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Provision of early field experiences for teacher candidates in Singapore and how it can contribute to teacher resilience and retention

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Abstract

Singapore is noted for its low teacher attrition rate, while teacher retention continues to be a pressing issue for many countries. Drawing on the experiences of student teachers in the sole institute for pre-service teacher education in Singapore, this paper argues for the importance of exposing teacher candidates to a lengthy period of school experience as part of the teacher selection process. Before they are officially enrolled into pre-service teacher education, the Ministry of Education (MOE) in Singapore requires all teacher candidates for the Postgraduate Diploma of Education programmes to go through compulsory school experiences. Our analysis shows that this lengthy exposure to the realities and complexities of teaching could be an important contributor to teacher retention in terms of testing and promoting teacher candidates' 'resilient qualities' such as *passion for teaching*, *self-efficacy beliefs*, and *positive emotion*. In other words, the school experience can help teacher candidates develop their understanding of themselves as teachers and assess their suitability for teaching. This study sheds new light on the current practices of teacher retention and teacher recruitment strategies.

Keywords: early field experiences, teacher resilience, teacher retention, student teachers, interviews

Introduction

A knotty problem hindering the establishment of a quality teaching force is high attrition rates both within pre-service teacher education and in schools. The problem exists in both developed and developing countries (Cooper and Alvarado 2006). In terms of pre-service teacher education, programme withdrawal appears to be a common problem in a number of places (Chambers et al. 2010; Coles 2001). It seems neither traditional teacher education programmes nor alternative routes can effectively tackle teacher shortages in the near future. For example, it is reported that only 40% of those in the prestigious Teach First programme in the UK will still be teaching five years later after starting their course, while this figure is 63% for the Postgraduate Certificate of Education programmes (Freedman 2014). The consequences of such high attrition can be profound. Financially, it means more expenditure on recruitment and training of new teachers. More importantly, the discontinuity it provokes would be detrimental to students' learning (Hong 2012). Schools suffer from teacher shortage would often have to hire less qualified teachers. Their lack of experience and expertise as well as the potential

consequences for children cannot be ignored. Therefore, the enhancement of teacher retention is of immense value to all pre-service programmes, in-service teachers, school administrators, pupils, and educational policy makers.

Research on teacher retention can be divided into two strands. A substantial number of studies tend to focus more on deficits or problems in teacher retention (e.g. what went wrong that caused teacher attrition) (Gu 2014). As Johnson et al. (2014) noted, many studies focus on the 'transition traumas' of early career teachers such as self-doubt, alienation, emotional exhaustion and burnout and suggest ways to ease these matters. Factors that caused these problems include personality misfit (Hong 2012), children's misbehavior (Gibbs and Miller 2013), a professional culture driven by 'accountability, performance, and measurability' (Luke 2011, 370), and job dissatisfaction caused by poor administrative support, poor salary, poor student motivation and other adverse working conditions (Ingersoll 2001, 2003; Weiss 1999). Although these studies offer useful insights into the factors that may lead to teachers' struggles and their decisions to leave the profession, they are 'overly concerned with a narrow problem-focused agenda' (Gu, 2014, 505). They produce little evidence on why so many teachers are willing

to remain in the profession, what are the factors and processes that make them willing, able, and committed to teach.

The second body of research adopts the lens of resilience in explaining why many teachers can sustain their commitment to and passion about teaching despite 'the many physical, emotional, and intellectual challenges that are associated with this' (Gu 2014, 507). Evidence from this line of research has highlighted the importance of connections with teachers, leaders, and students that support teachers' professional development and in turn build teachers' capacity to be resilient (Gu 2014), policies and practices that enhance pre-service preparation and employment processes, school culture that promotes teachers' sense of belonging, as well as self-reflection that builds strong teacher identity (Johnson et al. 2014). Moreover, various individual factors that influence teacher retention include teachers' passion for teaching, efficacy beliefs, content specific beliefs, attribution beliefs, and emotions (Chambers et al. 2010; Gibbs and Miller 2013). These studies have provided valuable insights on how conditions can be created to enhance teacher retention (Gu 2014).

To summarise, the extant literature has detailed the individual and contextual reasons influencing teacher retention. However, little information is

provided on the recruitment strategies that can help enhance teacher retention, although some scholars have hinted on its potential significance (e.g. Johnson et al. 2014). Some researchers have examined the administrative processes such as inefficiency and hyper-bureaucratisation (Stotko et al. 2007). Stotko et al. (2007) also noted the lack of effective strategies to assess teacher candidates' dispositions toward students and teaching, which are strongly correlated with teacher retention. Guarino et al.'s (2006) review of literature on teacher recruitment and retention shows increased clinical experience were successful in elevating teacher recruitment and retention rates. However, none of the research they reviewed seems to tackle the issue of how and why clinical experience can help enhance teacher retention. In addition, these clinical experiences were the features of pre-service programmes, not used as a strategy in teacher selection.

Building on current research on teacher retention, this study explores how a Singaporean practice of providing teacher candidates with early field experiences may enhance teacher retention with the promotion of teacher resilience. However, we would like to acknowledge that teacher retention was not our original research focus. The theme emerged while we were doing an exploratory research on student teachers' early field experiences in Singapore. From the iterations of data

analysis, a powerful theme that emerged was the student teachers' views associated with resilience, a contributing factor to retention. We therefore analyse the data again from the lens of 'teacher resilience and retention'. The research also probes the critical role of schools in creating the conditions that promote and nurture teachers' resilient qualities. It contributes to the current debates among researchers, policy makers and the teaching profession about the effective retention of teachers. Evidence for this study is from a larger longitudinal project that aims at investigating the development of teachers' professional competencies and professional identity in Singapore.

Literature review

The review serves as a conceptual framework in helping us explain how the early field experiences before pre-service teacher education can enhance the retention of those teacher candidates who eventually join the profession. In other words, in the discussion of findings, we will examine the role of early field experiences in promoting some important 'resilient qualities' of teachers, which in turn, may contribute to teacher retention. In line with the most recent research (e.g. Gibbs and Miller 2013; Gu 2014), we regard resilience as a relative, multidimensional and developmental concept. Hong (2012) synthesised relevant research and defined

resilience as 'the process of, capacity for or outcome of successful adaptation despite challenging circumstances' (419). It is influenced by the interaction between the individual and the context (Gu 2014), and can be enhanced and nurtured (Cefai 2004).

The last section of this review focuses on the necessity of providing early field experiences at the recruitment stage to promote teacher resilience in the long term. Now we move on to discuss the essential resilient qualities of teachers.

Passion for teaching

To ensure student teachers' deep engagement not only in initial teacher education (ITE) but also in their professional role in schools, it is important that ITE attract student teachers for the 'right' reasons (Flores and Niklasson 2014). The literature has provided fairly consistent evidence suggesting that we need to select candidates who have an intrinsic and altruistic motivation in teaching (Flores and Niklasson 2014), regarding it as essential for deep professional commitment.

However, evidence shows that student teachers' passion and commitment to teach is something that must not only be felt by themselves, but also be tested by the teaching reality (Chambers and Roper 2000; Chambers et al. 2010). In Chambers et al.'s (2010) study on why some student teachers withdrew from ITE

programmes, all participants seemed to have strong altruistic and intrinsic interests in teaching. They enjoyed teaching, wanted to make a difference in the students, and were genuinely committed to teaching at the outset. In addition, they were fairly confident that they had the qualities of being a good teacher. However, their perception of the teaching job was 'rose-tinted' and flawed. This bias may have come from their prior experiences as learners. As these candidates went through their ITE programme and especially their school experiences, all of them were taken aback by the teaching reality such as heavy workload, working extra hours, disciplinary problems, the demands of multiple responsibilities, the burden of administration, and bad work-life balance. These became important drivers on their decision to drop out. In other words, their perceived 'commitment' to teaching was not able to endure the reality shock. As commented by Chambers et al. (2010), 'becoming a skilled teacher demands inter alia commitment, energy, diligence, tenacity and intelligence' and 'not everyone has these qualities' (123). What is argued here is that we need to pay attention to the depth of teachers' passion for teaching (Hong 2012). An interest at the surface level cannot function as a sustaining motivation when teachers face challenging circumstances. Only those

who truly value and enjoy teaching would be able to derive deep satisfaction from their work and be more likely to stay resilient (Stanford 2001; Williams 2003).

Previous studies also highlighted the importance of school experiences in helping candidates make informed decisions to join teaching. In addition, they also conveyed a message on the intensity and nature of school experiences. For example, all candidates in Chambers et al.'s (2010) study had some kind of school-related experiences before they joined the ITE programme such as classroom observations. In fact, one candidate spent most of her time working in a school in advance of joining the ITE programme, but not as a teacher. Her experience highlights that simply being immersed in a school environment is not enough to give candidates an accurate appreciation of the demands of work as a teacher. In other words, observing the job of teaching is qualitatively different from doing it.

Self-efficacy beliefs

Self-efficacy is defined as 'people's judgments of their capabilities to organise and execute courses of action required to attain designated types of performance' (Bandura 1986, 391). Perceived self-efficacy influences the course of action people choose to take, the goals they set for themselves and their commitment to them, the effort they spend in achieving these goals, how long they persist in the face of

adversity and challenges, the amount of stress and depression they experience in coping with obstacles, and the accomplishments they can achieve (Bandura 2000).

Teachers' self-efficacy has been shown to impact their persistence, resilience when facing challenges or adverse events, passion for teaching, and probability of staying in teaching (Tschannen-Moran et al. 1998). Teachers' belief in their ability and their determination to succeed are important factors for successful classroom practices and management of various duties as a teacher (Gibbs and Miller 2013). Teachers having a stronger sense of efficacy are likely to perceive difficulties as challenges instead of threats (Hong 2012). As a result, they would invest effort when facing obstacles and direct their effort in finding solutions to these difficulties (Hong 2012). By contrast, people having low levels of efficacy beliefs tend to doubt their ability in overcoming the problems, and thus invest less effort and are less likely to persist when difficulties arise (Bandura 1986).

Converging evidence suggests that perceived efficacy is closely related to teachers' resilience and career decisions (Bobek 2002; Tait 2008). Efficacy beliefs help explain why some teachers persist and others choose to leave the profession, while all of them may have intrinsic motivation in working as a teacher. That is, although some teachers may value their career and have passion for it, if they

doubt their competence in being a successful teacher, they may not choose to stay in the career (Hong 2012).

In addition, efficacy beliefs are malleable. They can be enhanced or eroded. According to Bandura (1997), primary sources of efficacy include successful (mastery) experience, vicarious experience, social persuasion and affective states. Mastery experience has been shown to be the most salient factor promoting efficacy beliefs of both new and experienced teachers (Tschannen-Moran and Hoy 2007). Therefore, a productive way of increasing teacher candidates' resilience is to help them demonstrate their abilities in producing positive outcomes. It can strengthen their belief that such effects can be reproduced in their future endeavors (Gibbs and Miller 2013). Research has also shown the positive effects of vicarious experience and social persuasion on teachers' self-efficacy (Tschannen-Moran and McMaster 2009). These studies highlight the importance of providing supportive environment for enhancing teachers' sense of efficacy, and thus in turn boost their commitment to remain in the teaching career (Hong 2012). This environment can be influenced by a number of factors including principal's support, school and departmental culture, and mentor support (Gu 2014; Hong 2012).

Emotions

Teaching is by nature an emotionally-charged profession (Hargreaves 2001). Research has shown that high levels of stress, emotional exhaustion, and burnout are some major reasons for why teachers leave the job (Ballantyne 2007). The role of teachers' emotions cannot be underestimated as it is linked to how they perform at work. Negative emotions can lead to 'reduced personal responsibility for outcomes, greater self-interest, less idealism, emotional detachment, work alienation and reduced work goals' (Hughes 2001, 289). Apart from negatively affect teachers' professional learning and students' learning, prolonged negative emotions also decrease teachers' willingness to remain in the profession. By contrast, positive emotions such as joy, excitement and satisfaction can strengthen teachers' resilience in dealing with stress, obstacles, and adversities (Gu 2014; Gu and Day 2007).

The need for school experiences in teacher recruitment

Current literature demonstrates that there is a strong need to have a more reliable evaluation of the suitability of candidates, as teacher education 'cannot afford significant levels of attrition arising from poor selection decisions and programmes' (Teaching Australia 2007, 19). In addition, it is also important for the candidate to

test his or her own suitability so as to make informed career decision. However, alternative approaches to enhance the recruitment process have been very limited (Moran, 2008). Most suggestions from current literature revolve around the implementation of various skills tests, personality tests, and the enhancement of interview procedures (Donaldson 2010; Flores and Niklasson 2014).

However, research has shown the serious limitations and poor reliability of skills tests (Hextall et al. 2001). Tests are in nature very similar to academic qualifications, which do not necessarily reflect the capabilities of candidates (Moran 2008). Characteristics such as enthusiasm, commitment, and sensitivity to student needs, which are more closely related to the quality of teaching and learning, are hard to measure through assessments (OECD 2005). Interview also has serious limitations. It has been criticised that the current interview procedures are subjective, inconsistent and have considerable variability (Donaldson 2010). It is difficult to maintain continuity and consistency within and between the interviewing panels (Moran 2008). Candidates could be good at 'economising the truth' (Chambers and Roper 2000). In addition, candidates might also be demonstrating unrealistic commitment, which has not gone through the test of reality.

Another indirect and unintentional strategy is the 'test of suitability' for candidates through pre-service teacher education (Chambers and Roper 2000). Pre-service programmes are a good platform for student teachers to grow their professional expertise, to show their potential in teaching, and to test their suitability for teaching. However, too many dropouts will affect the operation of teacher training programmes (Chambers and Roper 2000), and it is costly for education systems to train people who will eventually turn out to be unsuited for teaching. In addition, it is also unfair for the individuals who leave the profession after training (Bonnet 1996) in terms of time and money invested.

To mitigate the limitations of those traditional recruitment strategies, the provision of early field experiences as a pre-training strategy to enhance teacher recruitment is increasingly common, especially in the UK and the US. In the UK, many initial teacher training programmes require applicants to have at least 10 days of school experience (DfE n.d.). In the US, a practice in a number of teacher training programmes is the provision of 150 – 200 hours of early field experiences with the dual aim of recruiting suitable candidates into teacher training and of developing their competence in teaching (e.g. Virginia Department of Education 2006).

It is important to point out a few important features of these provisions of early field experiences. First of all, the role schools in the US and UK is more of a provider of field experiences rather than an assessor of the candidates. Secondly, the provision of early field experiences is not systematic. For example, it is not provided for candidates who want to teach in primary schools in England. Thirdly, many candidates have to arrange school experiences independently on their own (DfE n.d.). More importantly, these experiences are characterised by mainly low-participation level activities – observation of teaching and pastoral work, or the opportunity to interact with teachers. The opportunity to plan and deliver lessons seems to be marginal and might not be available to many candidates (DfE n.d.; Virginia Department of Education 2006). The low level of involvement is largely due to the limited length of these field experiences. However, these features might have important implications for the effectiveness and rigor of field experiences. In addition, although these measures have been put in place, there has been little research evidence showing its impact on teacher retention. However, given the current high attrition rates in many jurisdictions (Jungert et al. 2014; Gilroy 2014), more effective measures are still in need to strengthen teacher retention.

Having discussed the importance of early field experiences for teacher recruitment and training as well as the provision of early field experiences in places like the UK and the US, we will now move on to introduce the Singapore context focusing on its systematic provision of early field experiences to teacher candidates.

The Singapore context

Singapore is regarded as one of the most successful education systems in building a stable and competent teaching force (McKinsey and Company 2007, 2010; OECD 2013). Its success can be judged from two aspects. First, Singapore's efforts in recruiting and preparing quality teachers have been successful given its international reputation for excellent educational achievements (Goodwin, Low and Ng. 2015). Singapore students consistently perform at or near the top in a number of international assessments such as the Trends in International Mathematics and Science Study, Progress in International Reading Literacy Study, and the Programme for International Student Assessment (PISA). Most recently, Singapore ranked first in the Organisation for Economic Co-operation and Development (OECD)'s global school ranking, with the U.K. ranked 20th and the U.S. ranked 28th

(Coughlan 2015 May 13). Second, the system has consistently maintained a low teacher attrition rate of less than 3%.

In Singapore, MOE and National Institute of Education (NIE) jointly conduct a nation-wide teacher recruitment to ensure consistently high standards for teacher candidates. NIE is the sole institute providing initial teacher training in Singapore. It offers three major pre-service programmes: 1) Diploma in Education (2 years); 2) Degree in Education (4 years); 3) Postgraduate Diploma in Education (PGDE) (1 year, has been extended to 16 months starting from July 2016 intake). Recruitment processes differ among different programmes. For PGDE, which is the focus of this study, a candidate's journey begins with an online application to the MOE. After a stringent selection process that involves proficiency tests and interviews, teacher candidates are assigned to schools where they go through contract teaching or Enhanced School Experience prior to their teacher training at NIE. PGDE programmes in Singapore recruits fresh university graduates and mid-career professionals who want to pursue a career in teaching. Only candidates who are deemed to possess the right attitude, passion and aptitude will be enrolled for ITE. Within every batch of PGDE participants, there are a number of MOE teaching scholars, for whom the selection process is different from the rest of the PGDE

participants. These scholars are not the focus of this study since they do not participate in the early field experiences like the other candidates.

Now we give a more detailed description of the two types of early field experiences in Singapore. Based on the information available at the MOE website (MOE n.d.), the purposes of the early field experiences policy are summarised as follows: (a) assessing candidates' attitude, aptitude and passion for education and making sure that the system recruits the most appropriate people into the profession; (b) giving candidates a chance to confirm their *individual – profession* match in terms of their suitability for the profession as well as their motivation and skills; (c) providing candidates with real life school experiences, which not only prepare them for their studies at university teacher training, but also the challenging school realities. Participants will receive a full monthly salary when they are placed to schools for early field experiences, and they are fully sponsored by the MOE for NIE training.

There are some essential differences between the two types of early field experiences – contract teaching and enhanced school experience. The most obvious difference is length. Enhanced school experience has a set duration of four weeks, whereas the duration of contract teaching may range from 3 to 30 months according to our survey data. The average is about 10 months. The length of contract

teaching is mainly determined by the candidate's suitability for the profession and readiness to start teacher training as assessed by the school that he or she is posted to. Another difference is the level of participation in school activities. Similar to early field experiences in the UK and the US, the enhanced school experience in Singapore is characterised by activities of low-level involvement such as observations and conversations with teachers. A few candidates may have the opportunity to teach. By contrast, candidates doing contract teaching are treated more similar to full-fledged teachers. For example, candidates are normally provided with opportunities to co-teach with their mentor teachers or may even teach independently for an entire school term with the supervision of mentors.

Methodology

This study aims to explore how the two types of early field experiences promote teacher candidates' resilient qualities. The data is collected via face-to-face interviews with 24 student teachers from the one-year PGDE programmes of the July 2012 intake in NIE. The interviews were conducted in August 2012. Sixteen participants took part in contract teaching, while eight participants took part in enhanced school experience. The length of contract teaching for these participants

ranges from four months to 18 months and 11 of them had contract teaching of at least one year. All participants went to different schools for their school experiences.

The main questions in the interview included the following:

1. How was your contract teaching/Enhanced School Experience structured?
2. What did your contract teaching / Enhanced School Experience involve?
3. What do you think was your role as a teacher?
4. How much freedom did you have when you taught?
5. Did you feel more prepared as a teacher?

Data analysis was based on the constant comparison method, which is rooted in the Grounded Theory approach (Strauss and Corbin 1998). We first read each interview transcript thoroughly. Events, opinions that were similar in nature were then grouped under broader categories. These categories were further abstracted into meanings and themes. After the common themes were developed, we examined the data again for patterns across all participants and further refined the themes. Finally, these themes were examined in relation to our literature review on the resilient qualities.

Findings and discussion

In line with our review, this section is organised according to the role of early field experiences in promoting the various resilient qualities of teachers, namely *passion for teaching*, *self-efficacy beliefs*, and *emotions*.

Passion for teaching

A major benefit of doing contract teaching is that it not only confirms teacher candidates' passion for teaching but also strengthens their desire to teach. This is a message that we get from all but two participants in contract teaching. The reason that they gave us was that they could see growth in their students. Student teachers were not only encouraged by their growth in academic outcomes, but more importantly, by seeing how they grew in non-academic areas including values like caring, as well as interpersonal skills.

For example, when ST2 joined contract teaching, she was simply trying to see whether banking or teaching was a better option for her. Thanks to her persistence in instilling a sense of care among her students, they became more caring and thoughtful. When one student in her class fell and got injured, her whole class took care of him. She told us that this experience was something that she could only have in schools. She realised that teaching was a career where she could do a lot

for other people, 'you light up yourself and give light to other people'.

Consequently, she felt teaching is 'so much more meaningful compared to banking' and is the choice for her. This decision was made in light of the fact that she was already sacrificing her weekends for work.

ST23 pointed out that it is essential for every teacher to go through contract teaching. Here is the reason that she gave:

I think you have to experience it because it's not just your job but involves people, which are the students. So it's a long term thing and you cannot just go in and clear your bond. If you don't have contract teaching and you break your bond (leave teaching within the first three years) when you go to schools, it's affecting the students that you are teaching.

Contract teaching seems to be a rather reliable test of participants' commitment and suitability for teaching. For this purpose, ample professional opportunities were given to participants to let them have a realistic view of a teacher's job. For example, three student teachers have the experience of teaching for an entire semester. All the rest of the contract teaching participants also had extensive opportunities to teach whole classes. In addition, they are involved in different kinds of school activities such as co-curricular activities, staff meeting, professional

learning activities, and meetings with parents. In addition to the evaluation from their mentors, the school management such as principal or vice-principal also observes their teaching.

On the other hand, contract teaching is also an opportunity for the student teacher to see whether he/she is suitable for teaching and make an informed decision. As commented by ST9 on the necessity of contract teaching:

I think it is good because it gives you an idea of whether you want to sign the bond and stay in teaching. Some went through contract teaching and they decided 'no, this is not for me'. It's better that contract teaching save them the hassle and the bond.

It gives participants a real sense of how to function like a teacher in the education system. They are assigned the duties that are similar to the full-load of a teacher, which entails a lot of things to 'juggle' and the experience of 'how a full time teacher actually copes with all these demands'. When one signs the contract to be a teacher, 'you know more about what you are going to get into'. For those whose contract teaching lasted for at least a year, they were able to go through the full cycle of school life, as commented by ST16:

Only through a one year cycle you are able to see the exam period, the festival period, the start of the school year, and the mid-year crisis.

While contract teaching seems to be a good platform that confirms participants' passion for teaching, this theme is not as prominent among ESE participants. ESE is less likely to give them a full taste of what teaching is like, the commitment teaching requires, or whether they are suitable. It is more about giving them 'a feel of the school system in Singapore and what the culture is like'. Only one participant mentioned that ESE gave him a taste of teaching because he was given many more opportunities to teach than the other participants had received.

Evidence on the relationship between school experience and student teachers' resilience is mixed. Some studies (Chambers and Roper 2002; Thornton 1999) found positive relationships, while some others (Chambers et al. 2010; Hobson et al. 2009) found that the longer pre-ITE school experience is, the less resilient they will be. Our results support the former. The relatively weaker role of enhanced school experience in testing and confirming participants' passion shows that school experiences that are characterised by low engagement levels had little impact on resilience.

It needs to be noted that our participants' contract teaching experiences were full of challenges and obstacles including disciplinary problems, heavy workload, lack of pedagogical knowledge and skills, lack of knowledge of students, as well as multiple responsibilities. In other words, for the student teachers who made their decision to join teaching in light of their contract teaching experience, the challenges they encountered in schools were considered as tolerable and surmountable. They were able to cope with the stress d in various ways. The challenge in contract teaching is demonstrated by the quote from ST 2:

When I first encountered these students, I was really quite shocked. The teacher was teaching in front, but behind they were dribbling their ball. And another one was throwing the water bottle.

Many student teachers may not have formed a firm commitment to the teaching profession at the point when they have joined teacher training (Chambers and Roper 2000). They may regard teaching as something they can try or as an alternative to unemployment (Chambers and Roper 2000). In the case of our participants, contract teaching seems to be a good platform to test their passion for teaching and the vision of making a difference in the young people against school reality. It can serve as a 'weeding out' process for those who are only committed to teaching at a surface level

to discover their unsuitability (Calderhead 1988). For others, it can be something that awakens, strengthens, and confirms their interest in teaching.

Self-efficacy beliefs

The sub-themes in this category are much in line with self-efficacy theory (Bandura 1997). That is, we found evidence that belongs to the different sources of efficacy-beliefs such as mastery experience, vicarious experience, and social persuasion. The most salient evidence is that mastery experiences in contract teaching can boost participants' efficacy beliefs. All participants in contract teaching felt that they were more prepared as a teacher after the experience. The following quote from ST2 reveals how she had progressed and became more confident as a teacher:

I already see a difference in me. Compared to the first month of my teaching, the last month is that when I go in, I know what to do. I will make them quiet first and then talk about the classroom rules. After that I will go into the proper teaching.

Her growth in classroom management is something that ST2 particularly cherished in her contract teaching experience. As demonstrated by the following quote:

I want their attention. So I just stand at the door, look at them for a few seconds. Then they know something is wrong and will keep quiet. Children being children, they are playful. Sometimes when they make mistakes, we will be strict with them.

But afterwards I always rationalise with them why I am not happy about their behavior. So this is a soft skill that I learned.

Another participant, ST21 shared his experience of how he managed to make unmotivated students more engaged in his Math class.

The first time when I go and do my first lesson, I just said "I love Maths!" The students were very shocked. Then I said again, "I love Maths!" I didn't get any response, so I tried the third time... "I love Maths!" Then I got response and managed to engage them.

ST21 told us that his strategy worked well and his students became more and more interested in learning the subject.

Participants' efficacy beliefs were not only enhanced through mastery experience like classroom management, but also through observing their mentor teachers' pedagogical practices. As shared by ST16 below:

So contract teaching was very good because I got to see how she taught Math to them. For me if I were to teach Math, I would do it the same as I learnt it during my time. This is not very good because the pedagogy used is already out of date. For her class, there is a lot of exploration where they have to figure out a certain

pattern. Last time we just memorise the rules and that's it. Now you guide them through an activity.

We also found the important role of social persuasion in promoting participants' efficacy beliefs. Among the 16 contract teaching participants, two had considered not joining the ITE program. One of them decided to give it a try with the encouragement of the principal in his contract school. The principal encouraged him that he has the qualities of being a good teacher and will do well in schools after going through ITE. The other participant was still undecided whether teaching is a suitable career for him, and he is the only one of the 24 participants.

Another highlight is that contract teaching could serve as a starting point for student teachers to become reflective practitioners. For example, ST1 started to ponder about educational principles such as 'how students can be sufficiently challenged and yet is not so far off from what they know that they could get lost completely', although he did not know the technical term 'n+1'. By contrast, due to the limited teaching experiences that ESE participants had, they appeared to be much less reflective about their teaching practices. In addition, they had no or very limited opportunities to practice their classroom management and pedagogical skills.

Emotions

All participants in contract teaching and ESE were satisfied with their school experiences, although the depth of their learning varied. Five contract teaching participants felt that their experience was enjoyable. One major source of their enjoyment was the support that they received from schools, as suggested by ST16:

As I step into the school, the mentor teacher said that they have a strong tradition for hand-holding for newcomers or untrained teachers who want to get an experience. She did tell me there's a lot of hand-holding, but I didn't realise what it actually meant until I worked with them for one year, which was really enjoyable.

The second source for contract teachers' career enjoyment is from their students. ST16 enjoyed teaching her classes despite all the challenges she met. She gained great recognition from her students and received "very nice farewell presents" when she left the school. Her enjoyment also came from students' growth. What was most memorable for her was that one student, who had disciplinary problems and did not do well in his studies, managed to reach to the top of his class in one of the subjects.

Most contract teaching participants suffered uncomfortable experiences at times with their students. However, these experiences offered them the opportunity to learn how to establish rapport and at the same time maintain proper boundaries with their students. For example, ST2 shared how she learned to set boundaries with her students through trial and error, with the support of her mentor:

Initially I was very bad, because I used the soft approach to management them, like “Hi, how are you?”, that kind of thing. It was so terrible that the students are totally not listening to me. So a senior teacher told me that you first build rapport with them; second, discipline them; and third, you teach. So after I got my own class, I started to implement her strategy. I will not be very friendly with them at first, but be strict and discipline them. After some time, only when I see the possibilities, I will start to be friend with them, joke with them.

Compared with contract teaching, ESE does not afford much opportunity for deep professional engagement such as independent teaching. Therefore, it is not a surprise that ESE participants did not achieve similar professional satisfaction as contract teachers.

Emotions are a significant and ongoing part of being a teacher (Day et al. 2006).

Contract teaching seemed to provide a platform for participants to learn to

negotiate an appropriate emotional 'line' in establishing relationships with their students. This helped them to reduce stress and burnout. The positive emotions derived from supportive interpersonal relationships can help participants develop better coping strategies in the face of obstacles (Gu and Day 2007). That is, 'positive emotions fuel psychological resilience' (Gu and Day 2007, 1304).

Summary

Our analyses revealed that prolonged early field experiences that involved a higher level of teaching responsibilities have helped promote student teachers' passion for teaching, self-efficacy beliefs, and positive emotions. These resilient qualities may contribute to teacher retention, as showed by previous studies (Chambers et al. 2010; Gibbs and Miller 2013). First, during contract teaching, all the participants have experienced one or more of the following challenges: student disciplinary problems, sacrifice of personal life due to heavy workload, and demands of multiple roles and responsibilities. These live experiences of a teacher's life, rather than discourage them from teaching, confirm their passion for this profession. In other words, these student teachers' passion and commitment to teach is not only felt by themselves, but also tested through lengthy exposure to the teaching reality. Their passion for teaching is at a deeper level that can endure the reality shock, sustaining their love

for teaching and the prospect of staying for a longer time even under challenging circumstances. Second, the mastery experience during contract teaching has helped demonstrate and affirm student teachers' abilities to tackle these challenges. Support from the school, mentors and other teachers also helped boost their sense of efficacy, which in turn can enhance their commitment to remain in the teaching career (Hong 2012). Third, the joy and satisfaction derived from contract teaching can help student teachers sustain their teaching career. The positive emotions can strengthen their resilience when facing stress, obstacles, and adversities (Gu 2014). In other words, they may perceive challenging circumstances from a more positive perspective, and therefore may experience less emotional exhaustion and burnout, factors accounting for many teachers' leaving the profession (Ballantyne 2007). To summarise, our study sheds new light on how conditions can be created to enhance teacher resilience and retention with the provision of extended early field experiences for teacher candidates.

Conclusions and implications

Three conclusions can be drawn from the above discussion. First, contract teaching seems to be an effective strategy to nurture and develop the resilient

qualities of teacher candidates such as passion for teaching, self-efficacy beliefs, and positive emotions. Second, the usefulness of ESE in promoting the resilient qualities is limited compared to contract teaching. Third, the limitations of ESE in developing teacher resilience could be due to its short length and the low engagement level of its activities. In other words, the higher the engagement level in a school experience, the higher potential it may have in boosting teacher resilience. These conclusions heighten our awareness of the value of engaging teacher candidates in prolonged field experiences at the recruitment stage.

In light of research that suggests beginning teachers often struggle with reality shocks, which is one of the main reasons for attrition, scholars have been calling for continuing and well supervised field experiences in schools prior to full-time teaching (Darling-Hammond 1996; Ronfeldt 2012). Indeed, the concern with alleviating beginning teachers' reality shocks through better opportunities of learning in practice has become the focus of policy makers and teacher educators in Singapore as well as other countries. For example, at Utrecht University in the Netherlands, 'a part of the programme must be arranged in such a way that it resembles the working situations of the beginning teacher' (Hammerness, van-Tartwijk and Snoek 2012, 53-54) to ensure that student teachers experience the

reality shock within the programme. However, it might be a better choice to expose student teachers to real school settings. It is only through gaining first-hand experience in schools that the multitude of demands of teaching can be made visible to the student teachers (Chambers and Roper 2000). In addition, given the issue of student teacher dropout during teacher training, it would be important that this school experience comes at the recruitment stage before student teachers officially commence their teacher training. It is for the interests of both the teacher candidates and the education system. On one hand, candidates need to evaluate if teaching is a suitable profession for them. On the other hand, to establish a resilient teaching force, student teachers' strong commitment despite the realities of teaching is something that they must be able to demonstrate. As opined by Chambers and Roper (2000), this commitment 'must be made and be seen to be made' (40).

While the idea of testing aspiring teachers' suitability for the teaching profession through longer teaching experiences before joining a teacher education programme seems to work effectively in Singapore, one must give thorough consideration of the complexity of context when drawing implications for other places or countries. Implementing prolonged early field experiences at a system

level has major policy implications. A major one is funding. Ministries of Education have to think about what works for their specific situations given varying limitations. For instance, it might be advisable to give partial financial support to teacher candidates for their early field experiences.

Another very important consideration is contextual uniqueness. The uniqueness of the Singapore context can be encapsulated by the Policies-Practice-Preparation model for teacher education (c.f. Goodwin, Low, and Darling-Hammond 2017; Lee and Low 2014; NIE 2009). The three parties in the model are the MOE (Policies), Schools (Practice), and NIE (Preparation). The model helps ensure systemic coherence and allows fidelity in implementation across all stakeholders within the teacher education system (Lee and Low 2014). In relation to pre-service teacher preparation, the MOE (Policies) sets the goals of education at a system level, develops Human Resource policies for teachers (e.g., the size of the teaching force and recruitment), resources schools and NIE in deliver its policies, and puts in place structures and procedures to ensure fidelity in implementation (Goodwin et al. 2017). NIE, being the sole pre-service teacher preparation institute in the nation, translates MOE's policies into relevant teacher preparation programs (Goodwin et al. 2017). Schools take an active role in teacher

recruitment, school attachments (e.g., contract teaching), practicum, and other collaborative platforms with MOE and NIE (NIE 2009). The active role of schools helps strengthen the theory-practice nexus (NIE 2009). As pointed out by one reviewer of this article as well as other international researchers (e.g., Darling-Hammond et al. 2017; Goodwin et al. 2017), this unique partnership model has probably played an important role in sustaining the teacher workforce in Singapore. It does so by ensuring close alignment of policy and practice among the MOE, NIE, and schools.

Evidently, the Singapore teacher education context is very different from other countries such as those mentioned in this paper UK, Australia, and US. In light of the findings presented in this paper and the contextual uniqueness in different countries, we would like to suggest a few areas for consideration, with the aim of assisting readers assess the feasibility of having prolonged early field experiences as a recruitment strategy in their own national/regional contexts:

1. Macro context: What are the political, economic, social, and cultural forces that influence policy making related to teacher education?
2. Key stakeholders: who are the key stakeholders having vested interest in teacher recruitment and teacher education? How to ensure coherence and

alignment of philosophy and goals among the key stakeholders if the strategy was to be adopted?

- a) The roles and capacities of each stakeholder
- b) The visions, values, and motivations of each stakeholder
- c) The working process of each stakeholder and the processes of systemic alignment

3. A systemic view: What are the implications for policy and practices in other areas of teacher education if this strategy was to be adopted? This question is essential because the management of education should be perceived as an intersecting and evolving whole, rather than a set of disconnected initiatives (Goodwin et al. 2017),

Compared to countries such as Australia, UK, and the US, Singapore is a much smaller country. Implementing such a process in contexts such as these big countries could potentially meet various challenges that Singapore may not have. However, there can be things “powerful enough to transcend the practicalities, realities, and limitations of implementation, culture, human capital, resource distribution, and local norms” when we learn from international peers on educational matters. In this study, what underpins the policy of implementing

prolonged early field experiences as a recruitment strategy is the idea of making teaching a high quality profession – through attracting, retaining and sustaining quality (Goodwin 2014). This is a key motivation that shapes the education initiatives in Singapore. It is also an idea that can sit at the heart of meaningful educational reform in other contexts. What we have reported in this study is exploratory and not intended as a complete representation of what is involved in early field experiences. It draws on a small sample of student teachers, and therefore, the conclusions are suggestive and tentative. However, data such as these hold great potential to illuminate the prospects of mandating a relatively long school stint in the recruitment stage, and should provide ideas for policy makers and teacher educators in countries grappling with the difficulty of establishing a quality and stable teaching force. Extending this study to a larger population and the use of both qualitative and quantitative methods would deepen our understanding of the usefulness of early field experiences. In particular, we plan to explore further the concept of early field experience in recruitment, and its implications for teacher resilience and retention. Last but not least, we should not forget another group of stakeholders in the early field experiences – the school students. We recommend research to be conducted from the eyes of school

students who are being taught by the untrained teachers, with a particular focus on how early field experiences such as contract teaching can be provided without compromising the quality of students' learning.

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