

Won't Stop, Can't Stop: Alternative Route to Licensure Special Education Teachers' Persistence in their Careers

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Abstract

Alternate route to licensure (AR) programs in special education continue to increase despite concerns that teachers certified through these pathways leave the profession at rates higher than traditionally prepared teachers. The purpose of this study was to examine special education AR program completers to determine their persistence to stay in the profession despite odds of attrition. For this article, we examined survey results from AR special education teachers ($n = 57$) and completed focus group interviews with a subset ($n = 13$) from this same sample. Using Social Cognitive Theory (SCT) to guide our research, we uncovered three major themes from our focus groups: role conceptualization, barriers experienced, and motivating factors. Our findings suggest that AR special education teachers' persistence relies on several factors, such as society's respect for teachers, effective mentoring programs, positive collaboration experience, understanding of their unique role as AR teachers, and self-efficacy. Implications for educational practices, policies, and further research about AR teachers is explored.

Keywords: teacher persistence, special education teacher, attrition, retention, persistence

1. Introduction

Acute teacher shortages across the country have created unique pressures on the teacher preparation pipeline to meet the demand for educators, particularly in the area of special education (U.S. Department of Education, 2022). Alternative routes (AR) to special education licensure involving a traditional undergraduate degree-granting program leading to certification have grown substantially over the last few decades (U.S. Department of Education, 2021). Since the 1980s, as the special education field has simultaneously evolved over time, AR to licensure programs for general and special educators have increased exponentially (U.S. Department of Education, 2018). Recently, a systematic review of state-level policy requirements of special education AR programs found that 33 of the 50 states (66%) have AR programs in special education, suggesting states' need to prepare special education teachers (SETs) through AR pathways programs (Scott et al., 2022). With a majority of states certifying SETs through AR programs, researchers have focused on ways to promote the success of these teachers; however, little is still known about the factors contributing to AR SETs persistence in the profession (Scott et al., 2022).

Research shows that AR program completers are 25% more likely to change schools or leave the field when compared to traditionally licensed educators, thus straining the capacity of schools and districts to manage this level of turnover (Carver-Thomas & Darling-Hammond, 2017). Unlike traditionally licensed educators, those certified through AR programs often begin full-time teaching while earning certification, therefore lacking a pedagogical foundation upon entering the classroom (Darling-Hammond, 2010). However, school divisions continue to utilize these provisionally licensed teachers to fulfill vacant positions. For example, roughly 100,000 classrooms in the United States were staffed by non-fully credentialed teachers in the 2017–2018 school year (García & Weiss, 2019). Although teaching while undergoing certification presents as a short-term solution for addressing teacher shortage, research shows that educators who are not fully prepared are less effective in fostering positive student outcomes (Darling-Hammond, 2016) and are also less likely to persist in the field (Podolsky et al., 2016). For AR SETs, a lack of adequate preparation and quality is of particular concern. Unfortunately, approximately 51% of all school districts and 90% of high-poverty schools report issues attracting high-quality

SETs (Council for Exceptional Children [CEC], 2019). Further, retaining these professionals is also difficult, with SETs exiting the field at twice the rate of their general education counterparts (12.3% v. 7.6%; CEC, 2019).

It is also unclear how these candidates' professional self-efficacy beliefs may affect their persistence in the field. In their meta-analysis of 33 studies using 16,122 participants, Chestnut and Burley (2015) found that self-efficacy beliefs were strongly related to preservice and inservice teachers' commitment to remaining in the profession. Given that AR special educators often enter the profession while concurrently enrolled in their AR programs (Darling-Hammond, 2010), there is a need to understand whether self-efficacy helps to explain AR special educators' decisions about their persistence in the field.

1.1 Purpose of the Study

Given the widespread SET shortage and steps undertaken by states to staff classrooms, there is a need to understand why AR special educators persist in the profession despite the many factors related to their attrition. This is especially crucial because a shortage of highly qualified teachers hinders student achievement (Ronfeldt et al., 2013) and students' potential for achieving their college/career goals after high school. In our study, we use the Social Cognitive Theory (SCT; Bandura, 1999) as our theoretical underpinning for understanding the personal, behavioral, and environmental factors influencing human behavior—in our case the decision made by AR SETs to remain in their current teaching positions. SCT provides a useful framework for conceptualizing and interpreting teachers' self-reflection on their agency within their nested work environments (e.g., classroom, school, district, and society; Bandura, 1999).

Our study's research questions are:

- 1) What factors impact AR teachers' persistence in the profession?
- 2) How does self-efficacy impact teacher persistence?

2. Method

To address our study's research questions, we used a mixed-method sequential explanatory design, which allows for quantitative and qualitative data collection and analysis to occur in two separate phases in one research study, followed by an integration of findings from both phases (Ivankova et al., 2006). In the first phase, quantitative data is collected and analyzed and used to inform the subsequent process in which qualitative data is collected and analyzed to help explain and elaborate on findings from the first phase (Creswell, 2014).

2.1 Participants

Participants represented a subset of a larger sample of 211 graduates of SET certification programs located in a Mid-Atlantic region in the United States. A survey was sent to participants from the dataset, of which 97 SET participants (46%) completed the survey. Fifty-seven of the 97 SET participants received their licensure through an AR program, and thus, 57 of the 97 participants were included in the present study. For the qualitative portion of the research, we followed up with 13 of the 57 participants to participate in focus groups. We further explain the data collection methods used for the survey and focus groups below.

2.2 Phase 1: Quantitative Design Phase

The survey consisted of 38 items based on current literature on teacher persistence designed to identify internal (e.g., Billingsley, 2004) and external (e.g., Guha et al., 2017) factors influencing the participants' persistence in the teaching profession. Additionally, several key concepts from Bandura's (1999) SCT (i.e., self-efficacy, reciprocal determinism between teachers, actions and beliefs, and environments such as the classroom, school, or districts) were used to inform survey questions. Multiple survey items were constructed using a five-point Likert-type scale to better understand how teachers conceptualized various aspects of each of the key concepts, described by SCT. Table 1 provides a matrix of sample survey items and their scaled response options aligned with key SCT concepts and how each fit into reciprocal interactions within personal, behavioral, or environmental factors. Survey items were developed to gain a multifaceted understanding of the dynamics between teachers and their persistence in the field, while mindful of overlapping simultaneous and evolving dynamics between personal, behavioral, and environmental influences.

Table 1. Participant characteristics

Total Sample (n=57)	<i>n</i>	%
Gender		
Female	45	79
Male	11	20
Not Reported	1	2
Race and/or Ethnicity		
Black or African American	18	32
White	27	47
Asian or Pacific Islander	5	9
Latino/a and/or Hispanic	1	2
Native American or Alaskan Native	1	2
Black or African American and White	1	2
Asian or Pacific Islander and White	1	2
Native American or Alaskan Native and White	1	2
Prefer Not to Say	1	2
Highest educational level		
Bachelor's Degree	9	16
Master's Degree	22	39
Some Graduate Credits	26	46
Years of Teaching		
1–3	40	70
4–5	8	14
6–10	3	5
>10	5	9
Teaching Placement		
High School	18	32
Middle School	8	14
Elementary School	29	51
Multiple Placements	1	2
Locality of School		
Rural	9	16
Urban	13	23
Suburban	35	61
Participation in Mentorship Programs		
Previously Completed	34	68
Currently Enrolled	16	32
None	7	14

The research team addressed the reliability and validity of our measure in several ways. First, we consulted a panel of experts during the survey's construction. We also evaluated the survey's internal consistency ($\alpha = .93$). The other two sections of the survey involved background and demographic information. This coefficient indicates the items in this subsection have relatively high internal consistency (Creswell & Creswell, 2018). To validate our measure's validity, we included qualitative options on the survey to confirm the assessment's accuracy, as well as a follow-up qualitative focus group with interested participants, later discussed. These analyses were conducted using Excel and SPSS software packages.

2.3 Phase 2: Qualitative Design Phase

Survey respondents were provided the option of participating in a further qualitative phase of the study. Participants who expressed interest in joining the second phase of this study were contacted via email to schedule semi-structured focus groups. Focus group questions were developed based on preliminary quantitative findings showing that multiple factors (e.g., individual and system-level factors) influence AR SETs' persistence. Focus groups were conducted by members of the research team. Convenience sampling procedures were used alongside purposeful sampling of participants across different school districts, geographical locations, and demographic characteristics (e.g., race/ethnicity) to ensure variability of each focus group (Etikan et al., 2016). Thirteen total AR SETs participated across three different focus groups over a period of four weeks. Each focus group lasted approximately 90 minutes and was audio recorded for transcription purposes. After completion of the focus groups, one researcher transcribed the recordings for data analysis. Member checks were completed by phone to review transcripts and modify data, if needed. No changes were recommended by the participants.

We used thematic analysis to identify themes across our data set (Braun & Clarke, 2006), where we first reviewed the data before using an inductive, open-coding process to develop initial codes using the Atlas.ti software program. We then discussed and finalized emergent themes based on participants’ data (Braun & Clarke, 2006). Based on these themes, the first author developed a codebook in consensus with the second and third authors. This codebook was developed in an Excel spreadsheet and included the theme names, definitions, and subthemes agreed upon by the research team. In the following section, we present the results of both the quantitative and qualitative phases of our research procedure.

3. Results

Findings from this study suggest a number of factors related to the teacher persistence of SET candidates that should be noted—from both the quantitative and qualitative processes, as well as the intersection of the two. See Table 1 for information regarding participant demographics and background.

3.1 Factors for Persistence

Participants revealed several significant SCT factor interactions that related to their decision to persist or leave the field (all means and standard deviations for the subscales are shown in Table 2). Results of a one-way ANOVA showed that there were significant mean differences in levels of satisfaction and attractiveness between teachers who have considered leaving and teachers who have not considered leaving the profession. In addition, societal respect of teachers, passion about the profession, stress, usefulness of a mentorship program, usefulness of PLC, and collaboration showed significant differences. This finding indicates that participants who had never considered leaving the teaching profession rated each area higher than those that did consider leaving teaching. Further, all except one subscale under school/district support (i.e., the teacher-student ratio in my classrooms is adequate to support my students) indicated significant differences. Other areas analyzed that did not reveal statistically significant differences included effectiveness and passion about students.

Table 2. One-way analysis of variance of special education teachers’ decisions to remain or leave the field and persistence domains

Persistence Domains	<i>df</i>	<i>F</i>	<i>p</i>	<i>M</i>	<i>SD</i>
Satisfaction	1	31.816	.000*	3.39	1.201
Attractiveness	1	27.367	.000*	2.75	1.184
Effectiveness	1	.414	.522	3.89	.673
Society Respect of Teachers	1	12.356	.001*	2.86	1.125
Passionate about Students	1	2.117	.151	4.77	.501
Passionate about Profession	1	5.023	.023*	4.28	.861
Stress	1	6.347	.015*	4.09	1.032
Mentorship Program	1	.475	.493	-	-
Usefulness of Mentoring	1	22.261	.000*	3.32	1.316
PLC	1	1.510	.224	-	-
Usefulness of PLC	1	4.026	.051*	3.48	1.150
Collaboration	1	5.909	.018*	3.89	1.332
School/District Supports					
Overall, the school I work in has a positive climate.	1	5.475	.023*	3.40	1.294
The actions of the administrative leadership within my school positively contribute to my efforts.	1	5.037	.029*	3.25	1.214
Actions of the central leadership within my district positively contribute to my efforts	1	12.966	.001*	2.96	1.052
My school and district policies contribute positively to my efforts.	1	13.334	.001*	3.07	1.076
I receive sufficient support from the leadership within my school.	1	6.119	.016*	3.19	1.260
I receive sufficient support from colleagues and other staff within my school.	1	7.343	.009*	3.81	1.125
Within my school and district, I am empowered to make decisions or changes when needed.	1	5.120	.028*	3.28	1.098
I am adequately compensated financially in my salary and benefits.	1	8.427	.005*	2.51	1.104
I have all the resources needed to effectively support my students.	1	6.713	.012*	2.72	1.192
My caseload allows me to provide adequate support to my students.	1	9.679	.003*	2.93	1.189
The teacher-student ratio in my classrooms is adequate to support my students.	1	1.287	2.62	3.16	1.192
I receive sufficient professional development to support my role.	1	5.796	.019*	3.32	1.167
The professional development I receive is well-aligned with my needs.	1	6.675	.012*	3.23	1.225

Note. * indicates *p* is significant at that .05 level.

As shown in Table 2, persistence domains include several individual items encouraging the special educators to reflect on different personal and environmental factors influencing their persistence. For example, “Satisfaction” refers to a single question that asks “How satisfied are you with your profession?” and “Effectiveness” refers to the following question asked on the survey: “Overall, how would you rate your own effectiveness as a teacher?”

3.2 Focus Group Findings

As previously stated, we were interested in further understanding the factors surrounding the AR SETs’ persistence factors identified in the quantitative data. Therefore, our questions broadly concentrated on understanding AR SETs’ challenges and motivations for persisting in the profession. Findings from our focus group revealed three major themes, including role conceptualization, barriers experienced, and motivating factors. Each of these themes have operational definitions and include multiple subthemes, discussed below.

3.3 Role Conceptualization

Our first major theme was role conceptualization, which is defined as intrapersonal and organizational factors that define one’s roles and responsibilities as an AR SET.

Interpersonal factors. Several SETs mentioned interpersonal factors as important dynamics in conceptualizing their role as special educators. For example, having more life experience shaped one participant’s role, explaining that, after having children and multiple careers, “there are a lot of things that you can bring to the table when you’re a say, a more experienced adult.” There were also various individuals who shaped the AR SET’s role and identities, including parents, teachers, school administrators, and faculty from the AR preparation program. Specifically, the expectation and pressure imparted by these individuals about their roles was central in how they delivered instruction to students with disabilities, but also the pressure and challenges they faced. One participant discussed how the school principal communicated the role of the AR SET similarly to what she learned in her teacher preparation program, and this impacted her decision to remain in the profession: “What I learned in my program was that being an alternate route teacher was going to be harder on me than a regular SET because I was learning while I was working.”

Organizational factors. Participants also conceptualized their role as special educators in terms of certain organizational factors related to their school and district communities. For example, the delivery of professional development specific to AR SETs was common in some districts and not common in other school districts. Additionally, while survey results indicated slight agreement that mentorship was useful to their work, qualitative results illuminated areas where organizational culture was misaligned with participants’ perceptions of best practice. This challenge to formulating an effective teacher role was described by one participant as: “I did have a mentor who had been in special education for a long time, and she was a wonderful person, but I think over time had learned that you could only say so much.”

3.4 Barriers Experienced

Our second major theme was barriers experienced, or forces that create challenges in AR SETs’ persistence in the profession. These barriers were classified into four categories, or sub-themes: (a) theory to practice gap, (b) course sequencing, (c) lack of administrative support, and (d) work demand.

Theory to practice gap. One of the primary barriers experienced by participants was a disconnect between the theoretical content taught in teacher education programs and the realities encountered in practice after entering the field. For some, this gap manifested in an overall confusion over how to prioritize and implement elements of teaching: “I learned so much I mean, we all I’m sure you know we’ve all been overwhelmed almost with the amount of information that we have and then what to do with it...to put it into practice for the students.” In other cases, participants noted a difference between what they had learned to be best practice in preparation programs and practice in classrooms and schools. As one participant put it: “[There] is a lack of consistency between what we’re learning in our courses and what we’re actually being instructed in our schools and in our counties.”

Course sequencing. The misalignment between the reality of school classrooms and coursework from teacher education programs often directly centered on the sequence and requirements of licensure itself. Since the AR SETs in our study taught while also earning certification toward license, many related that while the topics of required courses were relevant to their practice, the timing of that instruction meant that the knowledge was difficult to immediately apply to practice. One participant shared an experience with behavioral coursework related to this theme: “I found that the material we were learning, while it was super interesting and really really appropriate for my understanding, it came at a bad time because the things that we were being asked to do, we couldn’t really do.” Along with the sequence of coursework requirements, some participants alluded to a perceived insufficiency in the experiences of an alternative licensure program. One teacher relayed: “That was kind of a

feeling I got that somehow, they thought what we were doing, um...wasn't preparing us. That we should have had some other experience in teaching."

Lack of administrative support. Another key theme that emerged as a barrier to SETs' persistence in the field was the lack of administrative support. This finding was in keeping with results of the quantitative analysis which showed a significant interaction effect between leadership and colleague support and participants considering exiting the field. For participants, this overall lack of support took various forms, from inadequate mentorship ("my mentor was not even remotely associated with special education. She knew nothing about it, absolutely nothing") to more direct leadership through the special education designee roles taken on by administrators ("the third-year, which was the worst for me, our administrator had zero, zero experience in special education. She had never even taken a special education class and she was a special education administrator"). This broad lack of support contributed to lowering expectations for one teacher who related:

I was working in isolation. I didn't have any support. When I went to the other special education teachers and tried to talk about what wasn't working, they would say yes we know it's not working, just do the best you can with it and then you'll just have to be okay with the results.

Work demand. The final barrier code related to unrealistic or unsustainable overall work demands placed on AR SETs, which was consistent with quantitative results that showed a significant association between work stress and consideration of leaving the field. Many of the participants articulated the dilemma in terms of too many competing and important demands relative to the available time to do them. In the words of one participant, "time was, a huge, obviously, constraint I think for everyone." Another stated: "You can only do so much and that you have to prioritize your time and, school did not get my hundred percent because my hundred percent was going towards the children."

Participants also mentioned that the specific demands of the AR program process were particularly difficult in requiring juggling both coursework and job demands simultaneously. One participant expressed:

... when you've got IEPs [individualized education programs] and meetings with parents and grading papers and lesson plans and then on top of that you also have the demands of going back to school and writing papers and doing research, um...and sometimes some of the classes require that you meet with students after school and you know do testing with them. While it's all great learning, it can be quite overwhelming.

3.5 Motivating Factors

Our third major theme was motivating factors, which related to intrinsic or extrinsic considerations that participants perceived as reasons for continuing in the profession. These motivating factors also included aspects of self-efficacy, as well as the dynamics between individual teachers, their actions, and the environment around them. These factors influenced the environment in terms of outcomes like student success, as well as mediating external factors like collegial support and working conditions on their self-efficacy. Two sub-themes include intrinsic factors and extrinsic factors.

Intrinsic factors. Across participants, SETs overwhelmingly articulated intrinsic motivating factors for persisting in the field related directly to students. For some, this motivation stemmed from the outcome or performance of the students they taught:

We had a student that came to my school in 4th grade that was reading at a kindergarten level and she just left 6th grade reading on a 4th grade level...that the light bulb came on, she received this report that she needed to improve and succeed is my motivation.

For others, the motivation stems from the relationship with students itself—"I loved being with the students, I loved the staff, I loved everything about it. And then I just realized I had a real passion for it." For at least one participant, this intrinsic motivation also directly intersected with some of the barriers experienced, but—at least in the short term—led to persistence:

I'm sure, everybody that that goes into this goes in for the need, and then when you see the need is so great and you want to do something and you can't it...I would say without trying to be overdramatic...it broke my heart. I mean I would come home at night and cry over what I saw happening to my children and knowing I could do nothing about it. So, that's what motivated me to stay. I don't know what the future holds for me.

Extrinsic factors. Motivational factors that affected teachers extrinsically were much more diverse and related to comradery and collaboration, employment benefits, and job flexibility. One participant exclaimed that "I feel that my administrator is incredibly positive about the contributions that I was able to make in one year and she was very kind to share those, um...you know statements with me and that you know that's very motivating." This same

participant stated “I also had an incredible team that, um...they were open to suggestions I would make.” Another SET found support through their AR program cohort:

Having the cohort peers as a study group as a support group has been incredibly helpful and... I don't think there's been a semester when one of us hasn't voiced, you know, “I wouldn't be in this program still if it weren't for this study group.”

Others found collaboration to be a key motivating factor. For one teacher, that was with school colleagues, as they stated, “collaboration with the gen ed teachers and the fact that we all have the same common goal...and the professional development that's offered within our county is helpful.” For another teacher, collaboration with parents offered motivation and support, stating, “...just knowing that families were appreciative and wanted to help their kids do whatever it was I was trying to help their kids do in the school, they wanted to help their kids do those things at home.”

Several teachers also cited specific benefits of the job itself as a motivating factor (e.g., “stable job,” “retirement system”) toward persisting in the field. For others, the flexibility of the schedule (e.g., “summers off”) was a distinct advantage that motivated persistence.

4. Discussion

We explored the various factors impacting AR SETs' persistence in the teaching profession. This study and its findings contribute to a need for further empirical evidence on teacher persistence and provide implications for future research, policy, and practice in this area. SCT was used to frame the study and inform its overall design, conceptualization of research questions, survey development, and analysis and interpretation of findings. The study examined the individual perspectives of AR special educators on the varying personal and environmental factors contributing to their persistence.

Overall, the results comport with SCT literature in other explorations of how reciprocal determinism and self-efficacy operate in other contexts (e.g., Bandura, 1999; Williams & Williams, 2010), showing that influences are not unidirectional or isolated. The findings of this study are in agreement with previous SCT research showing reciprocal determinism to be holistic in nature rather than isolated to individual one-way effects related to a single factor (Williams & Williams, 2010). In other words, rather than isolating a single environmental strata as responsible for the causal influence in teachers' decisions to remain in the profession, our quantitative findings revealed that persistence is associated with more immediate environmental factors that impact self-efficacy, like school climate, collaboration, and mentorship, but also by self-reflection of the broader societal environment in such discrete factors, including the attractiveness of the field and respect for teachers as a whole. This was further highlighted in our focus groups, which revealed multiple intrinsic and extrinsic motivating factors influencing teachers' decisions to stay in the profession and provide useful insights into better understanding how AR SETs conceptualize themselves in their role, as well as how they interact with reciprocal deterministic factors differently than teachers who participated in traditional preparation programs.

Consistent with previous literature, our focus group participants reported holding numerous professional identities that have shaped their roles and responsibilities as AR SETs influenced their relationships with students, their students' families, and other education professionals (Washburn-Moses, 2005). Although there is a lack of sufficient literature previously describing the perceived roles of AR special educators, research does suggest that understanding roles in schools is the biggest challenge faced by novel SETs (Mathews et al., 2017). According to Billingsley et al. (2019), framing induction experiences for SETs with high leverage practices can foster a greater understanding of their roles, in addition to their knowledge of effective instructional practices.

Results of both quantitative and qualitative phases of this study revealed multiple factors relating to how participants found motivation to persist in the field. Factors salient to teacher persistence were identified within all three modes of SCT agency defined by Bandura (2006): individual, proxy, and collective. Individual agency was represented by personal beliefs and teacher self-efficacy to influence specific outcomes (e.g., student success) and in turn, influenced by individual satisfaction within one's role. This included holding a strong passion for working with students and for teaching.

Other extrinsic motivating factors reported in our study correspond to two of the four major factors influencing teacher recruitment and retention (i.e., mentoring and induction and teaching conditions; Darling-Hammond, 2016). Proxy agency was revealed through some of these extrinsic motivating factors like collaboration and support from peers and school personnel as well as collective action taken within nested groups (e.g., school, district, field), while collective agency was captured through teachers' self-reflection regarding their perceived societal role and collective self-effectiveness to impact outcomes.

While these motivators have largely influenced our sample of AR special educators to remain in the profession, over half also reported having considered leaving, with a variety of barriers to persisting highlighted in our focus group. Most importantly, dissatisfaction in the profession and high work stress largely contributed to our sample's considerations for leaving, according to survey responses. This is consistent with findings from Perrachione et al.'s (2008) study examining elementary educators' satisfaction and retention in the profession, suggesting that those who experience satisfaction with teaching or the profession were more likely to remain in the field compared to those who were dissatisfied.

Some of the barriers expressed by our survey and focus group participants are consistent with previous literature, such as poor working conditions (e.g., inadequate support or as referenced above, lack of administrative support) and work demand (Washburn-Moses, 2005). Unlike previous literature, however, focus group participants particularly emphasized a dissonance between what they were learning in their licensure programs and what could be directly applied into their current practice (e.g., licensure requirements). This gap may have arisen because the AR special educators were receiving licensure in teaching K-12 special education. Therefore, they were required to learn concepts across grade levels and to assist students with differing ability levels, regardless of their current employment situation. On the other hand, needing to learn certain strategies earlier in the school year also may have been a limitation of their specific AR program, which could be potentially addressed at the university level with their program supervisors.

4.1 Limitations and Implications for Research

This research is part of a larger analysis examining the persistence of 97 SETs, with 57 of these SETs reported undergoing AR to licensure. Future research should replicate this work to include an evaluation of a higher number of AR special educators currently persisting in the profession. It is also recommended that future studies dive more deeply into understanding the varying intrinsic and extrinsic motivating factors influencing AR SET persistence. Further, our study examined AR special educators and factors influencing their persistence; our research did not tackle how these factors differ to traditionally licensed special educators, AR general educators, or traditionally licensed general educators; thus, others should consider this as a future line of research. Also, the discrete nature of the mixed-method design used in this study did not allow for analysis longitudinally or within structural factor relationships, which can be further explored in future studies. Next, future research should examine the roles and responsibilities of AR SETs and how they perceive their professional identities as well as how others (e.g., administrators, general educators, etc.) perceive their identities in schools. Additionally, given the exploratory nature of our research questions, one-way ANOVA was used to determine whether differences existed between teachers with differing personal and environmental factors. While we found that differences did exist for many of these groups in terms of whether they plan to remain in the field, further research in this area is needed to determine the extent to which these factors predict persistence. Future research in this area should also consider examining potential latent constructs related to the direct factors we examined using structural equation modeling or factor analysis, given the high alpha values of many of the factors examined in our study.

Bandura's (1999) SCT framework provided a useful lens for examining the dynamic influences between teachers and their self-efficacy in relation to personal and environmental factors related to teacher persistence. Future research may expand on this study in several ways. Findings from this study show that many factors overlap and intersect to inform teachers' behavior and choice around persistence. However, further study is needed to better understand how these factors may cluster around central themes and items may load onto one another. Use of SCT in conjunction with analytical approaches such as structural equation modeling and factor analysis may reveal further relationships between these factors that could serve to greatly further research and policy. Furthermore, given the temporal nature of the reciprocal determinism between SCT factors, future studies should build on the findings of this study to explore not only how teachers come to the dichotomous decision to stay or leave, but how they weigh this decision over time along a spectrum using longitudinal, repeated measures data (Williams & Williams, 2010).

4.2 Implications for Practice

Perhaps most importantly, practitioners working to support teacher persistence should note findings related to the understanding of the interconnected and reciprocal nature of how teachers' self-efficacy has influences on--and is in turn--influenced by multiple personal and environmental factors. Thus, efforts to address teacher persistence should be approached with this SCT lens in mind as narrow approaches to change single isolated factors may not be as effective as those that consider teacher agency, self-efficacy, and the reciprocal nature of the teacher, their behavior, and these factors. Given the concern for a greater alignment between program specific features and current classroom experiences (i.e., challenges to licensure requirements), program personnel should consider

acquiring feedback from their AR special educators throughout the duration of their training and to use their educators' reflections to make appropriate modifications to their programs' instruction as well as overall structure. In general, AR programs should be responsive to the needs of their educators to foster SET persistence (Billingsley, 2004).

In addition, our participants reported that colleague and leadership support was associated with higher job satisfaction and persistence. Thus, school personnel should foster greater opportunities for mentorship, which previous literature (e.g., Darling-Hammond, 2016) indicates as one factor contributing to teacher retention. Based on the different experiences with mentorship expressed by our participants, we recommend that future AR SETs partner with colleagues who have extensive knowledge and experience in special education and in working with students with disabilities. It is also recommended that mentors partnered with AR special educators undergo clinical faculty training to strengthen their understanding of best practices as well as their efforts in supporting the AR special educators' journeys to becoming critically reflective practitioners. AR program faculty/staff should establish partnerships with local school communities to affect school-based concerns of the AR SETs who are still in their AR program, such as through engaging in clear and consistent communication with administrators to help bridge the research to practice gap and meet the current needs of their special educators.

To strengthen AR SETs' feelings of strong leadership support, it is recommended that administrators and other faculty members establish deliberate roles for their SETs, encourage positive work conditions and supports (possibility through engaging in active listening and understanding to their SETs' concerns contributing to considerations to leave their position), and offer opportunities for professional development (Billingsley, 2004). Further, induction for SETs and school administrators should include high leverage practices to promote teacher effectiveness and subsequently retention (Billingsley et al., 2019), which would positively impact students with disabilities' achievement and outcomes, since a shortage of highly qualified teachers hinders student achievement (Ronfeldt et al., 2013).

4.3 Conclusion

Recent literature indicates that AR SETs leave the field at higher rates than traditionally licensed SETs. However, limited research examines the reasons why those AR SETs currently remain in the profession. Our study adds to the current literature base by examining the various factors influencing AR SET persistence, and in particular, how self-efficacy influences and is influenced by these different factors impacting persistence. Findings from our mixed-method research revealed several intrinsic and extrinsic motivational factors for AR SETs to remain in the profession, as well as factors hindering their experiences in schools.

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