

A Typology of Student-Teachers' Coping with Stressful Classroom Events

Wilfried Admiraal

Leiden University Graduate School of Teaching,
Leiden University, Leiden, the Netherlands

Abstract

In teacher education programs, student teachers gain their first autonomous teaching experiences. While students regard the teaching practicum as the most valued part of their teacher education program, they also consider it to be the most stressful. Student teachers are most concerned about daily hassles in class, mostly related to poor student discipline. Yet they also consider direct interaction with students as the main source of their job satisfaction and a reason to enter the profession in the first place. This paradox could imply that feelings of stress do not so much result from the events themselves but from inadequate responses to classroom events. Based on cluster analysis of video-taped lessons and stimulated-recall interviews with 27 student teachers, a typology has been developed of student teachers' coping with stressful classroom events in secondary education. Responses to classroom events have been grouped into four types of coping: Varying (a combination of problem-focused actions and teaching activities ignoring the problematic classroom event), Hestitating (hesitation to either approach or avoid the classroom event, arousing at the same time tension in the relationship with students), Problem-solving (a series of problem-focused actions), and Avoiding (avoiding or ignoring the problematic classroom event). These types vary along two underlying dimensions: avoidance-approach and calmness-agitation. The coping types particularly differed in the way student teachers approached, avoid or ignored the classroom event, how agitated they were and the length of the coping response. Implications for teacher education are discussed to support student teachers with more approach-coping strategies.

Keywords: teaching practicum; classroom events; stress; coping; student teachers

Introduction

In teacher education programmes, student teachers gain their first autonomous teaching experiences. While students regard the teaching practicum as the most valued part of their teacher education program, they also consider it to be the most stressful (Caires, Almeida, & Vieira, 2012; Ding & Wang, 2018). Student teachers are most concerned about daily hassles in class, mostly related to poor student discipline. Yet they also consider direct interaction with students as the main source of their job satisfaction and a reason to enter the profession in the first place (Pillen, Beijaard, & Den Brok 2013). This paradox could imply that feelings of stress do not so much result from the events themselves but from inadequate responses to classroom events. Blase (1986) found that in coping with student-related stressors, in-service teachers relied primarily on confrontational strategies, in other words, teacher behavior designed to reduce or eliminate perceived external sources of stress. For example, teachers tackled student discipline problems using such strategies as behavior modification, removing a student from class, scolding the student, and discussing the problem. Adaptive strategies, which do not affect the source of stress directly, but rather serve to manage its consequences for the teacher, were used less often. However, recent work of Gustems-Carnicer, Calderón and Calderón-Garrido (2019) showed the opposite for student teachers, who showed more avoidance coping strategies than approach coping strategies, with a focus on cognitive avoidance, emotional discharge and seeking alternative rewards.

In teacher education, student teachers should be taught to respond to classroom problems with appropriate strategies making direct interaction with students a source of greater job satisfaction. To be able to initiate training in the use of appropriate response strategies in teacher education programs, this study aimed at the development of a typology of student-teachers' coping with stressful classroom events.

Transactional Model of Stress and Coping

The theoretical framework of this study is the well-known transactional model of stress and coping (see Lazarus & Folkman, 1984), which is often used to describe and evaluate the stress and coping process. Stress is defined as a particular relation between the person and the environment appraised by the person as taxing or exceeding his or her resources and disrupting the daily routines. A key feature of this definition is the appraisal of the relation: stress is not due exclusively to environmental changes or personality traits. Coping behavior is described in terms of efforts to manage (i.e., master, reduce or tolerate) a troubled person-environment

relation. A key feature of this definition is its contextual character: coping behavior is influenced by a person's appraisal of the actual demands of the encounter and his resources for managing those demands. Coping behavior may be directed at managing or altering the problem which is causing the distress or at regulating the emotional response to the problem. The former is referred to as *problem-focused* coping behavior, and the latter as *emotion-focused* coping. Problem-focused coping behavior has to do with confrontational and problem-solving strategies, such as defining the problem, generating alternative solutions, weighing alternatives in terms of their cost and benefits, selecting one of them, and taking action. Emotion-focused behavior includes positive reappraisal and defensive strategies, such as avoidance, minimisation, distancing, selective attention, and positive comparison. In general, emotion-focused forms of coping behavior are more likely to be used when the assessment is that nothing can be done to modify environmental conditions. Problem-focused forms of coping behavior, on the other hand, are more often employed when such conditions are seen as amenable to change (Lazarus & Folkman, 1984).

Problematic events feature prominently in the transactional theory of stress and coping. Lazarus and Folkman report that, in general, daily events predict changes in psychosomatic health better than major life events. No doubt student teachers experience daily hassles in class during their teaching practicum and a discrepancy between perceived demands and resources is manifest when they try to cope with their practicum concerns (cf., Lindqvist, Weurlander, Wernerson, & Thornberg, 2019).

Student-teachers' Stress and Coping

Student teachers consider their school teaching practicum (STP) as the most significant element of their course program for their personal and professional development as prospective teachers (Malderez, Hobson, Tracey, & Kerr, 2007). In STP, student teachers take their first steps in becoming a teacher, developing their teaching competence as new teachers, increasing their teaching repertoire, and evolving relationships with school and colleagues. STP should help student teachers to bridge a challenging part of the process that beginning teachers undergo, from learning how to teach to actually starting to teach in a real classroom. As beginning teachers learn to apply their theoretical knowledge in a practical context, they seem to struggle with this transition from learner-teacher to beginning teacher.

In their study on identity development of beginning teachers (12 student teachers and 12 first-year graduates), Pillen et al. (2013) examined beginning teachers' tensions and the way they cope with these tensions. These tensions dealt with their

identity as teacher vs learner, feelings of incompetence, work pressure, and ideas about teaching that conflict with the ones of their colleagues, mentor at school or institutional educator. Yet the tension that was experienced most was related to relationship of the beginning teachers with their students: Beginning teachers may feel that taking control of the class might be at the expense of a close relationship with their students. Lindqvist et al. (2019) also examined the transformation from student teacher to beginning teacher with a focus on conflicts encountered in school. The authors examined intrapersonal and interpersonal conflicts in teaching of student teachers during their final year of teacher education and their first year as practicing teachers. The intrapersonal conflicts were related to teachers' view of being good enough as a teacher, setting boundaries of time and engagement with teaching, and suppressing their emotions. The interpersonal conflicts dealt with teaching methods of their colleagues in school, distrust of colleagues and parents of the-teachers' teaching competence, and teachers' interaction with their students.

In a study with a focus on student-teachers' STP, Caires et al. (2012) examined the perceptions of their STP of 295 student teachers from Portugal using the Inventory of Experiences and Perceptions of the Teaching Practice developed by the authors in a previous study. Four clusters of student-teachers' experiences were distinguished: 1) learning and supervision – experiences with university supervisor, mentors and co-operating teachers in school; 2) professional and institutional socialization – experiences related to the adaption process in school and the teaching profession; 3) emotional and physical impact – experiences related to student-teachers' well-being, and 4) career aspects – experiences referring to teacher identity and teaching profession. The third scale received the lowest scores, which means that teaching practicum was perceived as a stressful and demanding period.

The relationship with their students seems to be the greatest source of stress of student teachers during their first experience as a teacher. More specific, classroom discipline (Kaldi, 2009), student misbehavior (Lewis, Romi, Wui & Katz, 2005), and students' inattentive behavior (Ding, Li, Li, & Kulm, 2010) are main concerns of student teachers during their STP. It seems that the so-called 'reality shock' has been moved from the first teaching experiences of beginning teachers to the ones of student teachers. Yet during their STP student teachers are mentored and supervised in dealing with problematic classroom events, to improve their classroom management skills and reduce feelings of stress. Searching and receiving help from supervisors, mentors and peers is one of the most mentioned coping strategies of student teachers (Lindqvist et al., 2019; Murray-Harvey, 2001; Pillen et al., 2013).

Other coping strategies student teachers apply to deal with stress are self-reflection, diversions, minimizing, positive reappraisal and avoidance as well as more logical analysis and problem solving (Gustems-Carnier et al., 2019; Murray-Harvey, 2001). But most coping strategies described in the literature about STP refer to forms of dealing with problematic classroom events on the long run, which are less relevant for coping with problematic events in the classroom, which require an immediate response. This study aims to contribute to our understanding of student-teachers' coping with stressful classroom events during STP. To be able to initiate training in the use of appropriate response strategies in teacher education programs, a typology of student-teachers' coping with stressful classroom events has been developed. The research question that directed our study was:

“What types of coping responses can be identified when student teachers cope with stressful classroom events?”

Method

Participants and Procedures

The participants were 27 student teachers from a one-year graduate teacher education program of a large research university in the Netherlands, which prepares teachers for secondary education after four years of subject-matter studies. They were in their second school practice period, in which they carried full responsibility for some classes and were supervised at a distance by a co-operating teacher and a university supervisor. A stratified random sampling procedure has been used. The population of student teachers was first divided into nine strata, according to a combination of school subjects (Language and Arts, Science, or Social science) and starting date of their teaching practicum. Prospective participants received a telephone call from a project interviewer who requested permission to record a lesson and conduct an interview. Five participants declined to participate, because of lack of time or disapproval of the school principal, yielding a final sample of 27 student teachers. Our sample was representative of the whole group of student teachers with respect to gender, age, and subject taught, with 18 females and all student teachers 26 years of age or younger.

Video recordings were used to analyse the student teacher's coping responses and stimulated-recall interviews provided data about the nature of the classroom events and the student teacher's appraisal of the events. In all, 306 classroom events and an equal number of coping responses were analysed.

Classroom Events

In a stimulated-recall interview, each student teacher mentioned about 10 events from the particular lesson that had required their attention. The student teachers assessed what was at stake in each event and what they had intended to do. Each interview lasted about one and a half hours. Classroom events were considered to be events perceived by student teachers as disruptions of their daily classroom routine. The nature of classroom events was assessed by assigning one score on one out of nine categories to all the participant's statements about the nature of a particular event (see Table 1). These categories were based on previous research into stressful classroom events (Admiraal, Korthagen, & Wubbels, 2000). To determine the reliability of the instrument, two raters coded all 306 events. The interrater agreement (Cohen's κ) was .88.

Table 1. Types of stressful classroom events

Category	Example	Percentage (n=306)
Instructional problems	Teacher makes a mistake in the explanation of some	8
Difficulties in organizing lesson	subject Teacher is distributing stencils	9 4
Difficulties with materials	Teacher uses the video player, but it does not work	22
Misbehavior whole class	Class is noisy at the beginning of a lesson	21
Misbehavior one student	Two students are constantly chattering	5
Student criticism	Some students criticize their grades for an exam	4
Low student achievement	Student pronounces a French word in a wrong way	18
Student on-task behavior	Student asks a question about an assignment	9
Student apathy	Students do not respond when a teacher invites two of them	

Table 1 shows students' misbehavior (of either one student or the whole class) was relatively often perceived as a stressful classroom event (43%). This is consistent with the literature on classroom problems of student teachers (Kaldi, 2009; McDonald, 1993). Events directly related to teaching class (instructional problems and difficulties with organizing the lesson) were less frequently reported.

Student-teachers' Coping

One lesson of each student teacher has been videotaped. Each event lasted between about ten seconds and five minutes, and consisted of, on average, eight actions of the student teacher (in total some 2,300 actions). Each action was coded on two dimensions based on Admiraal, Wubbels, & Korthagen (1996).

The first dimension of student teachers' coping – *avoidance-approach*- refers to the intensity of student teachers' cognitive and behavioral effort to control or eliminate stressors. In all types of classroom events, low scores on the avoidance-approach dimension were assigned to teacher behavior avoiding the problem in class, including silent waiting, listening to the students, looking up something in a book or cleaning the blackboard. High scores on the avoidance-approach dimension were assigned to student-teacher behavior approaching the problem in class, such as involving students in the subject matter (asking questions, inviting them to answer, and rewarding or criticizing them), and disciplining students.

The second dimension – *calmness-agitation*- refers to the degree of tension the student teacher arouses in the interaction with the students. Low scores on this second dimension were assigned to instructional and organizational behavior that student teachers used to either tackle or ignore the perceived problems. High scores on the calmness-agitation dimension were assigned to silence and disciplinary actions on the part of student teachers, which were perceived as showing a high degree of agitation in the interaction with students and a disapproving attitude towards the students. Each response was summarized with a mean score and standard deviation in scores on both dimensions, resulting in four variables ("M Approach", "SD Approach", "M Agitation", and "SD Agitation"). To check the reliability of this scoring procedure, 90 randomly selected responses were coded by a second observer, which resulted in an agreement in scores of 84 per cent.

Analyses

In order to develop a typology of student teachers' coping responses to a stressful classroom event, we used cluster analysis with the four scores on both coping dimensions: "M Approach", "SD Approach", "M Agitation", and "SD Agitation". We decided to use the (squared) Euclidean distance as the similarity measure and a combination of a hierarchical method and optimization method as clustering method (see for an overview of clustering methods Everitt, Landau, Leese, Stahl, 2011). All 11 combinations of similarity measures and clustering methods available in SPSS 25 were evaluated. In order to ascertain the optimal cluster analysis for our data, we used the Variance Ratio Criterion (VRC, see Calinski & Harabasz, 1974). This criterion refers to the ratio of the 'within variance' (variance explained by the clusters) and 'between variance', corrected for the number of clusters and responses. All methods with the squared Euclidean distance had higher VRC values, compared to the methods with Euclidean distance. In Figure 1, we present the VRC values for each method with the squared Euclidean distance for a maximum of 20 clusters. As the

single linkage and complete linkage method have the same results with Euclidean distance and squared Euclidean distance, these methods are not included in Figure 1.

Figure 1 shows two methods ('Ward' and 'Average linkage within groups') generally yielded the best results. When the number of cluster is low, the difference between both methods was insignificant; In the case of eight clusters or more, the Ward-method gave the best results. Based on this information we decided to use a typology into four types of responses attained by the 'Average linkage within groups'-method. In order to increase the proportion variance explained by this clustering, we used the optimization method 'nearest centroid sorting' with the mean scores of the four clusters of responses. In the end, the typology with four types of responses explained 49 percent of the total variance, varying from 34 percent in "SD Approach" to 61 percent in "M Agitation".

In order to evaluate the reliability of the typology, we compared the typology into four clusters with a typology based on 50 percent of the data, which was randomly chosen. Therefore, we used the Rand measure corrected for chance (Morey & Agresti, 1984). The value of the Rand measure and corrected Rand measure was .90 and .77, respectively, which met the commonly applied norm of .70.

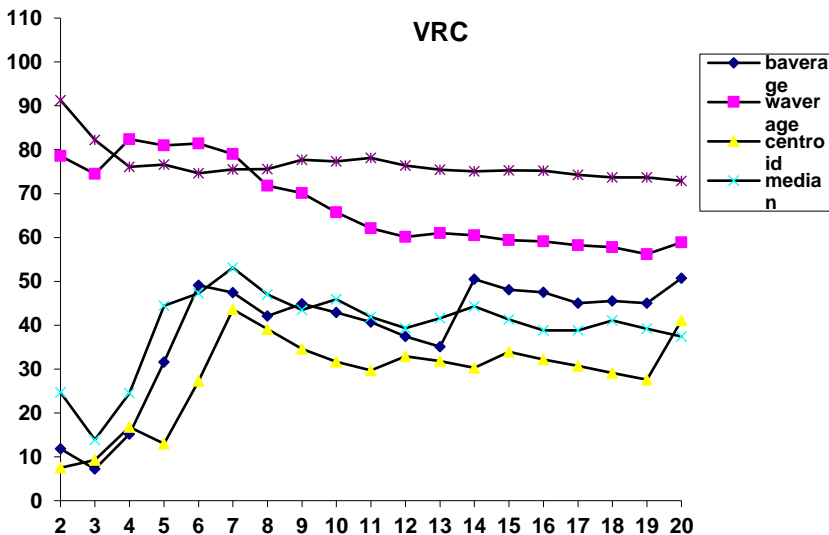


Figure 1. The values of the VRC of the five method using the squared Euclidean distance for a maximum of 20 clusters (bavera = "average linkage between groups"; waver = "average linkage within groups").

Typology of Coping Responses

In Table 2, we present the mean scores on "M Approach", "SD Approach", "M Agitation", and "SD Agitation" for each type. In the description of the typology, we also used other information, such as extreme scores on both coping dimensions, the number of actions within each response, the duration of responses, and the subjects' perceptions on their responses as stated in the interviews.

Table 2. Mean scores on the two coping dimensions for each type of coping responses

Type	Label	M Approach	M Agitation	SD Approach	SD Agitation
Type 1	Varying	0.17	-0.23	0.85	0.93
(n=127)	Hesitating	-0.21	0.56	0.91	0.95
Type 2	Problem solving	0.84	-0.60	0.11	0.03
(n=101)	Avoiding	-0.75	-0.62	0.16	0.22
Type 3 (n=30)					
Type 4 (n=41)					

Between brackets the number of coping responses in each type.

In Figure2, we graphically present the cluster centres of each of the four types.

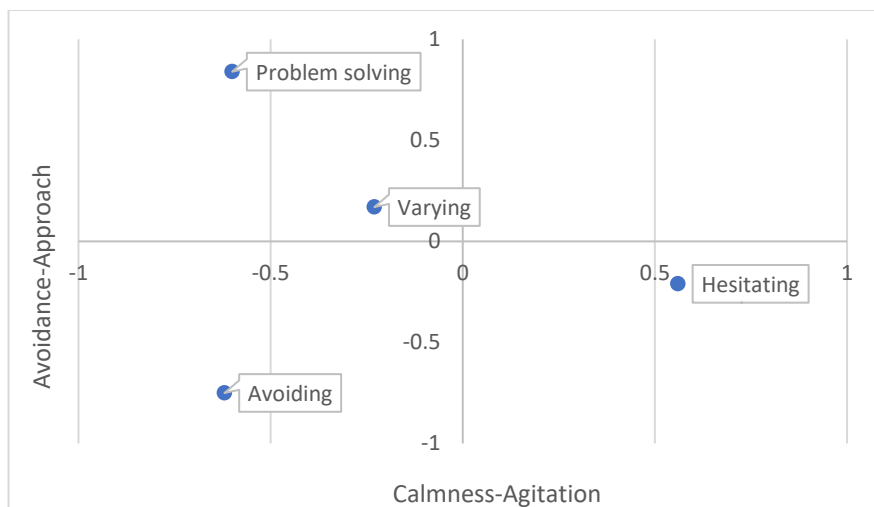


Figure 2. Cluster centres of the four types of coping.

Type 1: Varying (N= 127)

This type of coping response was characterized by average mean scores on both dimensions and relatively high standard deviations. This means student teachers combined problem-focused actions and teaching activities ignoring the problematic classroom event. Student teachers' coping actions mostly included a combination of disciplinary actions, waiting, instructing, asking questions and inviting students to

respond. In general, these responses were relatively long and related to almost all kinds of classroom events.

The following statements of the participants in our study were typical for this kind of responses.

They [the students] had to complete these assignments on their own and I had to say a couple times “come on, can it be more quiet please, I want to have it calmer please”. I had to say this two or three times. Meanwhile, I answered some questions and helped some kids. [student teacher 7; event 8]

And:

Testing the kids’ homework, I constantly looked over my shoulder, as there was something happening behind my back. And I felt that there was. Actually, it was not necessary, but each time I looked whether the class was disciplined enough. I think this was caused by the previous lessons in which they made a racket ... And now I thought, well I just check the kids now and then. [student teacher 6; event 2]

Sometimes, teachers used the alternation of interventions and instruction more intentionally.

I remember that I waited long before class was quiet. I just hung around a little ... The kids had to ‘start up’. So, I gave them the time to take their places, to get their things, and for me as well ... Then I tried to calm them down. [student teacher 12; event 1]

Another teacher tried to restore discipline in class by intervening indirectly. This can be illustrated by teacher’s statements on restoring class discipline by giving an assignment about the subject:

I just thought let me tell them a little story to get their attention, to calm them down ... They needed a change of subject ... With telling them a story I wanted to solve the discipline problems, I wanted to calm them down, to get their attention. [student teacher 12; event 10]

Because telling students a nice story did not work to calm them down, the teacher used corrections as well. Another example of intervening indirectly is a teacher who wanted some students to listen by asking another student to repeat his answer:

It was not that I could not hear him, actually I did. But in order to keep the others quiet, I asked him to repeat his answer: “Sorry, I cannot hear you”. I said it to the wrong kid, but I hoped it was a hint for the others. Something like, you have to be quiet, otherwise we all cannot hear anything. [student teacher 12; event 9]

This student teacher also used corrections besides this kind of intervening indirectly. The variety in coping actions may also be caused by the fact that the participants appraised the event differently at various moments in class. The following statement about two students who wanted to sit in the front of class illustrates this.

At that moment, I thought “Well so what. Just let them sit in the front, they will be on video and that is what they want”. I thought “what does it matter” ... Then I said “but you have to keep quiet at this place”. Then I thought “Shit, they want to sit here to have a good time”. So I had to let them know, it is okay when you want to sit here, but not be a pest. So, I warned them.” [student teacher 10; event 2]

In some cases, the variety in coping actions was a result the teacher’s uncertainty of how to respond. An example is the event that a student teacher wanted to correct some students during testing homework:

Then there was some noise at my left side, some students were disturbing and I was testing another student ... So, I had to split my attention: I had to watch these students and I was checking the answer the other student had given. So, I let the student read the question again, but I had to interrupt the kid a couple of times, because the others were so disturbing ... I just had the feeling, well what do I have do now, how can I tackle this problem. Either I do no pay attention to that kid [who was giving an answer] or I take a firm line with the two boys [who were annoying]. I was just undecided ... There were various things going round and round my head: like, just wait, when do I have to say something. Right at the moment should I say something? No, because I do not want to interrupt that boy [who was answering the question]. [student teacher 7; event 9].

Type 2: Hesitating (N= 101)

This type of coping response was characterized by high mean scores on Agitation and average mean scores on Approach-Avoidance. Both standard deviations were quite high. This means student teachers hesitated to either approach or avoid the classroom event, arousing at the same time tension in the relationship with students. Student teachers’ coping actions mostly included listening, waiting, and short disciplinary actions in an unfriendly way. This type of coping included quite long response and was especially related to the classroom events with misbehavior of the whole class.

An example is a teacher who was testing the reading of a student. The student did no know where to start her reading and then was not clearly audible.

Well, I was really hesitating, what do I have to do now. Shall I knock the hell out of her, or shall I be somewhat more accommodating. In the end, I chose the latter, but I felt uneasy about it ... I was really getting enraged here. [student teachers 11; event 6]

Hesitating is also a important part of the next example of a teacher in a problematic classroom event. The teacher wanted to move a student to another place in the class following constant talking. The teacher was uncertain whether the student would go.

Oh yes, at this moment I thought “well he keeps staying there, I hope he will move”... In the end I was convinced that he would go. Still it was running through my mind, “but what if he stays. Then I have to do something else, I have to lay another penalty on him. Then he will be moving.” [student teacher 13; event 7]

Hesitating about the way a teacher had to respond and being annoyed about the whole situation is also typical in the following example. A teacher had moved a student, because of constant talking. The teacher was holding back from intervening, because she hesitated whether the student will be moving to the right place, whether it was a correct thing to do, and whether the new place was a good choice.

On the one hand, hesitation, on the other I was determined, she has to go whether she wants or not. At the same time, you realize this can have negative consequences for the rest of the class. I mean, she [the student who was moved] won't be more quiet at that place. I knew that beforehand. ... However, when I had let her stay at her place, that would not be a success either. You have to choose the lesser of two evils. At that moment, I just chose to move her, because I knew that she thought this is worse than staying near her girlfriend. [student teacher 11; event 4]

The last assertion also reflects the unfriendly attitude of the teacher with regard to the students who caused the classroom problem. This type of coping response reflected inconsistent teacher behavior that was mostly caused by feelings of uncertainty how to tackle the problem. In some cases, the teacher was aware of this inconsistency, like a teacher response to a funny remark of a student:

That is difficult in this class. Those remarks, I cannot give up laughing about it. I was a little angry because of the situation before, and then, a student makes a funny remark and I have to laugh. I know that I should not do that. I found this awful because I made myself look a fool. On the one hand, I wanted to be angry as the kids did not pay attention. But when one makes a funny remark, well I thought this is a funny, you know. I think you may laugh about it. But when you want to be mad and you try to make clear that things can't go on like this. That is very annoying." [student teacher 8; event 3]

Sometimes uncertainty about how to respond to classroom problems had a more serious character and some severe consequences, like in the case of the following student teacher. The event occurred during a practicum of two hours. During a break, some students had smoked a cigarette, which was not allowed following the school rules. The amanuensis had made a remark about this and stated that they would not get their tea in class [something the student teacher did every week]. After the students entered class, the students defended themselves and they wanted to have their tea. The student teacher responded:

I thought, it is already hard to work with this group, I am responsible for the remainder of the lesson, so I made the best of a bad job, to restore a working class climate, by allowing them to have their tea. I had to go on and that was not possible by the move of the amanuensis ... I thought I have some boys who were mad, not at me, but at him. And they harassed me with questions and remarks and I was not able to react on that. I thought just give them their tea, then I have solved it ... I got into a panic. I thought those boys are full of bullshit and I do not know what to say. To get it over and go on with class,

I thought I better can give them their tea. It drove me to distraction, what do I have to do now. [student teacher 8; event 11]

In general, this type of coping response occurred mostly when teachers wanted to start their lesson and the student were still restless. Typical was the start of the class of the following student teacher:

Then I already became somewhat more irritated. Like, “be quite now, I want to have it quiet now”. I always try a couple times in a friendly way. But, at some stage I want it to have it quiet. And this was a moment like that. “So, you have to be quiet immediately!” [student teacher 13; event 2]

Or a student teacher who was uncertain whether he would be effective in restoring class discipline at the start of his lesson:

At that moment I thought “will I be successful?”. I don’t have a loud voice. I mean, most of the times they cannot hear me ... And I did not want to shout. So, I walked up to some kids hoping that this would help now and then, that they were getting more disciplined. At this moment, I thought, well, “will I be successful or not?” [student teacher 11; event 2]

Type 3: Problem Solving (N= 30)

This type of coping was characterized by high mean scores on both dimensions and low standard deviations. Generally, it refers to short disciplinary actions with a combination of inviting, checking and criticizing students and listening to their response. This type of coping was relatively more related to classroom events dealing with difficulties in organizing class.

The following example was a student teacher who paid attention to the way she invited students to give answers, tested their homework or gave a reading assignment.

What I found irritating was that I constantly said “Do you want to do this, can you do that?” I was pointed out not do that this way. The class can also say we do not want that, or we cannot do that. They just have to do it. That was my goal, just say “Take you books, do this, do that, do you know the answer” in stead of “Do you want to give an answer?”. During teaching, I noticed that I was doing it again, especially during testing the homework. I think I have to change that. So, I felt this was irritating ... Do you see it? At that moment I thought, “Shit again, I do again”... It could be that class picks this up. Although class was disciplined this time.” [student teacher 2 event 3]

This student teacher was aware of what she was doing and she corrected it immediately. Another example of a teacher, now in combination with students’ on-task behavior:

That is Charlotte, a chatterbox and not so smart either. Well I heard her work because she was chattering again ... Then she did not know where to start and she did it wrong

three times. I thought, well okay that is the consequence of chattering and not paying attention. And I just let her know that. I just thought I made you look like a fool for the whole class. [student teacher 19; event 8]

Or the next assertion as a response on students' criticism:

Then I had to think of who is going to write on the blackboard. And he [a student] then said this is already the third time I have to do that! I just started and normally I would maybe ask another student, but now I thought "No way, you have to do it again. Just come to the blackboard." [student teacher 25; event 11]

The common aspect in the type of coping response were the short length of each response and the high efficacy teachers felt and sometimes also showed in their response to the classroom problems. The term 'problem solving' of the label of this type of coping refers to recovering the (slight) imbalance in classroom routines, and not only to disciplinary actions. Most of the times there was a short moment student teachers felt uncertain and they immediately reacted with confidence.

Type 4: Avoiding (N= 41)

This type of coping was characterized low mean scores and low standard deviations on both dimensions. Generally, student teachers continued their teaching (instruction, arranging the classroom environment, and organizing class) and ignored the classroom problem. In general, this type of coping included long responses and was related to all classroom events, but relatively more to events dealing with particular on-task behavior of students, such as a comment or a question.

In general, this type of coping was characterized by avoiding or neglecting the (possible) classroom problem as the following assertion of a student teacher shows.

This is a situation I intentionally avoid. I am just convinced that I should no pay any attention to this kind of events. Here, two girls are coming in late. Just greeting. Yes, and then that boy is coming in. He said sorry, I am late. I thought, this is okay. So, just going on with the lesson. [student teacher 12; event 2]

This statement shows that the teacher not only paid almost no attention to the classroom problem, it did not aroused her as well. This is somewhat different in the next example. This student teacher did no pay much attention to the problem in his response to the class, but the problem did aroused him. It was about some students asking for their test results:

It was about their test results. I had planned to present them tomorrow. First Claudia [a student] was asking for her results. I gave her these. Then Anouk [another student] asked for it, which was already irritating. Then I though now I have to watch out, before you know the whole class yells for results. So I tried to neglect her and the class by walking around a little and helped the students with questions. In the meanwhile, I gave every kid his test result." [student teacher 17; event 9]

In general, this of coping was relatively more related to on-task-behavior of students, often in terms students asking questions about the subject of the lesson. In the next example, the teacher behavior is similar as in the other examples (answering questions and continuing instruction), but the appraisal of the event was slightly different: The student teacher selected this event as a minor classroom problem.

Well, the moment I want to select were some questions from the group. Most of the times these questions are unexpected. You never know what they will be asking and what kind of things they do not get. Sometimes I myself think that has to be clear ... So I knew this time that it was a hard subject to cover in the lesson. I thought there will be some questions at different levels: Sometimes questions with which I had problems to know the answer; and sometimes questions of which I thought I told it you three times already. [student teacher 20; event 9]

This student teacher answered the questions and continued her instruction. She selected this classroom event because she did not know what to expect from class. These thoughts were running through her head during the event. In the next example, the student teacher was showing similar behavior (which was thus clustered into this type of coping), but his cognitions were different. He was particularly thinking of how to answer the questions and how to explain and illustrate the subject or, with other words, about his own actions instead of the (possible) responses from class.

There were some kids who had problems with the assignments. I had to explain it extensively. Although it went well, it took me a lot of energy. I had to verify which students were going well, who not. The former group did not need much attention; the latter the more. I had to listen well what the student did not understand and I had to check the whole class how they were working on the assignments.. And then there was Guido, a student who always asks a lot. He asked so much attention that I shut me off from the class. I had to listen what is the problem, which steps are unclear. How do I have to formulate my answer ... [student teacher 21; event 9]

The examples above were related to on-task behavior of the students. This was not always the case. The next assertion is from a student teacher (French language) who wanted to sing with the whole class some French songs. But the class was (unexpectedly) not very motivated to co-operate.

I thought after that assignment, "Let's sing some songs". They always find that amusing. And I wanted to complete the lesson with something like this. But I was disappointed. They were not singing, they were just chattering. I tried a couple of times, but it did not work ... I was thinking, "Well then I stop, I do it for them". But as soon I stopped, they were quiet and wanted to sing after all. [student teacher 23; event 9]

The common aspect of this type of coping was avoiding the particular problem and continuing the daily routines of teaching in terms of instructing, explaining, organizing, arranging materials, and so on. In general, the classroom problems were small problems, which took not much energy from the student teacher. Because the

responses were continuations of the teaching, the start and finish of the (long) responses were difficult to determine.

Discussion

A typology of responses have been developed of the way student teachers cope with stressful classroom events. Based on video-recordings of particular classroom events and stimulated-recall interviews in which student teachers explained their appraisal of the event and their behavior, four types of coping response have been identified. The first type of coping response, *Varying*, included a combination of intervention tactics of the student teacher and the continuation of instruction. Most of the time this combination of teacher actions was intentionally put into practice. The second type of coping response, *Hesitating*, referred to a combination of waiting and disciplinary actions in a unfriendly way. The term “fighting” or “anti-social”, sometimes used in the coping literature, could apply to this type of coping. Most of the time, the student teachers were uncertain about their actions and the effects of their actions. The third type of coping responses, *Problem-solving*, included short actions of the student teacher focused on restoring a slight imbalance in classroom routines, mostly related to the organization of class. In general, student teacher were quite confident about their actions. The fourth type of coping response, *Avoiding*, referred to instruction, answering questions, arranging materials, organizing class as part of the daily routine of teaching, all intentionnaly not focused on directly solving the problematic classroom event. In general, the classroom events were small problems and teachers felt relatively confident about their actions.

These four types of coping response can be positioned on one dimension commony distinguished in the coping literature: approach-avoidance (Lazarus & Folkman, 1984). One type (Problem solving) is positioned relatively high on approach, two types (Varying and Hestitating) scored in the middle and the fourth type (Avoiding) is placed relatively high on Avoidance. Both more extreme types (Problem solving and Avoidance) represented the least frequently applied coping response. This finding adds to previous research on student-teachers' coping, which reported that student teachers focussed on either avoidance strategies (Gustems-Carnicer et al., 2019) or problem soving strategies through searching for help of supervisor, mentor of co-operating teacher (Murray-Harvey, 2001; Pillet et al., 2013). In the current study, student teachers mostly applied a combination of approaching and avoiding the particular stressful events, either intentionally and carried out with confidence (Varying) or unintentionally and showing their agitation (Hesitating). Especially the latter type of coping might be related to the student-teachers' transformation from learner-teacher to beginning teacher.

Implications for Teacher Education

In general, only Hesitating responses led to negative feelings of student teachers about the way they had coped with the particular classroom event. They not only

wanted to perform more approach coping, they also recognized negative effects on the learning climate in class. They thought if they would have shown more approaching behavior and less agitation, the particular classroom event (mostly consisting of disciplinary problems) would have been solved faster and that the class climate would have been less negatively influenced. In other words, some student-teachers from this study wanted to learn how to move beyond showing agitation and develop more effective problem-solving behavior. They would like to develop from coping to managing as Hong, Day, & Greene (2018) examined. These authors presented the stories of six student teachers, based on interviews during three years (final year of teacher education and first two years as beginning teachers) showing three patterns of dealing with challenges in teaching: 1) from coping to managing (four teachers), 2) from managing to coping (one teacher) and 3) continuously coping (one teacher). The authors described coping as emotion-focused behavior without resolving the challenges and managing as overcoming or resolving the challenges. The four participants who moved from coping to managing mentioned strong support from their colleagues and administrators echoing the importance of building a supportive, encouraging and collaborative community, either during teacher education or as inservice teachers in school. The importance of support from supervisor, mentor or co-operating teachers in coping with challenges in teaching is confirmed in research on student-teachers' experiences with the STP (Lindqvist et al., 2019; Murray-Harvey, 2001; Pillen et al., 2013). In addition, student teachers might also be prepared to apply more effective or satisfying coping responses to problematic classroom events and acquire better classroom management skills (Dicke, Elling, Schmeck, & Leutner, 2015). For example, practicing more approach coping instead of avoidance coping in simulations, role-play or micro teaching might be a way to prepare student teachers on the actual teaching practice. Their peers as well as expert teachers could model activities of approach-coping responses.

Limitations and Directions for Future Research

Although we could include more than 300 stressful classroom events and coping response, only 27 student teachers of one university teacher education program in the Netherlands participated. A variety of classroom events and coping responses were studied, but the low number of participants can have consequences for the generalization of the findings to other student teachers in other teacher education programs. Additional research with other groups of student teachers as well as with beginning teachers would be welcome. Including beginning teachers or carrying out longitudinal research with participants during their STP as well as during their first years as beginning teachers will enable comparisons of coping responses in different stages of the teaching career leading to a variety of implications for teacher education as well as for teachers' professional development and supporting school structures.

Conclusion

Practice shock, or the transition from learner to professional, is not limited to the teaching profession. Many professions, including physicians, nurse, lawyers and social workers have their own descriptions of troublesome first encounters with work. The four types of coping responses with stressful classroom events identified in the current study, Varying, Hestitating, Problem solving en Avoiding, can be positioned on the two dimensions Approach-Avoidance and Calmness-Agitation. More focus on dealing with classroom events in teacher education, especially during mentoring and supervising the STP, might help student teachers to develop more effective classroom management skills and to make direct interaction with students a source of greater job satisfaction.

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