

Language Teacher Resilience: Antecedents and Experiences

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ABSTRACT

The aim of this study was to re-analyze data derived from the lead author's recent implementation of the approach, active learning in an English-language course in Japan through the lens of language teacher resilience. To do this, the study drew on the complexity-informed model of teacher resilience proposed by Kostoulas and Lämmerer (2018) and sought to investigate the antecedents to changes in teacher resilience that emerged during the implementation and their impact on the teacher's resilience system that comprised part of the model. A number of antecedents were found. These were stressors (related to e.g., the context, the implementation of the approach), positive appraisal of events, stressors and then appropriate action in response (e.g., accessing the literature, drawing on an existing skill), having a belief based on prior experience in the context, not being sufficiently informed about learners' language-learning goals and needs, and moderate interpersonal skills. Overall, the antecedents appear to have contributed to a re-configuring of the teacher's resilience system further in the direction of adaptive adjustment. Implications are discussed and suggestions for future research are made.

Keywords: resilience, antecedents, emotion, critical incidents, innovation

INTRODUCTION

Resilience these days is seen as a process through which individuals psychologically adapt in a positive way to adversity (Hiver, 2018; Luthar et al., 2000), bounce back from negative experiences (Campbell-Sills & Stein, 2007), and “function well generally over time in so called normal teaching and learning environments” (Gu & Day, 2013, p. 40) – in other words, thrive.

Being resilient has a number of benefits for teachers. Resilient teachers

approach their teaching with higher self-efficacy and draw on more active coping strategies. They possess the meta-cognition and self-regulation skills needed to be autonomous, exhibit greater altruism and sense of purpose in life, and have positive self-perceptions and a generally optimistic disposition. (Hiver, 2018, p. 236)

Understanding language teacher resilience is important because teachers are facing more adversity in their professional lives than ever before. More generally, as Hiver (2018, p. 231) puts it, language teachers may face

increasingly strident accountability measures and unpredictable reform mandates, accompanied by a lack of support and teacher autonomy (...) [and these may] undermine teachers’ professional self-worth and psychological well-being (...) [which may] prevent teachers from developing feelings of effectiveness and building confidence and self-reliance.

Such challenges may be driving longer-term issues that are facing the profession more broadly: teacher burnout and attrition. General education studies have shown that stress leads to burnout (Richards et al., 2016), and that there is a negative relationship between resilience and burnout (Beckett, 2011; Dworkin, 2009; Hong, 2012; Karimi & Adam, 2018; Richards et al., 2016). Therefore, helping teachers to be resilient in the face of stressors may lessen the likelihood of their burning out. This is also a priority since burned-out teachers may teach less effectively (Berg, 1994). Schaefer et al. (2012) found that in general education contexts, individual factors, such as burnout and resilience, are correlated with teacher attrition. Research has also shown that teacher attrition is a particular problem among early-career teachers (Kersaint et al., 2007). Teacher

burnout and attrition are also a problem among language teachers (Akbari & Roudi, 2020; Mason, 2017; Mukundan & Khandehroo, 2010; Murry, 2013; Swanson, 2010). Further research related to language teacher resilience is thus needed since it may help us to understand how to minimize teacher burnout and attrition, how to help teachers thrive, and how to better serve our learners given the obvious potential impact of teacher resilience (or lack thereof) on learner progress.

Glen Stewart, the lead author (henceforth, the pronoun ‘I’ will be used for this author), recently completed an implementation of active learning in an English-language course in Japan. During that study, I dealt with a number of stressors (including critical incidents) and experienced a number of emotions, and these seemed to impact my resilience as the implementation proceeded. Given this, my co-author and I decided to conduct a follow-up study in which we would re-analyze the results of the implementation study from the perspective of language teacher resilience. We determined that the focus of the study should be on teacher experience and antecedents to changes in teacher resilience. This was because such a focus could provide evidence of the antecedents that language teachers may be encountering in their day-to-day teaching, and also, more specifically, during an implementation of an innovation. It could also provide evidence of how such antecedents may be leading to fluctuations in teacher resilience in the same situations. The value of a study such as this is that it allows us to see the teacher operating as an active agent (Beltman et al., 2011). Thus, the study can also provide direct evidence of teacher resilience *in situ* rather than, for example, through teacher response to questionnaires.

LITERATURE REVIEW

Though multiple definitions of resilience have been proposed, one compelling definition states that resilience is “the dynamic and complex interplay between individual, relational, and contextual conditions that either enable or constrain teachers’ power and agency” (Johnson et al., 2016, p. 7). As noted earlier, other definitions highlight that resilience is an ability to psychologically adapt in a positive way to adversity (Hiver, 2018; Luthar et al., 2000), bounce back (Campbell-Sills & Stein, 2007), “increase one’s competence in the face of adverse conditions” (Bobek,

2002, p. 202), and thrive in “normal teaching and learning environments” (Gu & Day, 2013, p. 40). An appropriate operationalization of resilience for this study, then, is that it is the dynamic and complex interplay between individual, relational, and contextual conditions that either enable or constrain teachers’ power and agency that impacts their ability to positively adapt to diversity and thrive in their day-to-day teaching.

These days, resilience is seen to apply not only to threatening circumstances, but also everyday “hassles, setbacks, challenges, and pressures that are part of the ordinary course of life” (Hiver, 2018, p. 233). Such “low-level but persistent stressors” (Kostoulas & Lämmerer, 2020, p. 93) contribute to the development of resilient qualities (Davis et al., 2009; Gu & Day, 2007). General education studies have shown that teacher resilience is threatened by risk factors (individual and contextual) and promoted by protective factors (individual and contextual) (Beltman et al., 2012; Kaplan, 2002; Stavradi & Karagianni, 2020; Tait, 2008). Individual protective factors, for example, include altruism; strong intrinsic motivation; perseverance and persistence; optimism; a sense of humor; emotional intelligence; willingness to take risks; flexibility; coping skills; the ability to accept failure, learn, and move on; strong interpersonal skills; using a range of instructional practices; knowing students and responding to their needs; professional reflection; having a commitment to ongoing professional learning; and being confident in one’s teaching abilities (Beltman et al., 2012).

Current theorizing sees resilience as resulting from “fundamental systems for human development and adaptation operating normally” (Hiver, 2018, p. 233). This appears to involve individuals drawing on multiple capacities (Gu & Day, 2007; Kostoulas & Lämmerer, 2020) and deploying strategies (Beltman et al., 2012; Tait, 2008). Empirical studies examining resilience in the context of language teaching suggest that teacher efficacy predicts teacher resilience (Razmjoo & Ayoobiya, 2019). Moreover, both teacher efficacy (Fathi & Saedian, 2020; Fathi et al., 2021) and resilience (Fathi & Saedian, 2020) have been found to predict teacher burnout. Thus, one of the capacities that may comprise teachers’ resilience systems is teacher efficacy.

Several models of teacher resilience have been put forward. Richardson’s (2002) model describes resilience as “a process of adaptation, whereby some kind of perceived

adversity causes individuals to adopt new patterns of cognition, affect or behavior that make them less vulnerable to future adversity” (Kostoulas & Lämmerer, 2020, p. 91). Kostoulas and Lämmerer (2018) have proposed a complexity-informed model of language teacher resilience. According to that model, the resilience system is a “dense web of interacting psychological resources, on which individuals draw when facing adversity” (Kostoulas & Lämmerer, 2020, p. 93). In the Kostoulas and Lämmerer model, three universal clusters of resources are proposed to make up a teacher’s resilience system — *Inner Strengths* (e.g., language teacher efficacy beliefs, strong teacher identity, positivity, hope, optimism), *External Support Structures* (e.g., personal and professional networks, support from school leadership, institutional expectations), and a *Repertoire of Learned Strategies* (conscious and subconscious behavioral patterns and cognitive patterns) (Kostoulas & Lämmerer, 2020, pp. 93–94).

Two of the central constructs that make up the Inner Strengths cluster of resources are teacher identity and teacher efficacy. Teacher identity is a teacher’s sense of who they are in relation to their teaching context (Wenger, 1998). Teacher identity has been shown to be dynamic (Li, 2020; Pennington & Richards, 2016; Schutz & Lee, 2014; Zembylas, 2003). Some aspects can change “through new experiences and new interpretations of experience” (Pennington & Richards, 2016, p. 7) and through interaction with colleagues (Li, 2020). According to Schutz and Lee (2014), “teacher identities and emotion are not linear or unidirectional; rather, they are inextricably related to each other through an ongoing, multidirectional, transactional process” (pp. 173–174). Teacher efficacy is the teacher’s “belief in their ability to influence valued student outcomes” (Wheatley, 2005, p. 748). Teacher efficacy has been shown to be a dynamic construct. A teacher’s perceptions of the effectiveness of their actions can lead to a positive or negative change in teacher efficacy (Bandura, 1997; Tschannen-Moran & Woolfolk-Hoy, 2007). Teacher stress has been shown to be negatively correlated with teacher efficacy, and teacher stress and teacher efficacy correlate in domain-specific ways (Skaalvik & Skaalvik, 2017). General education research has shown that a teacher’s sense of agency, sense of efficacy, and sense of vocation play a part in determining how resilient the teacher may be (Sulis et al., 2022). Teacher agency is most commonly conceptualized as a capacity or as “something that is

achieved through engagement with very specific contextual conditions (...) [it] is not to be understood as something that people can have; it is something that people do” (Priestley et al., 2013, p. 189). It is how teachers have a hand in effecting change in their teaching contexts. A vocation is something that provides an individual with personal fulfillment and is helpful to the world (Fussy, 2023, p. 169). Research in language teaching contexts has shown that positive emotion can promote resilience (see e.g., Rizqi, 2017). This is in line with Fredrickson’s (2004) broaden-and-build theory of positive emotions. Wang et al. (2022) found that a number of factors related to inner strengths were perceived by teachers to limit their resilience. Among these were inadequate teaching skills, lack of flexibility or adaptability, and negative emotions.

With regard to the External Support Structures cluster of resources, general education studies have shown that several institutional factors affect teachers: heavy workload, mandated policies, poor student behaviour, and inadequate interpersonal relational skills (Minott, 2010). Such teachers may respond by adapting, resisting (Maxwell-Jolly, 2000), or leaving the job (Smithers & Robinson, 2003). Such studies have also shown that peer support (Perrachione et al., 2008) and a supportive school culture (Tait, 2008) promote resilience in teachers. Like teachers in general education contexts, teachers in language teaching contexts (both novice and experienced) are affected by heavy workloads and mandated policies (Chu & Liu, 2022; Fan et al., 2021; Rizqi, 2017), as well as unmotivated learners, large class sizes, and lack of institutional support (Fan et al., 2021). In these contexts, personal and professional networks have been shown to promote resilience (Rizqi, 2017).

Studies related to the Repertoire of Learned Strategies cluster show that a large number of strategies have been identified which can promote teacher resilience in general education contexts. Among those identified by Mansfield et al. (2016) are Problem Solving, Maintaining Proper Work-Life Balance, Taking Steps to Reduce one’s Stress Level, Goal Setting, Effective Communication, Effective Time Management, Setting Emotional Boundaries, Persistence, Promoting Positive Emotions, and Emotion Regulation. In language teaching contexts, Fan et al. (2021), for example, found that novice teachers at the university-level in China used four strategies: Perceiving Risks as Opportunities, Taking the Initiative to Motivate Students, Seeking Help

From one’s Social Network (primarily taking advantage of the existing institutional support), and Engaging in Ongoing Professional Learning. Chu and Liu (2022) found that experienced teachers in the same context (but at the high school level) made use of the strategies Taking the Initiative to Motivate Students and Seeking Help From one’s Social Network.

The existing literature on language teacher resilience has highlighted a gap in understanding the dynamic and adaptive nature of resilience in the context of language teaching. According to Hiver (2018), “very few designs are concerned with the dynamic, adaptive nature” (p. 241) of resilience, and, citing Robertson et al. (2015), he states that “little attention has been paid to fluctuations and adjustments of teacher resilience *in situ*” (p. 241) (see also Hiver & Sánchez Solarte, 2021). Further, the complexity-informed model of teacher resilience proposed by Kostoulas and Lämmerer (2018) has yet to be fully explored in empirical studies. We aimed to address this gap by reporting on a re-analysis of the data from my implementation study with a view to reporting on the dynamic, adaptive nature of my resilience through looking at the fluctuations and adjustments that occurred based on the antecedents encountered. By shedding light on the real-time fluctuations and adjustments that occurred during my implementation based on the antecedents encountered, it is hoped that this study might help to bridge the existing gap in the literature and enhance our understanding of resilience within language teaching contexts.

We used the following research questions to guide the study:

1. What antecedents to changes in teacher resilience emerged?
 - a. What was their impact on the individual system resources?
 - b. How did the teacher’s resilience fluctuate?
2. What was the overall impact on the teacher’s resilience system?

METHODOLOGY

Hiver and Sánchez Solarte (2021) propose that exploring language teacher resilience provides opportunities at both group and individual levels. When examining resilience at the individual level, the focus is on the teacher's development and implementation of resilience strategies. Given the research questions used, the present study opted for an individual-centric approach.

The overall approach to the research was qualitative and interpretive. We employed such an approach because the study was exploratory in nature (Bhattacharjee, 2012; Dörnyei, 2007). Our aim was to uncover the dynamics related to my resilience during the implementation of an innovation in one of my own courses. We believed that doing so might provide interesting findings related to teacher resilience, not only as it pertains to everyday teaching, but more specifically, as it pertains to the implementation of innovations by individual teachers. It was, therefore, a convenience sample.

The Merriam-Webster dictionary defines an antecedent as “a preceding event, condition, or cause” (Merriam-Webster, n.d.). Given the above, we operationalized antecedents as any event that preceded a potential change in teacher resilience. It was anticipated that such antecedents may be everyday stressors, risk factors, or protective factors. We took the view that it was conceivable that implementing an innovation might draw on or impact any or all three clusters of resources referred to in Kostoulas and Lämmerer's (2018) model, and at multiple points across the implementation.

For the purposes of this study, “innovation” refers to the adaption of my own pedagogic practices through implementation of the approach, active learning in order to better promote language learning (see De Lano et al., 1994). In line with those authors, we also considered active learning itself to be an innovation.

Context

The context of the study was a university near Tokyo. At the time, I was teaching six classes in the Faculty of International Studies there. I implemented active learning in two of those classes during the fall term of 2019. Both classes were for the same course type [Computer Assisted

Language Learning (CALL) 103]. One class took place at 9:20 a.m. on a Monday morning, with the other class taking place at 11:00 a.m. on the same day. The classes met 15 times across the term. The first class had International Understanding majors and the second class had International Tourism majors. The course undertaken by students in both classes was a compulsory first-year course. The overall objective of the course was to help students to improve their listening and speaking skills through using a CALL application. We met once a week for 90 min. There were 46 students enrolled across the two classes (i.e., 26 in each). The students who participated in the study were between 18 and 20 years of age. They had been placed into their class level (level 5) based on their performance on an online proficiency test prior to the term starting. Level 5 was the second-highest level in the faculty. Level 5 would roughly correspond to level A2 in the Common European Framework of Reference for Languages (Council of Europe, 2001).

The Participant

I am a 48-year-old Australian male and a long-term resident of Japan. I have been teaching English-language courses at the tertiary level in Japan for nine years. Prior to teaching at the tertiary level, I worked at a number of conversation schools and then two different junior and senior high schools in this context. I have had an interest in materials design (and in designing online tools for English-language teaching and learning and teacher professional development) for most of the time that I have been teaching. I completed a Master of Arts degree (in applied linguistics) in 2012. Prior to conducting the implementation of active learning, I had conducted one study related to the active learning approach in the same context of the study. I completed a PhD related to applied linguistics in 2020.

In regards to my resilience, the description provided by Hiver (2018) seen earlier would seem to have roughly described me prior to my undertaking the implementation study. In terms of my Inner Strengths, I would appear to have had a relatively strong teacher identity and a relatively strong sense of teacher efficacy. That said, though I was somewhat engaged with some relevant areas of the literature, I was not familiar with others. I was, however, engaged in an ongoing process of professional development through doing readings before each new term started and updating

my syllabi and teaching materials for the coming term. With regard to accessing External Support Structures, I was doing this in a limited way. For example, I was not a part of a professional network that met regularly. That said, I did consult with colleagues regularly about teaching-related matters and I did attend academic conferences every so often. With regard to my Repertoire of Learned Strategies, as noted above, I was actively engaging in professional development on an ongoing basis. The point to emphasize here is that I could be seen to be relatively resilient prior to undertaking the implementation study.

Data Collection and Analysis

Data Collection

The instruments from the implementation study that I drew on were a teaching log/journal and observations that took place during the implementation. I designed the journal based on Burns (2010) and Farrell (2018a). In the journal, I wrote reflections prior to, during, and after the implementation, including about my beliefs. I also wrote reflections-on-action (i.e., reflections about events that took place in class) and reflections-for-action (i.e., reflections about future classes, taking into consideration the other type of reflection) (Schön, 1983). I did this whenever any relevant event pertaining to the implementation took place. During the current study, these events were drawn on as a source of antecedents. For example, I wrote the following reflection-on-action in my teaching log/journal during the implementation: “I noticed that some learners dozed off when using the CALL application in class one.” During data analysis, I considered this to be a potential stressor related to the context.

With regard to the observations, I observed myself teaching several times across the implementation period. Each time, I video-recorded the lesson and then observed it afterwards. A critical friend also observed one of my classes and provided a written observation (my critical friend was a fellow teacher at the same university who I asked to observe one class and provide critical feedback). For the observations, we filled out an analytical observation chart (adapted from Burns, 2010) and a classroom observation protocol, which was an adaption of three observation protocols – the Communicative Orientation of Language Teaching observation scheme (Spada & Frohlich, 1995), the

Motivation Orientation of Language Teaching observation scheme (Guilloteaux & Dörnyei, 2008), and the Engineering Learning Classroom Observation Tool (Sanders et al., 2017, 2018). These were adapted since they each contained elements relevant to an implementation of active learning in an English-language course. In the current study, both instruments were used as sources of antecedents. Before using the instruments in the implementation study, I sent them to nine English as a foreign language teaching professionals (both PhD holders and PhD students) and slightly revised both instruments based on the feedback received. To facilitate my critical friend’s ability to fill out the instruments, I provided written instructions and a concrete example.

Data Analysis

For the current study, I re-analyzed the data derived from the above instruments using ATLAS.ti (ATLAS.ti Scientific Software Development GmbH, 2022). I applied descriptive coding (Saldaña, 2009) for all perceived antecedents. This included coding for emotions, critical incidents, Inner Strengths, External Support Structures, and Learned Strategies. For Inner Strengths, the focus was on coding for increases and decreases in each inner strength. Coding for Learned Strategies included a focus on cognitive patterns. Critical incidents were coded for based on Gkonou and Miller (2020). That is, to be a critical incident, the event had to pertain to my teaching, it had to have an emotional element, it had to be treated by me as a significant turning point for my teaching practice or teacher identity, and it was assigned meaning in terms of its impact on my ensuing teaching practice (Gkonou & Miller, 2020, p. 137). I applied one or more codes to each antecedent (e.g., for learners dozing off, the first code applied was “frustration” and the second code applied was “a potential decrease in resilience”). After I had completed the coding, I sought to verify the reliability of the coding scheme utilized through a process of peer checking (Dörnyei, 2007). This was achieved by my co-author meticulously reviewing and validating the coding scheme that I had used. After making necessary updates, I considered the potential impact of each antecedent on each resource in each cluster in Kostoulas and Lämmerer’s (2018) model.

Ethical Considerations

Permission to conduct the study was sought from the institution in advance and was granted. Participation was voluntary and all participants signed an informed consent form. Confidentiality was ensured by the careful handling and storage of participant data. Any identifying materials were destroyed after a period of two years.

Trustworthiness

During the implementation study, I sought to establish trustworthiness by ensuring the credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985) of the research process. During that study, I also carefully considered the implications of my positionality. For example, I ensured that data collection was not coercive (Creswell, 2012), that all participant voices were heard, and that I did not prevent the participants from being honest or forthcoming. For the current study, I also managed my own subjectivity by maintaining methodological transparency (i.e., by providing as detailed a description of the research process as possible), submitting to the data as the process unfolded, and seeking to make appropriate claims (Holliday, 2015, pp. 52–53). Further, I avoided allowing my personal

biases and preconceptions to “interfere with (my) ability to present a fair and accurate portrayal of the phenomenon” (Bhattacharjee, 2012, p. 106; see also Dörnyei, 2007) by honestly providing all data related to my teaching practice and by carefully considering the extent to which I was presenting an overly “rosy picture” of positive change.

FINDINGS

What Antecedents to Changes in Teacher Resilience Emerged?

What was Their Impact on the Individual System Resources?

As noted above, Kostoulas and Lämmerer (2018) propose three universal clusters of resources that make up the resilience system – Inner Strengths, External Support Structures, and a Repertoire of Learned Strategies.

Inner Strengths. The findings (see Table 1) indicate that antecedents related to these appear to have led to changes in teacher identity, teacher efficacy beliefs, teaching-related knowledge, and my sense of purpose in professional activity. (Note that all representative examples in the following tables have been taken from the instruments listed earlier.)

Table 1. *Inner Strengths*

Antecedent	Representative Example	Potential Impact on Resilience System
Stressor related to the context	I noticed that some learners dozed off when using the CALL application in class one.	Teacher Identity and Teacher Efficacy – negative
Positive appraisal of events	There were expressions of enjoyment from the learners when they were engaged in group work in class 2.	Teacher Identity and Teacher Efficacy – positive
Stressor + Appropriate action (e.g., accessing the literature, drawing on an existing skill)	I needed to operationalize the innovation, so I accessed the literature and re-familiarized myself with relevant terms and constructs.	Teaching-Related Knowledge – likely increased Teacher Identity and Teacher Efficacy – both positive and negative Sense of Purpose in Professional Activity – likely increased
	I needed to make changes to the handouts I was using based on the data collected, and I was able to do this because I had had an interest in materials development for some years.	Teacher Identity and Teacher Efficacy – positive

Having a belief based on prior experience in the context	I assumed, based in part on prior experience in the context, that all learners in the course would enjoy playing language games. Through data collection, it became clear that some did not.	Teaching-Related Knowledge – likely increased Teacher Identity and Teacher Efficacy – negative
Not being sufficiently informed about the learners' language-learning goals and needs		
Moderate interpersonal skills	I sometimes found it difficult to conduct discussions from the front of the classroom <i>with confidence</i> with that particular cohort of learners (I found them to be somewhat more critical than earlier cohorts).	Teacher Identity and Teacher Efficacy – negative

Note. CALL is an abbreviation for Computer Assisted Language Learning.

Two points need to be made here. First, not all of the above antecedents could be perceived as stressors – for example, my positive appraisal of events. Positive appraisal of events (see Gross, 1998; Schutz et al., 2006) would have led me to experience joy. At such times, a positive change to some aspect of my resilience system would have been likely (e.g., to my teacher identity; Schutz & Lee, 2014). Second, there would have been no change in some resources. For example, Kostoulas and Lämmerer (2020) mention the teacher's ability to self-

regulate their own emotions as being a system resource. In my case, my ability to regulate emotion did not improve since I did not focus to a sufficient extent on this during the implementation.

External Support Structures. The findings (see Table 2) indicate that antecedents related to External Support Structures appear to have led to changes in the extent to which I was Making Use of Professional Networks and Seeking Effective Support from Faculty Administrators.

Table 2. *External Support Structures*

Antecedent	Representative Example	Potential Impact on Resilience System
Stressors related to the implementation and to the context	I was not sure about how some aspects of the implementation should be conducted, so I sought the advice of a PhD holder on campus. It was largely a positive experience.	What I did: Drew on my Professional Network The impact: Teaching-Related Knowledge – likely increased
	I did not think that using the CALL application for 40 min to one hour in class facilitated implementation of the innovation, so I decided to negotiate more with faculty administrators going forward.	What I would do: Seek Effective Support From Faculty Administrators The impact: Teacher Identity and Teacher Efficacy – both positive and negative

Note. CALL is an abbreviation for Computer Assisted Language Learning.

Learned Strategies. The findings (see Table 3) indicate that antecedents related to these appear to have led to changes mainly in the extent to which I was using specific behavioral patterns.

I also used other learned strategies. One was: Making Assurances to Learners to Maintain Their Motivation. The reason I used it was that the learners themselves were

a stressor, and their cognition and behavior were crucial to the success or failure of the implementation. Another was Self-regulating my Cognition and Behavior so that I Could Implement in Line with the Formulated Operationalization. For example, at one point during the implementation, I felt that the lesson pacing was not appropriate, which prompted me to adjust accordingly. A further one was Engaging Learners More Actively to

Gather Useful Information that Would Facilitate the Implementation. For instance, I was unsure why some learners were eager to participate in many speaking activities. Upon inquiry, one learner revealed his reason in detail – a planned study-abroad trip to the Philippines.

It should be pointed out that the impacts on the resilience system that I have listed on the right side of the tables on the preceding pages and below are, in some

cases, meant to be indicative only. This is because it was difficult to pinpoint what the precise impact on my resilience system may be/have been in those cases (e.g., when I would negotiate with faculty administrators at some future point). Further, some events might have involved a change in impact after the initial impact – that is, a negative impact *and then* a positive impact (e.g., when operationalizing the innovation).

Table 3. Learned Strategies

Antecedent	Representative Example	Potential Impact on Resilience System
Stressors related to pedagogical need or to implementation of the innovation	As also mentioned in Table 1, I needed to operationalize the innovation. I accessed the literature and re-familiarized myself with relevant terms and constructs.	What I did: Invested Time and Effort in Professional Development The impact: Teaching-Related Knowledge – likely increased , Teacher Identity and Teacher Efficacy – both positive and negative
	I wanted to find ways to maximally implement the innovation. I asked one learner who finished his work early to go to the back of the classroom and engage in topic-related conversation with me. He reported enjoying doing so.	What I did: Tried a New Thing The impact: Teaching-Related Knowledge – likely increased , Teacher Identity and Teacher Efficacy – both positive and negative
Stressors related to the context	My critical friend pointed out weaknesses in my teaching in a somewhat rude way. I avoided him for some time.	What I did: Distanced Myself From a Stressor The impact: Stress reduction
	Being compared by some learners to other teachers in the faculty. Among other things, I thought about the situation in a more positive way (this was a case of Positive Reframing; Harvard University, 2022) to think differently about the experience – I decided that it was good that the learners were so motivated.	What I did: Positive Reframing The impact: Teaching-Related Knowledge – likely increased , Teacher Identity and Teacher Efficacy – positive

How did the Teacher's Resilience Fluctuate?

According to Kostoulas and Lämmerer (2020), “teacher resilience systems are in constant flux, as their configuration constantly changes in response to stressors that perturb the system” (p. 95). The figure that follows (Figure 1) shows that antecedents to potential changes in teacher resilience occurred at multiple points across the 15-week term. It is possible that my resilience fluctuated accordingly. On the timeline, I do not indicate all

antecedents that were encountered during the 15-week course, only representative ones.

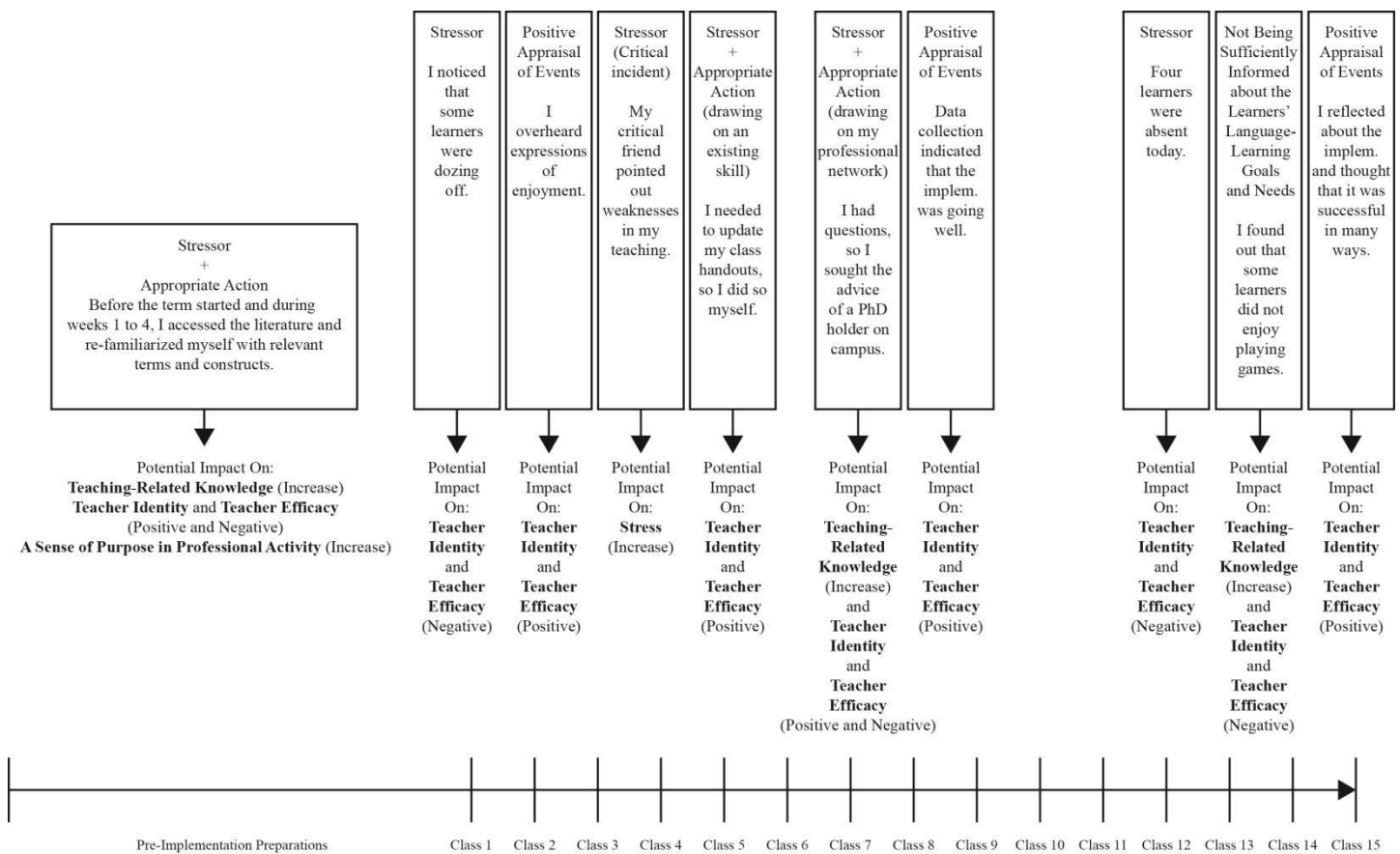
Three things should be noted. First, antecedents that implicated my teacher identity and my teacher efficacy led to the largest potential falls in my resilience – for example, when I realized the gap between my existing knowledge and that needed to operationalize the innovation. I felt shame at this time and sought to remedy the situation. After successfully operationalizing, I felt more positive. I assume that this resulted from a positive

change in my resilience system. Another example is negative critical incidents. In the case of my critical friend pointing out weaknesses in my teaching, I likely subconsciously used the strategy (Distancing Myself from a Stressor), as indicated above, because of the impact of the feedback on my self-image and my sense of teacher efficacy.

Second, fluctuations in my resilience were noticeable both at the onset and conclusion of the implementation

process. Further, *when* I encountered an antecedent potentially influenced the magnitude of its impact on my resilience. I came to see gaps in my practical knowledge related to the learners, prompting me to think that my initial data collection efforts had been lacking. Consequently, any positive assessment that I had at this time regarding the overall implementation was tempered by this realization. Moreover, the timing of this, occurring towards the conclusion of the implementation, likely exacerbated its adverse effects.

Figure 1. *The Antecedents on a Timeline (the 15-Week Course)*



Note. implem. denotes implementation.

Third, a potential source of fluctuation in my resilience was my own misinterpretation. One example relates to student lateness and absences. I had an ongoing concern related to these issues (as indicated in my teaching log/journal) since lateness or absence by students may have indicated a lack of learner engagement, and maximization of learner engagement was central to my operationalization of active learning. This potentially led

to a fall in teacher resilience at multiple points. As indicated, in class 12, four learners out of 23 were absent. This should not necessarily be a cause for concern, but it was for me for the reason stated. This impacted one or more resources in my resilience system.

What was the Overall Impact on the Teacher's Resilience System?

The end result of the overall implementation process appears to have been a re-configuring of my resilience system further in the direction of adaptive adjustment. That is, no radical change appears to have taken place. Further, it would appear that my resilience system was re-configured in part because of the antecedents that arose during the implementation. Some of these involved critical incidents. The re-configuration involved enhancing my Inner Strengths, increasing the number of External Support Structures available to me, and enlarging my Repertoire of Learned Strategies that I could access and was motivated to utilize.

Kostoulas and Lämmerer (2020) contend that their “model of resilience also highlights the role of adversity as a trigger or impetus for psychological growth and professional development” (p. 106). This appears to have happened in my own case, as evidenced on the preceding pages. And, in the future, it is conceivable that when faced with adversity, I would be more resilient as a result of having implemented the innovation. This would mainly be because of the increases in knowledge and the strengthening of my teacher identity and my sense of teacher efficacy. Kostoulas and Lämmerer state that, according to their model, resilience is produced by the interaction between the system components. What occurred during the implementation appears to demonstrate this. For example, overall increases in teacher identity and teacher efficacy were likely achieved despite my coming to a more realistic sense of self (e.g., due to weaknesses in my teaching being pointed out). Clearly, there were things to counter the impact of the realizations.

DISCUSSION

What follows is a summary of the preceding findings. Overall, antecedents to changes in resilience found in this study were: stressors related to the context, stressors related to pedagogical need or implementation of the innovation, positive appraisal of events, stressors and then appropriate action in response (e.g., accessing the literature, drawing on an existing skill), having a belief based on prior experience in the context, not being

sufficiently informed about learners' language-learning goals and needs, and moderate interpersonal skills. These impacted the resource clusters in a variety of ways across the 15-week implementation: (1) antecedents that implicated my teacher identity and my teacher efficacy led to the largest potential falls in teacher resilience; (2) potential rise and fall in resilience occurred both at the beginning and at the end of the implementation, and *when* an antecedent was encountered could have contributed to the extent of its impact on my resilience; and (3) a potential source of fluctuation in teacher resilience was my own misinterpretation. The end result of the overall implementation process appears to have been a re-configuring of my resilience system further in the direction of adaptive adjustment.

Unlike in other studies (e.g., Stavrouli & Karagianni, 2020; Tait, 2008), in the current study, we have used the terminology “antecedents” rather than “risk factors” and “protective factors” given the aims of the study. The total set of antecedents found consisted of both risk factors and protective factors. The findings of this study show the role of these factors as antecedents to changes in my resilience system. Beyond potential impact on resources such as teacher efficacy, the factors also impacted my emotions and the extent to which I felt stress. Thus, we see the interplay of individual and contextual factors together contributing to my global experience of implementing the innovation, and potentially, the likelihood of my completing the implementation or my implementing again in the same context and/or in the same way.

As stated earlier, empirical research related to resilience within the context of language teaching indicates that teacher efficacy predicts teacher resilience (Razmjoo & Ayoobiya, 2019). The current study provides evidence for this (in particular, the critical incident involving my critical friend). Further, I perceive negative emotion to have played a role at those times when my teacher efficacy was negatively impacted by specific antecedents. This perception is partly in line with those of teachers in a study by Wang et al. (2022). In my case, it was when I noticed learners dozing off and when my critical friend pointed out weaknesses in my teaching. As has been pointed out elsewhere (Beltman et al., 2011; Fan et al., 2021), teachers are active agents. They deal with risk factors by drawing on protective factors (i.e., their individual Inner Strengths). And, through experience,

their resilience systems change. We found that some antecedents contributed to the development of my resilient qualities. This included positive appraisal of events and stressors if appropriate action was taken in response (e.g., accessing the literature, drawing on an existing skill). Even not being sufficiently informed about some of the learners' language-learning goals and needs until late in the implementation may have eventually led to a positive change in my Inner Strengths (i.e., I became more knowledgeable about how to implement the innovation going forward).

What is also clear is the role that teacher interpretation of antecedents plays in the process. A teacher's interpretation results from one or more parts of their resilience system. In order for the teacher's interpretation to change, one or more of their individual system resources would need to be changed. This could potentially happen as a result of teacher agency (i.e., the teacher seeks help from their colleagues, they provide information, and this ultimately leads to an increase in teaching-related knowledge and belief change) or incidentally through experience (i.e., their learners provide information without prompting, which ultimately leads to the same result as above). Further, a particularly positive change in teacher identity or teacher efficacy could lead the teacher to a less negative (or "anxious") interpretation of the events. This confirms the need for teachers to deploy a strategy, such as Maintaining Awareness of and Self-Regulating one's Interpretation of Events as part of their overall effort to maximize their resilience. This would be a worthy addition to the collection of strategies that language teachers are deploying elsewhere (see Chu & Liu, 2022; Fan et al., 2021).

According to Hiver (2018, p. 235), teacher resilience "encompasses the teachers' sense of purpose." Gu and Day (2013) state that resilience is "driven by teachers' educational purposes" (p. 39). Implementation of an innovation is an example of this. And, it has benefits. Based on the findings of this study, it would appear that implementing an innovation can help teachers in a number of ways: (1) it may force them to further engage with the literature; (2) if the implementation involves a stressful social element (e.g., working with a critical friend), it may help them gain experience dealing with such stressors and prepare them for future encounters [in

line with Richardson's (2002) definition of resilience]; (3) if the process involves reflection, it may help them to build their awareness of their teaching-related cognition and their practice (see Farrell, 2018b for a review), and through so doing, encourage them to make positive changes; and (4) it may require them to draw on their existing interests and skills (e.g., related to materials creation) to solve implementation-specific problems. All of the above would lead to fluctuations in resilience. What is also clear is that mandated policies at an institution (in my case, in regards to how to have learners use a CALL application) – or the teacher's interpretation of them – may negatively impact a teacher's resilience during implementation of an innovation, as it does generally (Chu & Liu, 2022; Fan et al., 2021; Rizqi, 2017). However, the ultimate outcome of a teacher implementing an innovation may be a positive transformation of their resilience system. This may result from improvements in the teacher's sense of efficacy and vocation (Sulis et al., 2022). It may also result from improvements in their sense of agency (however, that may be contingent on multiple factors related to the context and the innovation). A positive transformation in the teacher's resilience system may subsequently result in increased engagement with their work, as observed by Xie (2021). This was true of me to some extent.

So far, we have discussed teacher resilience through the prism of teacher agency. Resilience is also increasingly being viewed through the prism of social ecology. That is, resilience is seen as a phenomenon that results from "a cluster of ecological factors that predict positive human development (...) and that the effect of an individual's capacity to cope and the resources he or she has is influenced by the nature of the challenges the individual faces" (Ungar, 2012, p. 14). Looking at the implementation through this prism, we can see that the antecedents that my resilience system strengthened in response to included ecological factors. Examples are the recommendation by the Ministry of Education, Culture, Sports, Science, and Technology in Japan that teachers implement active learning in their courses (Central Council for Education, 2012), feedback from my critical friend, and learner expectations and requests. In all three cases, I responded by taking action that I perceived as being appropriate: updating my teaching-related cognition and practice. Through doing this, I likely strengthened several resources related to my Inner

Strengths (e.g., teacher efficacy). What is also clear is that other ecological factors contributed to this growth as well – for example, faculty administrators allowing the implementation to take place, and learners and other teachers being willing to participate in the process. What this highlights is that teachers can, as always, view stressors as an opportunity for growth if appropriate action is taken. What it also highlights is that positive change in teachers' resilience systems is contingent upon ecological factors and that teachers need the support of faculty/school administrators and their fellow teachers, and the cooperation of their learners (though teachers may still be able to achieve positive change in their systems in the absence of these things depending on the strategies deployed).

CONCLUSION

This study focused on a re-analysis of the results of one teacher's recent implementation of active learning in an English-language course in Japan and the changes that appeared to take place in the teacher's resilience system as conceptualized in Kostoulas and Lämmerer's (2018) teacher resilience model. It should be noted that this study has two limitations. First, given that the data was derived from an individual teacher, the findings cannot be generalized more broadly. That said, given the aim of the study, focusing on an individual teacher was appropriate, and the findings therefore make a valid contribution to the relevant area of the literature. Specifically, the findings of this study provide evidence related to "fluctuations and adjustments of teacher resilience *in situ*" (Hiver, 2018, p. 241). Second, data analysis for the current study involved re-analysis of data from a previous study of the current authors. Therefore, the trustworthiness of the current study depends in part on the trustworthiness of the original study. It should be highlighted, therefore, that the original study was a doctoral study and considerable effort was put into ensuring the trustworthiness of that study.

Authors' Contributions

GS conceived the study design, undertook primary responsibility for data analysis, and served as the principal author of the article. HR provided guidance on the methodology, contributed to data analysis, and engaged in close collaboration with GS during the composition of the article.

The findings of the current study have a number of implications. First, in regards to Kostoulas and Lämmerer's (2018) teacher resilience model, it would appear that re-configurations of teacher resilience systems can occur over shorter time frames (e.g., within a 15-week course) as well as over longer time frames (Kostoulas & Lämmerer, 2020). Second, implementation of an innovation may help at least some teachers to achieve positive re-configuration of their resilience systems. Faculty/School administrators could, therefore, encourage teachers to look for an innovation that they think would positively impact their learners and try implementing it. Third, given the antecedents faced by the lead author of this study when implementing his own choice of innovation, if teachers do so, they may need support and even leeway to experiment. They may also benefit from pre-implementation training to help inform them about the types of antecedents that they could face during the implementation and what strategies they could use in response. Such training should also focus in part on teacher misinterpretation and its potential negative impact on their resilience during the overall process. Fourth, the study has demonstrated that teachers are capable of reflecting about their own resilience. Doing so may help them to identify antecedents that may be causing them to be less resilient than they could be. They could then seek to take positive action regarding those.

Two directions for future research can be suggested. First, more studies focusing on Kostoulas and Lämmerer's (2018) model of teacher resilience could be conducted to help document the "genesis of (...) reconfigurations of the (resilience) systems' internal structure" (Kostoulas & Lämmerer, 2020, p. 106). These could focus on stressors, such as those documented in the current study, as well as others. Second, research focused on teacher reflection about their own resilience could be conducted to determine the positive impact of their doing so as a means to mitigate teacher burnout and teacher attrition.

Ethics Approval & Consent to Participate

Permission to conduct the study was sought from Bunkyo University, Adachi Campus, Japan in advance and was granted. Participation was voluntary and all participants signed an informed consent form.

Funding

No funding was received to conduct this research.

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