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Author(s) Jessie Ee and Agnes Chang

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How Resilient are our GraduateTrainee Teachers in Singapore?

Jessie Ee and Agnes Chang National Institute of Education, Singapore jessie.ee@nie.edu.sg

Resilience is the capacity to take risks and adapt even when one faces adversity or negative life conditions, such as poverty or life threatening situations. Resilient people are active and socially responsive to their environmental context. Schools struggle with teacher absentees, burnout and high teacher turn-over. As teachers are models of values and competencies for their students, they need to be imbued with resilient traits so that they can face the challenges of tomorrow as well as be better at meeting their students' needs. As resilience is one of the needed traits of the 21st century, especially in times like the financial tsunami that we are currently facing, it is crucial to know how resilient our teachers are so that they will be good role models of resilience to their students. A resilient questionnaire was administered to 109 trainee teachers in Singapore to assess their resilience. This paper examines the resilience of our trainee teachers and identify the traits that predict their resilience with implications for enhancing resilience in the classroom.

Keywords: teacher education, resilience, Singapore

In the first decade of the 21st Century, nations witnessed a series of national and man-related disasters, SARS in 2003, the Tsunami off Aceh (Sumatra) in 2004, the Sichuan Earthquake in 2007 and the recent Financial Tsunami in 2008. There is an apparent increase in the number of people seeking psychological and psychiatric help in 2008 and 2009. Resilience is seen as a psychological condition that has captured the attention and imagination of Singapore's top policy-makers, educationalists and parents. Mr. Tharman Shanmugaratnam, the former Minister for Education, highlighted the importance of nurturing resilience during a Ministry of Education Workplan Seminar in 2004 when he called upon Singapore top educationalists to develop our young's adversity quotient' and be better equipped to face up to 'life's demands and inevitable setbacks':

"What are our goals in education? We want to nurture young Singaporeans with minds that keep enquiring, and a desire to use their energies to create a better society. We want to help every child find his own talents, and grow and emerge from school confident of his abilities. And we want our young to have the toughness, the 'adversity quotient', to face up to life's demands and inevitable setbacks, and be willing to work hard to achieve their dreams."

(P. 4, Speech by Mr. Tharman Shanmugaratnam, Minister for Education, At the Ministry of Education Workplan Seminar, 29 September 2004, Ngee Ann Polytechnic Convention Centre) This was further reiterated in the 2006 National Day Rally Speech by our Prime Minister Lee Hsien Loong on the call to build up our youth's character and resilience within the context of our National Education in the schools.

To this end, Singapore schools have embarked on a range of enrichment programmes designed to facilitate character development – ranging from class room style workshops, project based learning to more experiential initiatives like overseas trips and rope course based workshops. Most of these initiatives have merit in their own right in developing a range of desirable values such as team spirit, leadership, sense of national identity and resilience.

"Teaching is an emotional practice. It arouses and colours feelings in teachers and students. Teaching not only involves instructing students, but also caring for them, forming bonds and relationships with them... It is a job where teachers repeatedly put their selves on the line ... [I]t is easy to lose sight of teaching's emotional dimension, of the enthusiasm, passion, care, wisdom, inspiration, and dedication that make many teachers great". (Hargreaves & Fullan, 2000)

According to McIntyre (2003), new teachers at risk of leaving the profession express strong unhappiness with their teaching assignments, frustration with the politics of their profession, the lack of adequate resources, and inadequate mentoring support. These findings echo those in other North American studies, which report that novice teachers' initial optimism can turn to pessimism as the year progresses and the reality of teaching sets in (Brock & Grady, 2001; Darling-Hammond, 1997; Hargraves & Fullan, 2000). Novice teacher resilience, bolstered by personal efficacy and emotional competence, may be key to helping beginning teachers become more competent, more confident and more committed to teaching over the years.

However, as teachers are the role models of values and competencies for their students, they should be imbued with resilient traits that we

hope to develop in our students. According to Gibson and Dembo (1984), resilient teachers have high self-efficacy and are persistent in the face of setbacks. Other studies have also shown that they are more open to new ideas and approaches to better meet their students' needs (Cousins & Walker, 2000; Guskey, 1988), work longer with struggling students (Gibson & Dembo, 1984), exhibit greater enthusiasm and levels of planning and organization (Allinder, 1994) resulting in higher student achievement and greater student resilience (Ross, 1998, Hoy & Spero, 2005). These studies seem to also imply that resilient teachers are likely to have high self-efficacy and positive dispositions that sustain their capacity to bounce-back even in the face of setbacks and adversities. As teaching is a challenging vocation and teachers need to be resilient to carry out their duties professionally and proficiently, resilience is an important trait that is necessary for all teachers to possess.

However, as schools struggle with teacher absentism, burn-out and high turn-over, and teachers attempt to keep pace with the many educational initiatives from the Ministry of Education and the demands from parents, how resilient are our teachers today? Furthermore, with the many new teachers in the National Institute of Education (NIE) of Singapore who consider teaching as their second or third career, understanding the level of resilience of our trainee teachers will assist NIE in providing better pre-service teacher-training for the schools of tomorrow.

The present study attempts to identify the resilient traits present or lacking in our Secondary trainee teachers and the implications for pre-service teacher education and schools today.

Goleman (1995) describes resilience in terms of "emotional intelligence" which is an essential life skill. Goleman (2002) argued that emotional intelligence supports effective teamwork, problem-solving, risk taking and the ability to cope with change. Elias et al. (1997) use the term "social-emotional competence"

in understanding, managing and expressing the social and emotional aspects of one's life.

In the United Kingdom, Weare (2004) uses the term "emotional literacy" to suggest ways that schools can develop resilience. Weare highlights the central place of the emotions in learning and thinking and the important roles schools can play in enhancing literacy. An emotional literate person is one who has self-understanding, can understand and manage their own emotions and can understand social situations to develop effective relationships.

Resilience refers to positive adaptation among individuals during or following exposure to adversities or risks that have the potential to harm development (Masten, 2007). The resilience of adults who work in schools is important because these individuals play a central role in school resilience while also serving as protective adults or brokers of resources in the lives of highrisk children. Teachers and other school staff function directly as promotive and protective factors in the lives of high-risk children while also nurturing the learning skills, knowledge, self-regulation skills and self-protective skills that children need to adapt on their own. As teacher counselors, they attempt to promote positive relationships among school staff and all students, and advocacy or intervention aimed at promoting student strengths. Galassi and Akos (2007) found that school counselors are able to promote positive academic development and school success in multiple ways. Effective schools and teachers provide children with mastery experiences, opportunities to experience success and enjoy achievement that also serve to foster intrinsic motivation, self-efficacy and persistence in the face of failure on a daily basis.

In the risk and resilience literature (Benard, 2004; Tusaie & Dyer, 2004), it is agreed that risk factors contribute to psychological distress while protective factors moderate the effects of adversity. Risk factors for novice teachers might include the typical stressors encountered in the first year of teaching, such as the expectations,

isolation and lack of support and the emerging gap between novice teachers' vision of teaching and the realities of the job.

Resilience is probably one of the most important human capacities of novice teachers as they face, confront, and overcome the stresses of first-year teaching. It is the ability to "bounce back" after a setback. It is also the capacity to see things realistically and to recognize what is possible and what is not. Resilient adults are able to maintain positive relationships, solve problems skillfully, set limits, stay motivated, and derive some sense of meaning from difficulties and challenges. They confront failure with optimism and persist in the face of difficulty. Hence, it is important that teachers are models of resilience that their students can role model after.

Drawing on the work of Benard (1991) and Wolin and Wolin (1993), Knight (2007) proposed a three dimensional framework for resilience: as a state, a condition and as a practice (Table 1). The following questions may be used to simplify the processes:

- "What is resilience and what does a resilient person look like?" (resilience as a state);
- 2. "What can I do about it?" (resilience as a condition) and;
- 3. "How will I go about it?" (resilience as a practice).

He proposed the three categories of the manifestations of resilience in Table 1.

Knight (2007) found that longitudinal studies (e.g. Masten, Coatsworth, Neemann, Gest, Tellegen & Garmezy, 1995; Pulkkinen, 2004) illustrated similar qualities of *emotional competence* such as positive self-concept, internal locus of control, autonomous and sense of humour. Youths' strong emotional competence e.g. self-esteem, strong sense of identity and locus of control etc. allows them to have better self-control and emotion regulation for developing adaptive social functioning in adulthood in spite of their adverse situations.

Table 1 *The Manifestations of Resilience*

Emotional Competence	Social Competence	Futures-Oriented		
Positive Self-Efficacy	Communication	Optimism		
Internal Locus of Control	Empathy	Spiritual		
Autonomous	Relationships	Sense of Purpose		
Sense of humour	Benevolence	Problem-Solving		
		Critical Thinking		
		Flexible and adaptive		
		Proactive		
		Positive Beliefs		

Source: Knight, C. (2007). A resilience framework: Perspectives for educators. Health Education, 107(6), 547.

Research (Masten et al., 1995; McGinty, 1999; Fuller, 2001) further supports the need for *social competence*, that is, supportive relationships from parents and teachers who are significant resources for enhancing young people's resilience as they encourage connectedness, belonging and empathy with others, resulting in the prevention of even substance abuse, violence and suicide. Knight (2007) stressed that in order to build resilient students, it is equally important that teachers and parents have a highly developed sense of optimism, empathy and strong social and emotional competence.

Resilience research (Benard, 2004; Seligman, 1995) have further stressed on being *future-oriented*, that is, having a purpose-driven life, and being metacognitively conscious of applying relevant critical thinking or problem-solving skills besides one's positive dispositions and flexibility and adaptive nature. Teachers are again seen as an important external resource to teach problem-solving and critical thinking skills that will empower their students to believe in themselves and in their ability to influence the future.

To insulate teachers from the effect of these risk factors, Benard (2003) suggests that they need resources, time, professional development opportunities, materials, caring collegial relationships, high expectations on the part of school leaders and opportunities for shared decision-making and planning. New teachers enhance their resilience by fostering productive relationships with people who understand the trials and tribulations of teaching, which reinforce the value of what teachers do, and who offer insight into various options available for dealing with a variety of teaching situations (Bobeck, 2002).

Thus, the seven variables of resilience taken from (Reivich & Shatte, 2003) were considered appropriate for this study as they addressed the three categories of resilience manifestations as suggested by Knight (2007). Self-efficacy, impulse control and emotion regulation addressed the emotional competence component, whereas, empathy and reaching out addressed the social competence aspect and optimism and causal analysis addressed the futures orientation. A description of each variable and its relationship with resilience will be further elaborated.

Emotion Regulation and Resilience

Emotion regulation is the ability to stay calm under pressure. They are able to use a set of skills to control their emotions, attention and behaviour. Self-regulation is important for forming intimate relationships, succeeding at work, and maintaining physical health. People who are unable to regulate their emotions often exhaust their friends and family members and have difficulty in maintaining friendships.

Impulse Control and Resilience

Impulse control is related to emotion regulation. People who are high in impulse control tend to be high on emotion regulation as well. Our thoughts tend to determine our impulse control and emotions. Being able to detect and control our impulsive beliefs will generate more accurate thoughts that will lead to better emotion regulation and result in more resilient behavior.

Optimism and Resilience

Optimism means the ability to perceive our future in a positive light. It implies believing that we have the ability to handle the adversities that will inevitably arise in the future. This also reflects our self-efficacy, our faith in our ability to solve our problems and master our world. Resilient people are optimistic and they believe that things change for the better and they are able to control their future.

Causal Analysis and Resilience

Causal analysis refers to people's ability to accurately identify the causes of problems. According to Seligman (1995), resilient people are those who have cognitive flexibility and can identify all the significant causes of the adversities they face, without being trapped in any specific pervasive explanatory styles. They tend to channel their problem-solving resources into factors that can control, overcome, steer through, bounce back and reach out.

Empathy and Resilience

Empathy is our ability to read other people's cues to their psychological and emotional states. Some of us are adept at interpreting the nonverbal of others e.g. their facial expressions, tone of voice, body language and determine what people are thinking and feeling. Resilient people are able to understand others better and thus can relate better with others.

Self-Efficacy and Resilience

Self-Efficacy represents our beliefs that we can solve the problems that we are likely to experience and our faith in our ability to succeed. As a resilient person with positive self-efficacy, we are likely to take on more responsibility and be confident that we will improve our lifestyles. Resilience and personal efficacy are related concepts. In fact, Benard (2004) lists self-efficacy as one of the characteristics of a resilient person, and similarly, Tschannen-Moran and Woolfolk Hoy (2001) suggest that people with high levels of personal efficacy possess strong resilience. Resilience and personal efficacy differ, however, in the ways they impact action, although high performance results from both. Personal efficacy is a future-directed human strength linked to action. Whereas, highly resilient individuals are reactive to stressful situations, highly efficacious individuals are proactive.

Reaching out and Resilience

Resilience is a mind-set that enables us to seek out new experiences and to view our lives as a work in progress. It confers confidence to take on new responsibilities at work, to risk embarrassment by approaching a person you'd like to know, to seek experiences that will challenge you to learn more about yourself and connect more deeply with others. We call this application of resilience reaching out. By reaching out, your life becomes richer, your connections to others become deeper and your world becomes broader. Those who reach out are good at 1) assessing risks, 2) knowing themselves and 3) being able to find meaning and purpose in their lives. First, as they assess risk, they use sound judgments to distinguish reasonable risk from unreasonable risk. They are realistically optimistic and can forecast with accuracy the potential problems that may arise and develop strategies to prevent them from occurring and to handle them when they do occur. Second, those who reach out use their emotional awareness to track subtle signs in relating to others. They are conscious as to when to continue and when too abstain from reaching out. Third, these people have found meaning and purpose in their endeavours and are appreciative of what they have and experience. As such, they are focused and have the ability to see the big picture and take personal responsibility for making a better world and feel that their life is purpose-driven. Each time they reach out, they not only improve their ability to learn new things but also risk rejection and failure. Their resilient skills deepened their emotional awareness and interpersonal skills and increase their ability to stay focused and find meaning in their lives.

Career change is related to career resilience, career identity, work stress, core self-evaluation and agreeableness (Coder, 2007). In addition, age is one of the factors that influences career change. However, Hartman, Turner, Daigle, Exum, and Cullen (2009) found that the protective factors in fostering resiliency may vary across gender. Males and females rely on different individual protective factors to foster resiliency. According to Reker and Peglar (2008), males have greater inner strength in taking charge.

With the recent influx of preservice teachers from various careers joining the teaching workforce and the recent literature findings which address the importance of teachers as significant external resource for their students in not only being disseminators of critical thinking and problem-solving skills but also role models of emotional and social competence as well as future-orientation, this exploratory study will address the following research questions.

Research Questions

- 1. Are there significant gender differences in trainee teachers' resilience?
- 2. Does career change make a more resilient teacher?
- 3. Are older teachers more resilient than younger teachers?
- 4. What traits predict trainee teachers' resilience?
- 5. How resilient are our trainee teachers?

METHODOLOGY

Four pre-service Postgraduate Diploma in Education (PGDE) classes were randomly administered with the resilient questionnaire. A total of 109 trainee teachers (42 (39%) males and 67 (61%) females) participated in the study. Fifytwo percent of whom were first career holders, 32% second career holders, and 15.6% were third-career holders. 99.1% indicated that they were closed to family members and 52.8% rated their self-esteem as somewhat high.

Instrumentation

The Resilient Scale (adapted from Reivich & Shatte, 2003) measures impulse control, empathy, emotion regulation, optimism, self-efficacy, causal analysis, and reaching out. There are four positive and four negative items for each sub-scale. Respondents were required to rate each item on a five-point scale from Not True to Very True, and the difference in scores between the positive and negative items were regrouped into one of the three categories, that is, above average (AA), average (AV) or below average (BA) for that variable in each subscale. The variables for resilience with sample items are listed in Table 2.

Data Analysis

Means, standard deviations, percentages were used for descriptive bio-data of subjects. Correlations were used to examine the relationships among the variables. One-way ANOVA was used to test significant gender differences among the variables. Regression analysis was used to identify the variables that predict trainee teachers' resilience.

FINDINGS

Gender Differences

There were no significant gender differences except for Impulse Control and Empathy (Table 3). Males were more likely than females to have better impulse control (r=.20, F=4.58, p<.05)

Table 2
Description of Resilient Variables and Sample Questions

Description of Variables	Sample Questions				
Impulse Control	(+) I am good at shutting out anything that distracts me from the task at hand.				
Ability to stay calm under pressure	(-) I give in to the urge to give up when things go wrong.				
Empathy Ability to understand others and see their perspectives	(+) By looking at their facial expressions, I recognise the emotions people are experiencing.				
	(-) It is difficult for me to understand why people feel the way they do.				
Emotion Regulation	(+) I can control the way I feel when adversity strikes.				
Ability to use a set of skills to control emotions, attention and behaviour	(-) I am unable to harness positive emotions to help me focus on a task.				
Optimism Ability to perceive our future in a	(+) Hard work always pays off.				
positive light even when faced with adversities	(-) I worry about my future.				
Self-Efficacy Believing in oneself and one's	(+) I expect that I will do well on most things.				
ability to take personal control of the situation	(-) I have doubts about my ability to solve problems at work or at home.				
Causal Analysis Ability to accurately identify the causes of the adversities they face,	(+) In most situations, I believe I'm good at identifying the true causes of problems.				
without being trapped in any specific pervasive explanatory styles	(-) I have been told I misinterpret events and situations.				
Reaching Out	(+) I am curious				
Ability to seek out new experiences	(-) I feel most comfortable in situations in which I am not the only one responsible.				

whilst, female trainee teachers were more empathetic than their male (r=.-.29, F=9.46, p<.01) counterparts.

Age and Career Change

Some trainee teachers tend to switch careers more times. The more trainee teachers switched their careers, the lower their Impulse Control and the less likely they are willing to reach out (Table 4). However, no age differences were found between older and younger trainee teachers. This may imply that resilience is dependent on individuals rather than on age (Table 4).

Predictors of Resilience

Pearson's product-moment correlation was used to examine the relationship among the variables as shown in Table 4. Regression in SPSS was used to examine the predictors of resilience. Using the enter method, a significant model emerged (F = 48.78, p=<0.001). Adjusted R square = .77. Self-efficacy (β =.60, p<.01), emotional regulation (β =.25, p<.01), empathy (β =.22, p<.01) and optimism (β =.12, p<.05) were found to be predictors of resilience.

Table 3 *Resilient Variables of PGDE Trainee Teachers in Frequencies and Percentages*

	Males (n=42)	Females (n=67)	Total (n=109)
Impulse Control (AA)	41 (97.6)	57 (85.1)	98 (89.9)
(Av)	1 (2.4)	10 (14.9)	11 (10.1)
(BA)	-	-	-
2. Empathy (AA)	-	2 (3.0)	2 (1.8)
(Av)	24 (57.1)	53 (79.1)	77 (70.6)
(BA)	18 (42.9)	12 (17.9)	30 (27.5)
3. Optimism (AA)	7 (16.7)	12 (17.9)	19 (17.4)
(Av)	33 (78.6)	52 (77.6)	85 (78.0)
(BA)	2 (4.8)	3 (4.5)	5 (4.6)
4. Self-Efficacy (AA)	3 (7.1)	4 (6.0)	7 (6.4)
(Av)	11 (26.2)	20 (29.9)	31 (28.4)
(BA)	28 (66.7)	43 (64.2)	71 (65.1)
5. Causal Analysis (AA)	4 (9.5)	4 (6.0)	8 (7.3)
(Av)	35 (83.3)	57 (85.1)	92 (84.4)
(BA)	3 (7.1)	6 (9.0)	9 (8.3)
6. Reaching Out (AA)	1 (2.4)	7 (10.4)	8 (7.3)
(Av)	13 (31.0)	24 (35.8)	37 (33.9)
(BA)	28 (66.7)	36 (53.7)	64 (58.7)
7. Emotion Regulation (AA)	-	-	-
(Av)	10 (23.8)	22 (32.8)	32 (29.4)
(BA)	32 (76.2)	45 (67.2)	77 (70.6)
8. Resilience (AA)	-	-	-
(Av)	12 (28.6)	26 (38.8)	38 (34.9)
(BA)	30 (71.4)	41 (61.2)	71 (65.1)

Table 4 *Intercorrelations among Age, Gender, Career and Resilience Traits of Trainee Teachers*

	1	2	3	4	5	6	7	8	9	10
1. Age										
2. Gender	27**									
3. Career	.56**	16								
4. Impulse Control	01	.20*	21*							
5. Empathy	.18	29**	07	.20*						
6. Optimism	08	02	11	.10	.20*					
7. Self-Efficacy	.01	01	15	.18	.21*	.54**				
8. Causal Analysis	01	.07	.01	.22*	.23*	.32**	.44**			
9. Reaching Out	01	16	21*	.21*	.17	.36**	.65**	.13		
10. Emotion Regulation	.10	10	.09	.15	.14	.26**	.26**	.27**	.21*	
11 Resilience	.05	11	10	.18	.39**	.56**	.80**	.36**	.60**	.46**

DISCUSSIONS

Female trainee teachers being more empathetic may be due to gender-related issues (Maccoby & Jacklin, 1974) as well as the Asian socialization system whilst males' better impulse control may be indicative of their greater inner strengths in taking charge and control (Reker & Peglar, 2008).

Resilience is also seen as independent on the individual rather than being age-related. This may again be related to culture and social experience provided. Frequent career change may not make a more resilient teacher. In fact, it may reflect that the teacher lacks tolerance and persistence which is not characteristic of resiliency. Self-Efficacy, Optimism, Emotional Regulation and Empathy were found to be predictors of trainee teachers' resilience in Singapore. Selfefficacy as one characteristic of resilience is further substantiated by Benard (2004) and Tschannen-Moran and Woolfolk Hoy (2001). This implies that it is important to have a positive and confident outlook on life and have multiperspective perceptions so that one can regulate oneself better whether through emotion, thought or action. This may also imply that someone with these four traits may also be better at creative problem solving. This finding is substantiated by Dai and Shen (2008), who found that positive people are better at risk-taking, multi-perspective taking and recognize failures as essential for new learning in problem-solving processes.

As only 34.9% of our trainee teachers have average resilience and 65.1% have below average resilience, we infer that their resilience may need attention. Trainee teachers may need to be informed of the characteristics of resilience and how they can be resilient through both pre-service and in-service Teacher Education Courses. Providing senior student mentors for trainee teachers' professional transition while they are undergoing training at the National Institute of Education (NIE) in Singapore or other higher institution of learning would also be desirable.

The Group Endeavour Service Learning (GESL) organized by NIE is another good initiative for developing empathy and compassion for the marginalized trainee teachers.

Preservice programs that emphasize the collegial nature of teaching provide opportunities to forge personal and professional relationships, and encourage continuing contact through networks and social events after graduation. All contribute to supporting new teachers as learners and novices in the field.

If early career attrition is less likely for teachers with strong resilience, then preservice and induction programs should offer resiliencebuilding activities and teach resilient strategies. They should address emotional competencies such as self-assessment, self-regulation, motivation, empathy, and social skills in a systematic way. Novice teachers should be encouraged to recognize and talk about their resilient responses to events, both to increase their sense of efficacy and to support their colleagues. Working with scenerios, videos, or actual classroom observations of the kinds of challenging situations teachers encounter, novice teachers could identify and practice coping strategies, emotional competence, reframing skills and other resilient behaviours of thinking. To become efficacious and maintain their resilience, new teachers also need assertiveness training so they can advocate for themselves in their new positions, work effectively with administration, colleagues, and parents, and ask for the support and assistance they need on the job.

The Ministry of Education may also need to encourage schools to provide master teachers to mentor inexperienced trainee teachers' transition from college or university to schools to emulate good classroom practices in schools. Relevant supportive systems need to be emplaced to nurture good dispositions and relationships so that there are better linkages, connectedness, belonging and empathy with others. Constructive feedback and positive attributions need to be considered (e.g. the use of appropriate strategies for enhancing teaching rather than mere feedback such as good

effort). Service camps organized in schools can also build self-efficacy, optimism and resilience for new teachers.

Future Research

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The resilient questionnaire may need to be further improved and made relevant for the local Asian context. Intervention programmes on teacher resilience that include promoting teacher orientations such as, social (e.g. empathy, relationship management), emotional (e.g. selfefficacy, emotion regulation etc.) and futuristic orientations (e.g. optimism, metacognition, critical thinking and problem-solving skills etc.) may need to be considered to enhance trainee teachers' resilience. Pre-service admissions processes may need to help identify resilient attitudes and behaviours in applicants, and preservice and induction programmes should offer resilience-building activities. Working with scenerios, videos or actual classroom observations of challenging nature will also assist teachers in practicing coping strategies, emotional competence, reframing skills and other resilient behaviours and ways of thinking. Excellent mentoring for beginning teachers in their new schools will also increase their selfefficacy. Resilience training targeted at children may also be another alternative route to assist adaptive and flexibility in thinking in adulthood. Parental workshops can also be designed to better prepare parents in nurturing their children towards resiliency.

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