"I Actually Felt More Confident": An Online Resource for Enhancing Pre-service Teacher Resilience During Professional Experience

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Abstract: One responsibility of teacher education is to provide opportunities for pre-service teachers to build skills and strategies to develop confidence for overcoming challenges and build their professional resilience, yet how students learn these skills is not clearly understood. This study examines how engaging with online modules influenced participants' efficacy and resilience during their final professional experience practicum. Interviews with 13 Australian pre-service teachers revealed that the module content and design reactivated existing knowledge, taught new emotional regulation and coping strategies, encouraged self-awareness and reflection, and built confidence. While further research is needed, participants used their new found knowledge during their professional placement and indicated they intended to do so in their future careers.

Keywords: teacher resilience; online learning; self-efficacy; professional experience; teacher education

Introduction

A shared goal of teacher educators is to prepare teachers who will go on to have successful and satisfying careers and make a positive contribution to the lives of students they teach. In many instances, this is the case, yet there are also instances of newly graduated teachers experiencing extreme difficulties, stress and mental ill-health, and ultimately finding it difficult to remain in the profession (Australian Institute for Teaching and School Leadership (AITSL), 2018; Harmsen, Helms-Lorenz, Maulana, & van Veen, 2018). An important aim of teacher education therefore is to provide opportunities for pre-service teachers to build skills and strategies to develop confidence for coping with challenges and build their professional resilience (Gu & Day, 2013; Le Cornu, 2009). Although it is acknowledged that teacher education should support development of professional resilience, how this occurs and the process by which pre-service teachers learn such skills and strategies has not been explored. This study investigates how use of a resilience focused online learning program may support that process.

The field of teacher resilience has burgeoned in recent years and many studies recommend resilience focused content in teacher education. Typically, teacher education programs are designed to develop knowledge, skills and practices related to curriculum and

pedagogy, with less attention given to pre-service teachers' social emotional development and coping skills. In many countries, including Australia, accredited teacher education programs are geared towards preparing pre-service teachers to demonstrate teaching standards (AITSL, 2011) reflecting professional knowledge, skills and engagement. Although it is acknowledged that non-cognitive capabilities, such as resilience are important for teachers, these are often neglected in mandated teacher education program requirements and teaching standards (Mansfield, Beltman, Weatherby-Fell, & Broadley, 2016; Richardson, Watt, & Devos, 2013).

During teacher education, a particularly critical time for pre-service teachers is professional experience. Not only does it provide the opportunity for application of knowledge and skills in an authentic context, but an extended period of time in school also affords experience of the social and emotional demands of the profession and can increase awareness of the need for adaptive coping strategies. During professional experience pre-service teachers encounter multiple socioemotional challenges (Caires, Almeida, & Martins, 2009) and it has often been suggested that skills to manage these challenges are lacking in teacher education. Sharplin, Peden and Marais (2016) identified seven inherent requirements for professional experience, three of which include socioemotional skills: *self-awareness and self-management* (self-knowledge, personal insight, reflection, confidence, organisation, time management); *social awareness and situational management* (engaging with colleagues, interpersonal requirements, appropriate behavioural responses, flexibility, adaptability); and *communication and relational skills* (interactivity, acceptance, empathy, tolerance, cultural competence). These three domains of skills align with the CASEL core competencies for social and emotional learning (SEL) (Collaborative for Academic Social and Emotional Learning (CASEL), 2019) and are also important for teacher resilience (Iizuka, Barrett, Gillies, Cook, & Marinovic, 2014). When teachers are socially and emotionally competent, this can assist with "effective coping and resilience in the face of stress" (Cefai & Cavioni, 2014, p. 136).

Given that professional experience presents authentic opportunities for experiencing the rewards and challenges of teaching, this is an important time where initial teacher education can contribute to supporting and preparing pre-service teachers to build confidence and capacity for resilience. Some teacher education programs run workshops or seminars to support pre-service teacher resilience, however along with the increasing online offerings in higher education, consideration should also be given to online resources. Pre-service teachers in this study engaged with a recently developed series of five online modules – the BRiTE program (Mansfield, Beltman, Broadley, & Weatherby-Fell, 2016a), which aimed to assist pre-service teachers build awareness of the skills and practices that facilitate resilience for teaching.

There are two main fields of literature that inform this study: teacher resilience and teacher self-efficacy. We contend that raising awareness of skills and strategies that support resilience, helps strengthen beliefs about efficacy for managing challenging situations, and this is an important part of the process of developing teacher resilience. While teacher education programs may support the development of self-efficacy for teaching (instruction, student engagement, classroom management) (see Lemon & Garvis, 2017; Tschannen-Moran & Woolfolk Hoy, 2001), there is less focus on efficacy for overcoming social emotional challenges and for understanding and managing physiological and affective states, the need for which is heightened during professional experience (Pfitzner-Eden, 2016). The aim of this study is to examine how engaging with the BRiTE online modules influenced pre-service teachers' confidence and resilience during their final professional experience.

Teacher Resilience and Self-Efficacy

Resilience has been defined as "the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances" (Masten, Best, & Garmezy, 1990, p. 425). In the context of the teaching profession, this may be evidenced through the process of teachers drawing on personal and contextual resources and employing effective strategies to adapt to challenges that arise in the context of their work (Beltman, 2015; Mansfield, et al., 2016). Teacher resilience has been associated with a multitude of constructs and contributes to important outcomes including teacher engagement, commitment, motivation and self-efficacy (Day & Gu, 2014; Mansfield, Beltman, Broadley, & Weatherby-Fell, 2016b).

An important personal factor in shaping teacher resilience is self-efficacy (Ee & Chang, 2010; Gu & Li, 2013; Mansfield, et al., 2016b) as it influences the degree to which individuals believe they can exercise control in adverse or threatening situations (Bandura, 1997). The strength of an individual's self-efficacy, or conviction that they can successfully carry out a certain action, "is likely to affect whether they will even try to cope with given situations" (Bandura, 1977, p. 193). Therefore, individuals with high self-efficacy are more likely to see demands as challenges (Bandura, 1997; Ventura, Salanova, & Llorens, 2015). Teachers with strong self-efficacy are also more likely to demonstrate capacity for resilience (Hong, 2010; Tait, 2008; Tschannen-Moran & Woolfolk Hoy, 2001).

There is a degree of reciprocity between resilience and self-efficacy, although causation remains unclear. For example, increasing self-efficacy can be said to lead to resilience, which in turn contributes to greater feelings of agency and ability to be proactive in the classroom (Keogh, Garvis, Pendergast, & Diamond, 2012). Similarly, Yost (2006, p. 74) argues that resilient teachers "can think deeply, problem-solve, and feel confident in their ability to meet the needs of their students" which is associated then with greater persistence and risk-taking. Just as self-efficacy is developed through interactions between individuals and their environments, resilience also is shaped by personal and contextual characteristics. Rather than being solely an individual trait, resilience develops through "dynamic and complex interactions between individuals and their social and geographic contexts that lead to positive outcomes for teachers" (Johnson et al., 2014, p. 15).

Self-efficacy refers to "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" and as such acts as a major influence on actions, effort investment, thought processes, perseverance, levels of stress in coping with adversity, resilience and affective states (Bandura, 1997, p.3). Bandura's theory states that there are four major sources of information that affect self-efficacy: enactive mastery experiences, vicarious experiences, verbal persuasion and physiological and affective states. When *mastery experiences* occur, particularly over time, strong efficacy expectations develop and individuals are likely to persist as these generalise to other situations. These actual performances are the "most reliable information for assessing self-efficacy" that individuals use (Schunk & Pajares, 2004, p. 117), so if pre-service teachers, for example, began to have success during professional experience, this mastery would contribute to self-efficacy. *Vicarious experiences* occur when a person sees others perform and overcome difficulties, generating expectations that, with persistence, they can also succeed (Bandura, 1977). This is particularly likely if observers see similarities between themselves and the models (Schunk & Pajares, 2004). Mass communication, with real stories, provides many opportunities for observational learning (McAlister, Perry, & Parcel, 2008) and in teaching, such learning would involve observing peers and other teachers overcoming challenges (McAlister et al., 2008; Skaalvik & Skaalvik, 2016).

A third source of information that affects individuals' self-efficacy is *verbal persuasion*. This comprises suggestions by others that they are capable of coping with situations that may have previously seemed overwhelming, coupled with conditions that will facilitate successful performance (Bandura, 1977). In teaching, this would include social support from colleagues and the school administration (Skaalvik & Skaalvik, 2016) as well as feedback from, and relationships with, their students (Le Cornu, 2013). Finally, *physiological and affective states* provide information to individuals that affects their self-efficacy. For example, individuals can interpret physiological indicators such as sweating or increased heart rate as meaning that they lack competence, and when these do not occur, they feel more efficacious (Schunk & Pajares, 2004). Such information affects efficacy beliefs via a cognitive appraisal that is made of the nature of the situation connected to the indicators (Poulou, 2007). Efficacy beliefs of teachers, as well as other positive outcomes, can be improved through interventions that enhance physiological states and positive mood, and reduce stress levels (Kaspereen, 2012; Siu, Cooper & Phillips, 2014). Further, efficacy beliefs influence how individuals interpret and integrate information and play an important role in attention and regulation processes (Bandura, 1997).

Self-efficacy is particularly important in the beginning stages of teaching (Tschannen-Moran & Woolfolk Hoy, 2007) when beliefs are "most malleable" (Pfitzner-Eden, 2016, p. 2) and there are fewer mastery experiences to draw on. Typically, teacher education programs support the development of self-efficacy through provision of enactive mastery experiences, vicarious experiences and verbal persuasion (Clark & Newberry, 2019), however Moulding, Stewart and Dunmeyer (2014) argue that physiological and affective states may be neglected, as they consider it unlikely that pre-service teacher education programs would include activities that directly address stress or mood.

One crucial time for development of teacher self-efficacy is the professional experience which occurs during pre-service teacher education (e.g. Klassen & Durksen, 2014; Woolfolk & Hoy, 1990; Sciuchetti & Yssel, 2019). Of particular relevance to this study are the findings from Pfitzner-Eden's (2016) study investigating the influence of each of Bandura's sources of efficacy in changing teacher self-efficacy during professional experience. Results showed that changes in teachers' self-efficacy are directly influenced by mastery experiences that are in turn informed by the other sources of self-efficacy. For example, negative physiological and affective states contributed to reduced experiences of mastery and thus to reduced self-efficacy. Recommendations from this study include formal integration of practice of self-regulation strategies associated with emotions and physiological states into professional experiences. These findings suggest that pre-service teachers experiencing stress, anxiety and negative emotions, may be less likely to develop self-efficacy in the teaching context than those experiencing positive physiological and affective states. Given that professional experience can be a time of multiple stress and pressures (Caires et al., 2009; Grant-Smith, DeZwaan, Chapman & Gillett-Swan, 2018), it would seem sensible then that teacher education programs integrate learning experiences to strengthen self-efficacy and resilience before formal professional experience.

Building Resilience Through Online Learning

Teachers are more often turning to online platforms for their professional learning where they can experience greater autonomy and develop their self-efficacy (Beach, 2017). Online interventions have the potential to offer low cost, accessible, non-threatening mental health interventions (Crisp & Griffiths, 2014). University students are one group that may be particularly supported by online interventions as a large proportion have high levels of

psychological distress and they are heavy users of the internet with free access provided by their universities (Ryan, Shochet, & Stallman, 2010). In line with such findings and the widespread recommendation that pre-service teacher education programs need to provide resources that develop their students' capacities for resilience (Beltman et al., 2011), online modules were developed (Mansfield, et al., 2016a). The BRiTE (Building Resilience in Teacher Education) modules were designed as a flexible, personalised and interactive learning resource for pre-service teachers and in the years 2016-2019 had over 15,000 users.

The BRiTE modules were designed to assist pre-service teachers develop understandings of the skills and strategies to support resilience. In designing the modules, the developers were guided by their shared expertise as teacher educators, knowledge about effective online learning experiences, as well as existing research in the field of teacher resilience. Five modules were created: B – Building resilience; R – Relationships; i – Wellbeing; T – Taking initiative; and E – Emotions. The topics within each module aim to build psychological and social capacities through focusing on, for example, recognising and regulating emotions, thinking optimistically, communicating effectively, managing stress, maintaining motivation and managing wellbeing. All activities are set within a context relevant for beginning teachers such as their final professional experience placement or a new appointment in a school. Specific topics are included that explain the immediate and long term physical and emotional consequences of stress as well as a variety of strategies likely to improve physical and emotional states by reducing stress and building positive emotions, as outlined in the literature.

Each module aims to enable users to:
- Increase their awareness of existing resilience strengths and previous enactive mastery experiences (through quizzes and reflection questions);
- Understand and build knowledge and skills endorsed by experts in the field (videos of teachers and experts explaining concepts, 'what do the experts say?' research summaries, downloadable fact sheets, teacher narrative case studies);
- Demonstrate how understandings about resilience could be applied to believable teaching situations ('What would you do?' scenarios, tips for concepts in practice, reflection questions and a variety of self-correcting interactive activities with feedback);
- Develop a set of personalized resilience resources (users can create a resilience toolkit of relevant information and reflections).

The BRiTE modules were designed so they could be used as a stand-alone resource, or be integrated into a pre-service course, particularly in conjunction with professional experience placements in schools. As research indicates that the modules are positively impacting factors such as commitment to the profession (Beltman, Mansfield, Wosnitza, Weatherby-Fell, & Broadley, 2018), this study aimed to closely examine the experiences of pre-service teachers who had completed the modules and their views of how the modules had influenced their resilience during their final professional experience placement.

Methodology
Participants

Participants were 13 pre-service teachers enrolled in a Graduate Diploma (1 year intensive) initial teacher education course at an Australian university. Participants were encouraged to complete the BRiTE modules prior to their final 5-week school based Professional Experience (PE). Completion of the modules was not a compulsory part of the course at that stage. Pre-service teachers were invited by email to participate in an interview

related to the modules after they had completed their course requirements. The invitation came from a staff member known to the students but not currently teaching them. All participants completed the modules prior to the PE and data from those interviews were analysed for this paper. As shown in Table 1, ten participants were female and eight were Primary teachers. Ages ranged from 21-50.

Pseudonym	Gender	School level	Age
Holly	Female	Secondary	21-25
Rebecca	Female	Secondary	21-25
Emma	Female	Secondary	36-40
Peter	Male	Secondary	36-40
Kathryn	Female	Secondary	41-45
Rhys	Male	Primary	25-30
Daniela	Female	Primary	25-30
Imogen	Female	Primary	31-35
Caleb	Male	Primary	41-45
Anna	Female	Primary	41-45
Claire	Female	Primary	41-45
Sarah	Female	Primary	41-45
Deborah	Female	Primary	46-50

Table 1: Participant demographics

Following their PE, participants were interviewed to discuss if and how engagement with the BRiTE modules influenced their perceived resilience during their placement. Specifically, participants were asked their general impressions of the modules, the influence they perceived engaging with the modules to have had on their experiences, if they recalled or used content from the BRiTE modules, and whether they would refer to the modules in their future teaching. Individual and university level ethics consent was obtained and all interviews were conducted by the same researcher who was known to the pre-service teachers but was not teaching them at that time. Each interview lasted between 30-45 minutes and was audio recorded, then transcribed for coding.

Data Analysis

Given the unique nature of the online resource, a grounded theory approach was used to analyse the data. This systematic qualitative approach generates a general explanation, in this case the connection between the BRiTE modules and PE experiences, followed by a "visual model that portrays the general explanation" (Creswell, 2005, p. 53). Sensitive to the individuals and their settings, this approach was also seen to be most suited to the complexities of the BRiTE modules. Using a constant comparative method (Fraenkel, Wallen, & Hyun, 2012), one researcher conducted open coding, generating provisional categories, moving to axial coding in consultation with a second researcher in an iterative process to examine connections between these categories (Punch & Oancea, 2014). The final coding stage was that of selective coding, where two researchers developed a more abstract level of explanation for the categories (Creswell, 2005). Once the final categories, or themes, were developed, the qualitative relations between them were explored and represented in diagrammatic form.

Results

All participants described ways in which engagement with the BRiTE modules influenced their thoughts and actions during professional experience. As shown in Table 2, seven connected key themes were identified. Connections between the themes are illustrated in Figure 1 and this is the frame used to determine the order of the presentation of the themes in Table 2 and in the results section. One further theme related to the nature of the online learning platform also emerged. Each theme will be presented in turn with illustrative quotes from the interviews with all participants' ideas featured.

Theme	Description	Number of participants	Number of references
Reminding and reinforcing	Reminded of things they already knew and behaviours/ attitudes that supported resilience. Reminded about options and reinforced existing ideas.	13	54
Increasing self-awareness	Made aware or more aware of what was already known. Brought things to mind/ at forefront of the mind.	10	14
Reflecting and thinking	Prompted reflection, thinking about already known and new resilience skills and strategies.	10	27
Learning new strategies	Learning new strategies, extending existing ideas.	9	20
Building confidence	Feeling more confident in coping with challenges, encouraged by new ideas, gave options, felt empowered to do more.	6	11
Applying strategies on professional experience	Specific examples of when and how strategies have influenced thoughts and actions on practicum	11	19
Applying strategies in the future	Specific examples of how strategies/module contact will influence future thoughts and actions.	11	19

Table 2: Emerging themes, number of participants and references

Reminding and Reinforcing

All thirteen participants described how the modules reminded them of what they already knew and resilience resources they possessed, and this code included the highest number or approximately one third of all references (54). For example, Holly said:

> *It definitely reminded me. I knew not to take things personally before ... but, yeah, it definitely reminded me about some of those things as well. It reminded me to make sure that I keep in touch with family as they are a good supportive network outside school and also reminded me to take care of myself as well as the students.*

Emma described how the modules provided reminders about ways to solve problems, providing "*options, because when you are in the moment you feel a bit trapped in the moment ... it can feel really overwhelming ... and then you catastrophise it*" Completing the modules immediately before the placement reminded her: *"Not to catastrophise ... take a minute, speak to someone, which for me is an important thing"*. Furthermore, for this participant, the reminders increased awareness and had a positive influence on emotional management:

> *I think because I was so exhausted and you need to remind yourself that emotional reactions are heightened because we are exhausted. I felt like crying … Doing the BRiTE stuff reminded me that I AM exhausted and it does make me more teary about stuff that wouldn't normally make me upset.*

Another participant described how the modules prompted thinking:

> *I remember thinking … this isn't something I don't know but it prompted me to think about it. … it does actually take that to make you… realise your potential or the skills you got or the… you have already have but you don't necessarily utilise them or implement them as a strategy. So it's good. If you prompt someone to actually think, then they are beneficial.* (Imogen)

For participants coming from another career, highlighting specific features of school contexts was helpful.

> *I liked some of the … prompting ideas about visiting the staffroom and sussing out the etiquette and all of those kind of things which I think is really useful. I've worked in professional fields before, so, that working with colleagues is something I know a reasonable bit about but there was those little things to be aware of.* (Deborah)

Increasing Self-awareness

Ten participants reported that engaging with the BRiTE modules had increased their self-awareness of resilience skills and strategies. Some reported it being *"good to just be aware of what you should be looking at if you need help in those areas"* (Claire) and that there were *"those little things to be aware of"* (Sarah) when working with colleagues. Increasing awareness was also reflected in comments such as: *"there was a lot of stuff you sort of knew, but didn't realise at times"* (Rhys); *"it just brought to mind some of the strategies, I probably wouldn't have thought of them"* (Caleb); and *"it was higher in my consciousness"* (Anna). Other participants noted having increased awareness of emotions, for example, *"I probably wasn't aware of my emotional well-being as much"* (Rebecca) and *"just having that awareness means you are not drowned by it… so having to frame my thoughts in a positive way helped me emotionally"* (Emma).

Reflecting and Thinking

Ten participants described how engaging with the modules encouraged them to think and reflect and 27 references were made to this in the interviews. Participants described how the modules *"actually allowed me to think about stuff like if I was taking care of myself"* and *"ways to think about how I would manage stress and problem solving skills in the classroom"* (Holly). The modules enabled *"thinking about resilience and thinking about bouncing back and the skills I already had instead of being scared"* (Kathryn). Thinking and reflecting also enabled resilience skills and strategies to be *"in the forefront of your memory. Like I was always thinking about it. If I didn't do the modules I am not sure how much I would have had it in perspective"* (Daniela).

Learning New Strategies

Nine participants explained how the modules helped them learn additional resilience-related skills and strategies and there were 20 references to new strategies. One participant

described learning about building relationships as *"definitely a stand out"* (Claire). Another described how the modules helped when things went wrong in *"learning to move past that, not getting trapped in it"* (Emma). Learning how to apply skills after recognizing physiological and affective states was also noted:

> *I learnt about how to apply skills if I become stressed or flustered. Also in how to not take things too personally from other students if they become angry towards me, it's about other things not always the teacher.* (Holly)

Participants also learnt about the role of resilience in career longevity:

> *There was some interesting information around teachers who stay in the field and teachers who don't and how that can be related back to resilience. That was interesting to think if you want to be in this then for the longer term this is not something you can think about five or ten years down the track or a couple of years. You need to think about how you are managing things from the beginning.* (Sarah)

Building Confidence

Six participants explicitly described how the BRiTE modules had helped them feel more confident about how to manage challenging situations, with the word "confident" necessary for this coding category. For example:

> *They definitely made me feel more confident when things aren't going so well, about how to look for help, how to ask for help and what kind of help to be looking for in the first place. They just made me feel with my class, I could do what I wanted to do.* (Claire)

One participant described feeling *"more confident in understanding situations. Not necessarily more confident in teaching … but more confident in understanding what was going on around you"* (Imogen). Confidence was enhanced through learning about resilience skills and strategies:

> *As a new teacher I feel quite confident knowing that I have a couple of strategies up my sleeve and that I will develop more strategies as I develop and as I go and adapt with what they come up with. I think I can marry it all in quite well. Yeah, it is a boost to my confidence.* (Rebecca)

Anna provided some additional insights as to the effect of feeling more confident on thought processes, behavior and motivation:

> *I actually felt more confident as I went in. I was a little anxious … but I did feel more confident and a bit calm…Probably I felt that I needed to step up. The modules helped me to think… to be proactive and actually be proactive in a positive sense. And, that I had been through more professionally… I felt more empowered to do more. I do… the modules did help. It kept forcing me to think… to be more objective… to be more rational about it and to reflect on what my options were. I wasn't just a pawn in their game although I knew I was visiting their space as a guest… I knew I had to take on a role and make it successful.*

Interestingly, of the six participants who described a positive impact on their confidence, only Rebecca was in the 21-25 age range, Imogen was in the 31-35 age range, and the remaining four were aged 41-45. This finding suggests that it is not only younger pre-service teachers who benefit from the modules, and highlights the contextual nature of efficacy and resilience development.

Applying Strategies on Professional Experience

Twelve of the thirteen participants described how they had used ideas from the modules when they were on PE and some of these examples also involved being reminded, made more aware, and reflecting and thinking on thoughts and behaviours 'in the moment'. Although there were general examples given, some more specific examples included:

I did reflect back on the modules, particularly the well-being. I had days where I was, I don't know, feeling a bit overwhelmed or I just, you know, basically had a bad day ... that did prompt me to reflect on some of the things that had been highlighted in the BRiTE modules ... a good example would be not taking it personally. (Peter).

There were a couple of times where I was a bit emotional after class thinking I can't do this (laughs). Yeah. But then I think, hang on a minute you gotta lose that idea because that is today and today is just a moment and tomorrow will be different and yeah don't carry that forward to tomorrow. [before] I hadn't really talked about just letting go... because that stuff was fresh in my mind I was able to let go. (Kathryn)

In these instances, learning from the modules helped pre-service teachers recognise their physiological and emotional responses, then reframe events and respond in a way that supported their resilience.

Applying Strategies in the Future

Ten of the thirteen participants also spoke about how they would use their learning from the modules in the future. Sometimes this meant in preparing for their first teaching position: *"regardless of the workload or the expectations of the school still, I will try to maintain that balance. For me personally, looking after my emotional well-being will be really important."* (Peter)

Similarly, Caleb was also thinking pro-actively about his wellbeing:

I am already starting to think about what sort of things I need to have organised outside of work so I am not just focused on work. I might take up sailing, as I haven't done that before. I have been sorting out a few things... I have a cousin up there and I can visit her. I don't think without BRiTE I might have thought about that.

Interestingly, there were also examples to illustrate how ideas from the modules applied to other aspects of life as described by Emma:

I think the aspects of self-care and the emotional regulation does flow on ... you find yourself using that at home as well ... you are automatically assessing what is happening and assessing rather than automatically reacting. So yeah, a lot of that personal wellbeing stuff and self-regulation stuff definitely flow on ... and I will be talking to the kids who are catastrophising, you know it isn't the end of the world and calm down. So it also flows on from that ... it does spread its feelers out a bit.

Online Design to Support Learning

Interestingly, participants also made particular comment about the online design of the modules and how this contributed to their learning. For example, Claire noted the importance of personalisation and how it promoted deeper thinking and reflection:

>*It wasn't just a program you read through and may or may not get anything out of. It is a program that makes you respond in a personal way and gets you thinking about how you related to it on a personal level … It's not just going through the process and tick the boxes type of certification. It's more a… it gets you personally involved, gets you thinking and it's a great resource to go back to.*

Similarly, Holly said it made her "*think of my strategies and what I would do, especially in those scenarios they have online, they made really think about that as well.*" (Holly)

Rebecca also explained how the prompts for reflection within the modules influenced her self-awareness:

>*What I liked about the modules is that we had to write our own strategies in those boxes and I sort of realised that I knew more than I thought when I had to come to write them down.*

Variety, authenticity, and feedback were incorporated into the module design and contributed to Anna's engagement and learning:

>*I liked, there was a variety of… there was smiley faces and … there was a couple of videos and there was a couple of text activities and things like that. It wasn't the same on every page… it had a bit of diversity I suppose and everything was different. I liked it. It was very concise and not overly simplified but it, yeah, it was nice and tidy. Nice summaries… positively expressed but still, highlighting some of the issues that might arise in schools that could cause conflict or upset… be problematic. It was good it didn't talk about the all of the positives that you might encounter. It felt real and legitimate. I remember thinking at the time, that was in there and this is how you would handle it. Some of my responses… I felt validated… that was good… that was positive too. But even when I deliberately got a couple wrong or I put something else in, it came back and made you think from a different perspective. Rather than no you idiot! So I thought that was good as well.*"

Connections Between Themes

As the higher order themes were developed, it became apparent that there were connections between the themes, based on how participants connected the themes in their explanations. Figure 1 shows these relationships with dotted lines showing the relationships illustrated by the data.
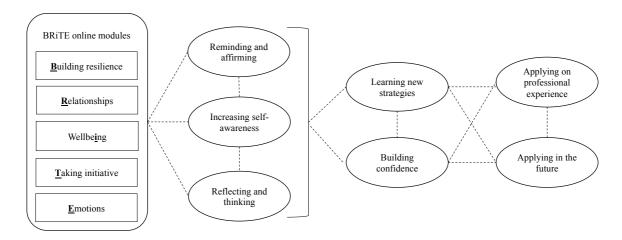
Figure 1. Connections between themes

As may be seen in Figure 1, the BRiTE modules with their explicit design were the starting point. For seven participants, increasing awareness was often accompanied by reflecting and thinking and/or reminding and affirming. All participants described at least one of these themes, six described two, and seven described all three. For nine participants, this 'activation' of thought led to an open-ness to learning new strategies, and six reported increased confidence. Four participants described both new strategies and increased confidence. The endpoint of the engagement with the modules was implementation and all participants described either applying strategies on their professional experience, or in the future.

Discussion

This paper reports findings from a study that examined how engaging with the BRiTE online modules influenced pre-service teachers' experiences and resilience during their final professional experience. Although limited by a small sample of self-selected participants from one university, the findings bring to light a number of points for further consideration.

The study illustrates that engaging with the BRiTE online modules had a positive impact on these pre-service teachers' resilience during professional experience. This occurred through the nature of the content and the online learning design. Specifically, the content focused on resilience related skills including emotional awareness, emotional management, communication and relationship building, problem solving and wellbeing. The online design promoted self-reflection and engagement through a variety of activities, was personalised, and encouraged deep thinking in an authentic context. These findings are promising, especially in light of the increasing emphasis on online provision in higher education and for teacher professional learning (Beltman & Poulton, 2019; Weatherby-Fell, Duchesne, & Neilsen-Hewett, 2019). There are relatively few studies that investigate the effects of resilience 'training' with pre-service teachers, yet this study shows the potential of online learning to support resilience. Participants completed the modules immediately prior to their professional experience in schools and future research would be needed to determine if this is the optimum time for such a learning experience, or whether integrating the modules within teacher education programs at different times and in different ways would lead to more robust skills and self-efficacy.

The findings show that experiences to affirm existing resources, increase self-awareness and self-management, and prompt positive action for maintaining wellbeing, contributed to a perceived increase in confidence for half the participants. Regarding the four sources of efficacy information (Bandura, 1997), the modules provided information that encouraged mastery experiences during professional experience, included teacher voices – verbal persuasion, encouraged vicarious learning through shared experiences and scenarios, and helped users recognise and regulate physiological and affective states. Although only half the participants reported specifically feeling more confident, more importantly most reported using their new-found skills during their placement. Schunk and Pajares (2004) cautioned that the effects of increased self-efficacy can be outweighed by other factors such as social demands and pressures so it is important to ensure that beginning teachers are provided with additional supports. As pre-service teachers build their skills, strategies and confidence, it is likely that they will put in greater efforts to seek and secure social support (Vanhove, Herian, Perez, Harms, & Lester, 2016), reflecting the dynamic and reciprocal nature of the themes in this study. Enhancing individual pre-service teacher self-efficacy is not enough.

The acknowledgement that beginning teachers may experience extreme difficulties in terms of stress and mental ill-health, resulting in difficulties to remain in the profession (AITSL, 2018) is significant. The importance of developing deep roots and connections within school communities, and building 'communities of resilience' has also been acknowledged in work with veteran teachers (those with 15-20 years of experience). For example, Drew and Sosnowski (2019) reported the capacity of experienced teachers to withstand challenges and maintain a sense of purpose was found to be directly aligned in the ways they were able to navigate the factors that constrained them, and also provided the opportunities to benefit from factors that enabled them. Similarly, during rural and regional professional experience placements, communities have been found to play a critical role in supporting pre-service teachers (Kline, White & Lock, 2013). Knowledge and awareness of how their resilience may be supported and enhanced can positively influence early career teachers' experiences.

Responsibility also lies with the wider social, cultural and political arenas within which teachers learn and work (Johnson et al., 2014).The preamble of the Alice Springs (Mparntwe) Education Declaration (2019) explicitly states that educators need appropriate support as they deliver the goals within the Declaration, specifically noting they cannot do it alone. Preparing young people to develop and grow in this time of rapid social and technological change is becoming more complex for teachers and educators, and together with their students, they need to be flexible, resilient, creative and able to keep learning. Goal 2 of the Declaration draws attention for all young Australians to become confident and creative individuals with a sense of self-worth, self-awareness and personal identity, to develop skills and strategies required to manage current and future challenges, and to be optimistic about their lives and the future.

In supporting quality teaching and leadership, the Declaration also recognises the importance of providing both opportunities and resources for ongoing professional learning and developing well-prepared pre-service teachers. These 'teachers-to-be' are acknowledged as having the ability to transform the lives of young people and inspire and nurture their personal and academic development. Promoting ways to relate to others and the positive influence and impact of maintaining healthy relationships may directly support pre-service teachers' sense of belonging, purpose and wellbeing, thereby enabling them to thrive.

Perhaps not surprisingly, many participant comments involved recollection of emotions, or emotionally challenging experiences. Twelve of the thirteen participants described how learning from the modules helped them in being aware of their emotions at particular points during their professional experience, and also assisted in regulation of

emotions which in turn promoted more adaptive outcomes. There were specific examples of pre-service teachers' awareness of their physiological reactions and affective states, such as "feeling flustered". Although research has emphasised the importance of emotion regulation for teachers (Fried, Mansfield, & Dobozy, 2015; Lavy & Eshet, 2018; Richardson et al., 2013), with the exception of Beltman and Poulton (2019) few studies have explored how online learning might provide useful tools to support this. An additional example is the use of simulated, virtual classroom experiences during pre-service teacher education to enhance self-efficacy and pedagogical skills (Stavroulia, Makri-Botswari, Psycharis, & Kekkeris, 2016). Positive and negative emotions were also experienced during the virtual experience, and although findings were inconclusive, the use of such online environments provides an opportunity to prepare pre-service teachers for their future classrooms in a supportive environment. This study highlights the potential, however larger intervention studies are important to further understand the value of online learning experiences in supporting emotional regulation.

The findings from this study also speak to the broader concern about the development of socioemotional competencies during teacher education (Pfitzner-Eden, 2016; Richardson et al., 2013; Sharplin et al., 2016) and how learning to support these may be delivered. As well as describing self-knowledge, reflection, personal insight, confidence, pro-active engagement with colleagues, and self-management during times of stress, participants mentioned feeling more confident with managing challenges. The capacity to embrace uncertainty, and use a 'turn-around' to reframe negative experiences into learning experiences, speaks to the power of reflection and reflective practice (Drew & Sosnowski, 2019). Self-efficacy for coping in a specific occupation has been investigated in other caring professions, such as nursing (see for example, Pisanti, Lombardo, Lucidi, Lazzari, & Bertini, 2008) and that work may provide insights for further related research in teacher education.

In addition to connections with sources of self-efficacy and emotions in teaching, there were connections between the higher-order themes themselves (see Figure 1). In a broad sense the themes could be viewed from a constructivist perspective, with activation of prior knowledge with which to build new knowledge and apply that knowledge in particular contexts. Various taxonomies of cognitive process (for example, Biggs & Collis, 1982; Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956) may also be useful in exploring this learning process with a larger data set. Quantitative studies, online self-reports during professional experience or observational studies could test the model developed and investigate its applicability to other participants and settings.

Conclusion

This exploratory study examined how engaging with the BRiTE online modules influenced participants' resilience and confidence during their final professional experience practicum. The finding that there was a positive influence on pre-service teachers' approach to managing challenges, confidence and management of emotions during their professional experience is encouraging, given that this is typically a time of high stress where multiple socioemotional challenges are encountered. Future research to further unpack the impact of the modules would benefit from a mixed methods approach and a larger sample size. The findings from the Initial Teacher Education Data Report (AITSL, 2019) where less than half (44%) of early career teachers indicated they were unlikely to leave classroom teaching in their foreseeable future, a further 20% indicated they would within one to five years, and 26% were unsure, speaks to the importance of providing opportunities to support those graduating from initial teacher education programs. The disparity between perceived

provision (40%) and reported delivery of formal induction programs by school leaders (69%), where these early career teachers feel a sense of belonging to the profession (62%) is concerning (AITSL, 2019).Those responsible for preparing and supporting pre-service and beginning teachers are encouraged to explore how they can incorporate similar interventions aiming to maximize wellbeing and resilience in the teaching profession.

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