teacher shortage in South Texas from the perspective of hiring principals. The study aimed to understand whether school administrators consider alternative certification programs as appropriately preparing and supporting teachers for long-term careers in the most high-need areas.

Keywords: *alternative teacher certification program, teacher shortages*

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### Introduction

Education has been faced with many challenges that include changes in policy, issues with funding, and teacher recruitment and retention (Bowling & Ball, 2018). Teacher shortage has long been a significant concern in education (Coffey, et al., 2019). Across the nation, unfilled teaching positions in multiple subjects and grade levels persist each school year, serving as an example of dire need. The high need for teachers may soon become a bigger problem. The looming retirement of the baby boomer generation will likely result in the loss of experienced teachers adding to the significant need for teachers (Coffey, et al., 2019). This is concerning as the current educational field is leaving districts under staffed and students underserved.

This qualitative study sought to determine the perceived impact on Alternative Teacher Certification Programs on the teacher shortage in Texas from the perspective of hiring principals. The study aimed to understand school administrators' perception of alternative certification programs as appropriately preparing and supporting teachers for long-term careers in the most high-need areas.

Research finds inconsistencies in teacher preparation programs, especially between traditional undergraduate programs and ACPs. ACPs must be studied to determine if they are appropriately preparing teachers for the complexities of the classroom in an effort to address the teacher shortage issue. There is a gap in the literature to inform of the principals' perspective of teachers coming from ACPs. Principals that have worked with teachers coming from ACPs have valuable information about these teachers. The principal is responsible for hiring teachers on their campus. School administrators are also responsible for evaluating teachers. They have firsthand knowledge and experience in supporting new teachers. This is the reason they were the target for this study. It is important to consider the principal's perspective of teachers coming from ACPs, as there is much to gain from their perspective. The results of the study shed light on the strengths and weaknesses of pre-service teacher preparation programs equipping school districts with information needed to best plan for in-service support.

### **Research Question**

The following research questions was used to guide the study:

- RQ 1: What is the impact of alternative teacher certification programs on teacher shortage as perceived by public school principals?

### **Theoretical Framework**

For the purpose of this study, social constructivism was the most appropriate interpretive framework. Social constructivism attempt to understand the world in which we live by understanding shared thoughts and assumptions (Creswell and Poth, 2018). The theory emphasizes the importance of culture and interaction with the environment as factors that develop one's cognitive abilities. As the study investigates the work place, it targeted the views and perspectives of administrators. The use of this framework aided in a better understanding of administrative decisions based on their experiences and the circumstances in the work place.

As the research explored the perspectives of the principal, person-oriented theory applies. James Macdonald (1995) is known for his perspectives on person-oriented theory (Macdonald, 1995). Macdonald encourages educators to question their assumptions and aspire to more worthy goals and strives to challenge educational leaders to rethink their basic assumptions and reconceptualize their field (Glatthorn et al., 2016). The person-oriented theory works well with the study as it explores the thinking of educational leaders. It allows leaders to self-reflect and consider their choices. As the study investigates educational leaders' decisions, it easily aligns with the purpose of the study.

### **Literature Review**

Research has showed that classroom management decisions of teachers have a significant impact on pupil achievement (Marzano 2003; McDonald 2010). Practical experiences allow future teachers the opportunity to learn from experienced teachers' effective classroom management practices and implementation, and appropriate teacher-pupil relationships for successful classroom management (Nelson et al., 2000). ACPs allow an easy transition for those that have already worked in other sectors. Although held to the same curriculum standards as traditional EPPs, ACPs are able to meet the required training in fewer credit hours.

Alternative certification programs have shown promise in alleviating teaching shortages and educator quality issues (Koehler, et al., 2013). They provide qualified teachers from diverse ranges of experiences to meet the need for student academic achievement in low-income schools (Heineke & Preach, 2013). programs in many states (Hohnstein, 2017). ACPs offer support through coursework, test preparation, and mentoring through on the job supervision. Still, there is little corroboration regarding the effectiveness of a particular pathway to teaching certification in regard to a teachers' impact on student learning (National Research Council, 2010). Further, although these programs are not new, there is not much research on the effectiveness of ACPs in addressing teacher shortages. Since there is no national standard for these types of programs, the outcomes are seen in the variations of quality, coursework, support, and performance (Antonetti, 2018). Beyond established minimum standards for teacher preparation, there is little consistency in the framework of these programs (Antonetti, 2018). These inconsistencies leave principals unprepared to provide professional development support for pre-service teachers. ACP teachers have limited and condensed pedagogical preparation relying too heavily on full-time teachers who themselves are overwhelmed with little time to provide adequate support for mentorship (Smith & Evans, 2008).

Research suggests that teachers coming from ACPs have less impact on student achievement compared to those coming from traditional teacher certification programs (Heineke & Preach, 2013). In ACPs, candidates for teacher credentialing do not complete clinical teaching, commonly known as student teaching, as do traditionally prepared teachers. Instead, they complete experiential learning on the job in the form of an internship (Heineke & Preach, 2013). Although a benefit because intern teachers are employable, the reality is that they are still fulfilling program requirements of coursework and require mentoring to be successful. They are not fully prepared for the classroom. The lack of a more guided and mentored clinical experience creates a gap in teacher abilities (Heineke & Preach, 2013). Some research suggests that considerable numbers of ACP teachers lack an understanding of pedagogy, classroom management, instructional strategies, and student's social and academic development issues (Zhang & Zeller, 2016). The less preparation a teacher has, the less likely there will be significant gains in student achievement (Linek, et al., 2012).

Perhaps of greater concern is research that finds that ACP teachers are not prepared for teaching the wide range of student abilities in their classroom. Differentiated instruction is necessary to meet the needs of all students. Students have a range of abilities and disabilities all which must be met and equitable serviced by the teacher. Lack of relevant training to meet those needs can be a challenge for beginning teachers. A huge range of abilities in one classroom is challenging (Muijs et al., 2012).

ACP teachers are unprepared for critical job requirements such as lesson planning and grading papers (Heineke & Preach, 2013). These teachers become stressed, burnout, and isolated. The programs do not have sufficient time to prepare teachers for all aspects of the job prior to teaching. ACP teachers must fulfill their job requirements and complete coursework for the program. These programs are not considerate of the demanding schedule of a first-year teacher (Heineke & Preach, 2013).

Research has found evidence to support the notion that university or traditionally certified teachers outperform alternatively certified teachers however there are many advantages for ACP teacher including work experienced teachers entering the teaching profession, addressing teacher shortage in high need areas, and combating general teacher shortages in general (Uriegas et al., 2014). When APCs

provide continuous professional development and support for teachers, it is seen as more beneficial than a semester of student teaching experience (Uriegas et al., 2014).

### **Method**

The study sought to determine the impact of alternative teacher certification programs on teacher shortages from the perspective of Texas principals. The qualitative component of the study utilized data collection through personal in-depth interviewing by engaging participants in a dialogue to determine the effectiveness of the alternative certification teachers from public school principals.

### **Sample**

The principals that were selected to participate in this study were from South Texas school districts. Eight principals voluntarily participated in the research study. The participants included five elementary principals, one intermediate principal, and one high school principal. All participants were from South Texas school districts.

### **Data Collection**

All of the participants willingly agreed to participate and provide their input for this research. A semi-structured interview protocol was used. During the interviews, reflective journaling assisted in documenting the researchers' ideas and personal reactions throughout the fieldwork (McMillan & Schumacher, 2010). After the interview, the audio recordings were transcribed. During data transcription, the researchers used the data collected and convert them into a format that will facilitate analysis. While analyzing the data, small pieces of data was identified that is capable of standing alone that supports a finding (McMillan & Schumacher, 2010). These findings are referred to as segment that assist in finding patterns such as language used, behaviors, strategies or anything associated with the aim of the study. This process assisted in the interpretation of the data to make connections and to explain the results. The researchers looked for themes to emerge as the interview data is analyzed. The data was organized in emerging classifications or themes.

### **Results**

#### **Teacher Attrition**

Participants were asked their perception of contributors to teacher attrition (see Table 1). Principals Three, Four, and Seven felt that campus climate was a factor. Principal Two and Four responded with leadership. Principals Three and Six responded with salary. Principals Six and Seven responded with lack of support. Principal One also discussed burn out, pressure from the state, and pressure from administrators. Principal Two spoke on consistency, continuity, curriculum procedure, structure, and systems in place. Principal Four talked about behavior management and being overwhelmed. Principal Five discussed lack of preparation and challenges in the classroom. Principal Six spoke on better job opportunity. Principal Eight talked about inconsistency with campus and district leadership, and explained "The district has dealt with many leadership changes across the district in a short amount of time that have included changes at the administrative level through campus level."

**Table 1***Theme that emerged from principal responses to question 4.*

Interview Question	
What do you perceive to be the contributors to teacher attrition?	
Theme	Total
Campus Climate	3
Leadership	2
Salary	2

Principals were asked their perception of strategies that aid in teacher retention (see Table 2). Principals Three and Five responded with leadership and school culture. Additional responses included school climate, respect, communication, curriculum, systems, and consistency from Principal Two, instructional coaches, and shared decision making from Principal 4, new programs from Principal Five, calendar from Principal Six, and TASBE study from Principal Eight. Principal Five shared information about a new grant that they had received that provided a true mentorship for new teachers. Principal Five explained that, “There were specific requirements that must be complied with for the grant.” The principal further explained that the grant includes, “required meeting hours per semester along with specific criteria ensure that new teachers are being provided with the assistance and support that is needed to be successful.”

**Table 2***Theme that emerged from principal responses to question 5.*

Interview Question	
What do you perceive to be strategies to aid in teacher retention?	
Theme	Total
Leadership	2
Campus Climate	3

### Alternative Certification Program

From this point in the interviews, all questions were ACP specific. The principals were asked their perception of teachers prepared by ACPs. In particular, principals were asked how well they were prepared for things such as classroom management, differentiated instruction, and effectively designed instruction (see Table 3). Classroom management was indicated as areas of need by Principals One, Three, Five, and Six. Principal One shared that, “Most new teachers regardless of the program in which they are coming from struggle with classroom management.” Principal Five indicated that, “ACP teachers have no experience with classroom management.” In regard to differentiated instruction, Principals One, Three, Five and Seven indicated concerns. Principal Two explained, “These teachers come in with the basics, but struggle with implementation.”

**Table 3**

*Theme that emerged from principal responses to question 8.*

Interview Question	
What is your perception of the quality of teachers prepared by alternative certification programs?	
Theme	Total
Classroom Management	4
Differentiated Instruction	4

The next topic asked about was clinical or practice teaching experience for pre-service teacher (see Table 4). Principals Two, Four, Five, Seven, and Eight felt that it is a very important component needed for new teachers. Principal Two indicated that, “The experience allows for observation time with a phase-in process to the job.” Principal Five shared that, “It is seen as an advantage.” Principal Six expressed that, “This component has been more beneficial in this time with all of the changes to instruction as result of COVID-19. The student teachers had to learn along with the teachers on how to provide virtual instruction.” Principals Six and Eight described practice teaching experience as an opportunity to determine whether teaching is the profession that they want to work in. Examples were provided by both principals of experiences where at the end of student teaching experience, the student teacher decided that the job wasn’t for them. Principal Seven saw the lack of practice teaching experience as “having a gap in preparation.” The principal indicated that, “the experience prepares them to be able to walk into the classroom ready to work.” For this reason, Principal Seven sees this opportunity as an asset to the new teacher.

**Table 4**

*Theme that emerged from principal responses to question 9.*

Interview Question	
What is the significance of clinical or practice teaching experience for pre-service teachers?	
Theme	Total
Very Important	5
Opportunity to determine career choice	2

Principals were asked their perceptions of how things differed with teachers earning their certificate via an ACP versus a more traditional certification route. Principal One commented that, “ACP teachers are typically more motivated and are usually older.” Principal Eight indicated that, “ACP teachers need more help in general.” Principal Three felt that, “ACP teachers don’t get the in-depth training where those coming from traditional programs are ready for the job.” Principal Four expressed that, “Those coming from traditional programs have more background strategies and need less support.” The principal also went into the details of the assistance that ACP teachers needed such as setting up a classroom, classroom management, and planning. Principal Eight explained that, “Those coming from a traditional program had more understanding of theory, had reasoning, and rational. ACP teachers were immersed with no understanding of the reasoning behind things.” The principal also indicated that, “As a result of COVID-19, all new teachers lack skills as they were unable to attain the typical preparation experiences. COVID-19 required instruction to change to virtual means. Some of the face to face requirements were altered to accommodate the mandate changes limiting in person exposure.”

Principals were asked what additional trainings they feel are needed for ACP teachers. (see Table 5) Principals Two, Three, and Six indicated that classroom management is an area of need, in addition to a mentorship. Principal Eight stated that, “A general understanding or overview of the daily teacher requirements are needed such as the programs that are used on a daily basis.” Principal Two mentioned, “Legal issues that are a concern such as leaving students unattended.” The principal also emphasized “unpacking the TEKS” as an area of importance. Principal Four discussed the importance of, “Appropriate communication with parents, students, and other professionals.” Principal Three indicated that, “Content training for reading is needed.” Principal Three recommended, “Observations are needed during the first semester to allow an opportunity to observe seasoned teachers in action.” Principal Two expressed the importance of “knowing how to approach different scenarios that may arise.” With virtual instruction in place, Principal Five indicated that, “There needs to be new trainings to include the new requirements for the job.”

**Table 5**

*Theme that emerged from principal responses to question 11.*

Interview Question	
What additional training do you believe ACP teachers need to prepare them to teach in K-12 schools?	
Theme	Total
Classroom Management	3
Mentorship	3

Perceptions were asked regarding the impact of ACPs on the teaching profession (see Table 6). Principals One, Three, Four, Five, and Eight commented that they have had a positive effect on the teaching profession. Principals Four and Five indicated that they have had a positive impact on teacher shortage. Principal One explained that, “ACPs have allowed an easier way to become a teacher.” Principal Two described ACP teachers coming from different professional as a “means of providing the concepts differently.” It was described by Principal Two as, “field experience in other occupations preparing them in different ways for the job.” They were seen to have “good communication skills, be more flexible, very understanding, and team players.” Principal Three described ACPs as, “providing more diversity among teachers.” Principal Seven explained that, “More ACP teachers has caused more instructional leadership in schools.” Principal Eight stated that, “The level of professionalism is not what it used to be. Sometimes ACP teachers are not of the same caliber as others.”

**Table 6**

*Theme that emerged from principal responses to question 12.*

Interview Question	
In your opinion, what impact has alternative certification programs had on the teaching profession?	
Theme	Total
Positive effect on the teaching profession	5
Positive effect on teacher shortage	2

Finally, principals were asked what they felt educator preparation programs should require to earn a certificate to teach in Texas (see Table 7). Principals One, Three, and Six felt that a Special

Education requirement is necessary. Principals Seven and Eight felt that pedagogies and content knowledge are needed. Principals Three and Four felt classroom management is important in addition to an overview of programs that districts commonly use. Differentiated instruction was discussed Principal Two, along with diverse learners. Principal Five emphasized, “An intense mentorship that has specific requirements” as important. Sheltered instruction was mentioned by a Principal Three. Principal Five expressed that, “Field experience was a necessary component.” Principal Five also described how lesson planning has changed significantly over the years. “It is far more complicated than it ever was. There are multiple sources of data and resources that must be included in lesson planning”, explained Principal Five. Principal Six indicated that, “A Special Education and 504 manuals are needed for all teachers along with an understanding of Special Education Law.”

**Table 7**

*Theme that emerged from principal responses to question 13.*

Interview Question	
In your opinion, what should an educator preparation program require to earn a certificate to teach in Texas?	
Theme	Total
Special Education	3
Pedagogies	2
Content Knowledge	2
Classroom Management	2

### Overarching Themes

Principals identified various factors that contribute to teacher attrition such as leadership, salary, campus culture, and lack of support. They identified factors that attribute to teacher retention as leadership and school culture. Overall, principals identified areas of need for ACP teachers but did not identify any significant causes for concern. Classroom management and differentiated instruction were identified as areas of need by Principals One, Three, and Five. Principal Two, Four, Five, Seven, and Eight did feel that practice teaching experience is important for new teachers. Additional trainings or supports that were recommended were classroom management by Principals Two, Three, and Six, and a mentorship by Principals One, Three, and Six. Principals One, Three, Four, Five, and Eight, do feel that ACPs have positively impacted teacher shortage. Some components that principals feel that is important for new teachers are classroom management by Principals One, Three and Four, special education by Principals One, Three and Six, and field experience and pedagogy/content knowledge by Principals Seven and Eight.

### Discussion

The findings from the study revealed that principals believe teachers coming from ACPs are positively assisting with teacher shortage. Principals do believe that ACP teachers do need additional support. Principals One, Three, Five, and Six felt areas of need included classroom management. Principals One, Three, Five, and Seven indicated differentiated instruction was an area of need. Effectively designed instruction was identified as an area of need by Principals Two and Eight. It is important to note that principals didn't see these areas of need as being any different from teachers

coming from university-based programs. Although Principals Two, Four, Five, Seven, and Eight see clinical experience as an advantage to new teachers, there were no negative perceptions of ACP teachers knowing that this component is lacking from the program.

Principals did believe that practice teaching experience is an important and beneficial component for new teachers. Principal Eight discussed the possibility of attempting to build in opportunities during the school day to gain some observation experience while on the job. The principal emphasized that the first semester was the most important time for the observations to take place. Practice teaching experience was discussed as an invaluable component that assists in preparing new teachers for the classroom. It allows new teachers an opportunity to learn from experienced teachers. The Texas Education Agency requires public schools in Texas to utilize the Texas Teacher Evaluation and Support System (T-TESS) for teacher appraisals. The appraisal is designed to assess teaching proficiency that provides evidence-based feedback by the administrator. The T-TESS creates a working relationship between the administrator and the teacher to support efforts to improve instructional quality in addition to student performance. Through this process, appraising administrators are allowed to identify the teachers' areas of need to create a plan of action to support the teacher in an effective manner. Regardless of which program teachers are coming from, schools are addressing their needed in an individualized manner.

Principal Five described a grant funded mentorship program requiring for specific minutes weekly working with experienced teachers in addition to observation time. There were not prior requirements that included minutes of working cooperatively nor observation time. Mentorships varied significantly depending on the mentor and the mentee. As the grant funded program is rigorous and specific, it allows for consistency in district wide mentorships for new teachers. Aligning teacher needs through T-TESS, principals have the ability to create a plan to address any shortcomings that teachers may have. T-TESS has required school administrators to be directly involved with the monitoring and support of teachers.

The study's findings provide support of previous research findings on ACPs. As research has shown that ACPs have assisted with teacher shortage, this remains to be true. Principals do feel that ACPs are addressing teacher shortage by getting teachers in the classroom. In some cases, they are finding themselves in the classroom in a shorter period of time compared to others. Some concerns with ACPs that have been discussed through previous research include differences and deficiencies in the quality of preparation, lack of clinical experience, needed mentorship, and lack of important foundational professional knowledge. The findings of this study support these to be continued concerns of principals. Principals are aware of these shortcomings and must prepare to appropriately address these teacher needs. They must be aware of available resources to appropriately support ACP teachers. These supports differ from district to district as described by the principals in this study.

Interestingly, Principal One indicated that ACP teachers are usually older and have more work experience offering different types of skills than those coming directly from a university-based teaching program. Research should be conducted to determine the common ages of those coming from ACPs. Age should be considered to determine if there is a difference in teaching ability when entering the education field at a later age. Additional research should be conducted to determine if there are different benefits to hiring those ACP teachers than have had other employment experience outside of education prior to teaching. The principal also expressed the non-traditional skills that older ACP teachers have

attained through employment outside of the education field. These skills included communication skills with parents and student along with outside the box thinking. Principal One felt that these ACP teachers come into the job with more dedication to the job. It should be explored to determine if there are benefits to hiring those coming from other occupations. This information would be beneficial to principals to consider other factors that may be favorable when hiring ACP teachers.

More research on the effectiveness of Alternative Certification Programs continues to be needed as these programs continue to be in demand. This study could be easily replicated in a quantitative approach. As quantitative approaches seek to analyze numerical data, revisions can be made to accommodate this approach. The interview questions could be used allowing participants to respond with the use of a Likert scale to identify levels of perceptions. The approach may allow for more principals to participate as it may take less time to provide responses compared to an interview.

The findings of the study support research that suggests ACPs are successfully assisting with teacher shortage. The findings also suggest a need for support for ACP teachers. The data revealed areas of need as classroom management and differentiated instruction. Knowledge of these needs can provide information for ACPs to revise their programming to incorporate instruction on classroom management and differentiated instruction. The information can be beneficial to principals that are hiring ACP teachers. It provides information to allow preparation for accommodating for these shortcomings once in the school setting.

Principals expressed a need for a true mentorship to appropriately support these teachers. Aside from offering supports for new teachers, the mentorship may offer support that will not be provided by the ACP program. It creates a connection with an experienced teacher to work with and learn from. As supports for the ACP teachers vary depending on the program that they are coming from, knowledge of the types of supports that will be provided may be beneficial to principals. This information may allow principals to be prepared to fill the gaps for new teachers. It is important that research is conducted to determine if these ACPs are creating quality teachers prepared for the classroom. The findings may lead to more insight into the specifics of the success of the different programs.

### **Conclusion**

Principals' perceptions of ACPs were found to be relatively consistent. Perceptions indicate ACPs are addressing teacher shortage. Every new teacher that enters a classroom requires guidance and support regardless of what type of program they are coming from. The purpose of this study was to gain the perceptions of principals on ACPs. Principals are prepared to provide the assistance that is needed for all teachers. Some areas of need emerged in the findings from the study such as weaknesses with classroom management and the ability to implement skills learned such as differentiated instruction. These areas of need offer valuable information for principals hiring ACP teachers. They can appropriately prepare to support these areas of need through professional development training or professional learning committees. The results will shed light on some areas of need that principals may need to be aware of when considering teachers coming from ACPs. The information can allow principals to appropriately prepare to fill any gaps that may exist in new teachers. As one participant commented how each individual is different and skills will vary regardless of the program that they come from. Principals need to be prepared to provide the leadership needed to support teachers. The findings also suggest that professional development is needed and would be beneficial for all teachers in

the area of classroom management and differentiated instruction. Using a proactive approach to these findings to support new teachers would allow principals to address possible weaknesses at the start of a teaching career to create success.

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### References

- Antonetti, S. (2018). Supporting alternative teaching candidates: A look at how the Georgia tap program addresses the teacher shortage. *Principal Leadership*, 19(1), 50-53.
- Bowling, A.M. & Ball, A.L. (2018). Alternative certification: A solution or an alternative problem? *Journal of Agricultural Education*, 59(2), 109-122.
- Coffey, H., Putman, S.M., Handler, L.K., & Leach, W. (2019). Growing them early: Recruiting and preparing future urban teachers through an early college collaboration between a college of education and an urban school district. *Teacher Education Quarterly*, 46(1), 35-54.
- Creswell, J.W. & Poth, C.N. (2018). *Qualitative inquiry & research design: Choosing among five approaches*. Thousand Oaks, CA: SAGE Publications, Inc.
- Glatthorn, A. A., Boschee, F., Whitehead, B. M., & Boschee, B. F. (2016). *Curriculum leadership: Strategies for development and implementation* (4<sup>th</sup> ed). Thousand Oaks, CA:
- Heineke, A.J. and Preach, D. (2013). Integrating graduate coursework to prepare alternatively certified teachers. *Teacher Education and Practice*, 26(3), 496-513.
- Hohnstein, S. (2017). The rise of urban alternative teacher certification. *Teacher Education and Practice*, 30(1), 94-106.
- Koehler, A., Feldhaus, C.R., Fernandez, E. and Hundley, S.P. (2013). Alternative certification programs and pre-service teacher preparedness. *Journal of STEM Education Innovations and Research*, 14(4), 45-55.
- Linek, W.M., Sampson, M.B., Haas, L., Sadler, D., Moore, L. and Nylan, M.C. (2012). The impact of teacher preparation. *Issues in Teacher Education*, 21(2), 67-82.
- Marzano, R. J. (2003). *What Works in Schools: Translating Research into Action*. United States: Association for Supervision and Curriculum Development.
- McDonald, T. (2010). Positive learning framework: Creating learning environments in which all children thrive. *Reclaiming Children & Youth*, 19(2), 16-20.
- McMillan, J. H. & Schumacher, S. (2010). *Research in education: Evidence-based inquiry* (7<sup>th</sup>). Boston, MA: Pearson Education Inc.
- Muijs, D., Chapman, C. and Armstrong, P. (2012). Teach first: Pedagogy and outcomes. The impact of an alternative certification programme. *Journal of Educational Research Online*, 4(2), 29-64.
- National Research Council. (2010). *Preparing teachers: Building evidence for sound policy*. Washington DC: The National Academies Press. <https://doi.org/10.17226/12882>
- Nelson, J., Lott, L., & Glenn, H.S. (2013). *Positive discipline in the classroom: Developing mutual respect, cooperation, and responsibility in your classroom*. (4<sup>th</sup>). New York: Three Rivers Press.
- Smith, E. R., & Evans, C. (2008). Providing effective mentoring for alternate route beginning teachers. *The Teacher*

*Education*, 43, 249-278. DOI: 10.1080/08878730802247886

Uriegas, B., Kupczynski, L., & Mundy, M. (2014). A comparison of traditional and alternative certification routes on classroom management. *Sage Open*, 4(40), 1-6. DOI: 10.1177/2158244014553599

Zhang, G. and Zeller, N. (2016). A longitudinal investigation of the relationship between teacher preparation and teacher retention. *Teacher Education Quarterly*, 43(2), 73-92.