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Learning to Allow Temporary Failure: potential benefits, supportive practices and teacher concerns

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ABSTRACT *Current theory and research in the area of motivation indicate that while frequent academic failures are clearly undesirable, temporary failure in challenging academic tasks can have important psychological benefits when followed by successful coping. However, teachers' responses during our school reform programme suggest that some special education teachers may find it extremely difficult to allow their pupils to experience any kind of failure or frustration, not even temporarily. An analysis of the cognitive and emotional reasons for this phenomenon is presented, followed by a summary of the potential benefits of temporary failure. Then drawing on Self-Determination Theory (SDT, Ryan & Deci, 2000), teaching practices that enable pupils to cope well with temporary failure are briefly described. The last section presents the way these SDT motivational principles have been used to promote the internalisation of a more positive attitude towards temporary failure by teachers, and to suggest various implications for the area of teacher education.*

INTRODUCTION

A series of workshops with the staff of a special education elementary school were aimed at enhancing teachers' capacity to support pupils' actual and perceived cognitive competence. The workshops were part of the ARC programme which is a comprehensive school reform programme focused on enhancing support for pupils' and teachers' basic psychological needs in several schools (Assor *et al*., 2000). The ARC (Autonomy, Relatedness & Competence) programme was based on Self-Determination Theory (SDT, Ryan & Deci, 2000), that views autonomy, relatedness, and competence as three basic needs whose satisfaction enhances psychological growth, well-being and learning.

During one workshop in the first phase of the intervention, we asked teachers to assign pupils various tasks and write down pupils' reactions to success or failure. Listening to

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teachers describe the process, we found that none of the pupils failed the tasks, not even a temporary failure. When we discussed this issue with the teachers, we realised that they clearly preferred to assign pupils 'tasks that are certain of success'. As teachers tried to explain the reasons for their choice of task, the argument they used pointed to some interesting assumptions they had about frustration and competence development. Teachers appeared to hold an underlying belief that even temporary and minor experiences of failure cause severe harm to pupils' perceived and actual competence.

As we spoke with the teachers, we realised that some of them did know, at least on the declarative level, that temporary failure and frustration might be an unavoidable necessity and perhaps even a useful step in the process of learning and competence development. However, most of the time, this knowledge appeared to be dormant and isolated from their emotional and behavioural responses.

Our search for theoretical and applied work dealing with the experience of temporary failure revealed that this issue has received only cursory and mostly indirect attention (e.g. Renfrow, 1984; Licht, 1992). Thus, it appears that most of the relevant literature deals mainly with repeated failures rather than with temporary failure. For example, Licht (1992) found that repeated failure experiences lead many children with learning problems to perform more poorly than one would predict on the basis of their diagnosed learning problems.

Given the negative implications of repeated and uncontrollable failures it appears very important to distinguish between such failures and failures which are temporary and controllable. Following Holt's (1964) and then Covington (1992), the latter failures can also be termed 'non-successes'. According to Covington (1992), non-successes are 'events that reflect the vast middle ground between outright perfection and abject failure'. The major thesis of this article is that while repeated and uncontrollable failures clearly are problematic, temporary and controllable failures are often a necessary and important experience that contributes to pupils' motivation, learning and emotional development.

While the emphasis on the positive outcomes of controllable temporary failure is consistent with major research-based theories of motivation (e.g. Skinner, 1995), it appears that this view did not receive sufficient attention in the literature dealing with teacher education or special education in particular. As teachers' negative view of temporary failure is likely to reduce their willingness to challenge their pupils and, respectively, to increase their tendency toward over-protection, it appears important to highlight the potential benefits of temporary and controllable temporary failure.

TWO ASPECTS OF TEACHERS' RELUCTANCE TO ALLOW TEMPORARY FAILURE

Teachers' reluctance to allow temporary failure appears to be both emotional and cognitive. The emotional cause involves the sensitivity of Special Education (SE) teachers

to the emotional pain of SE pupils facing frustrations. The cognitive cause involves lack of sufficient conviction regarding the value of temporary failure.

The Emotional Aspect

Teachers' daily work has an important emotional aspect (Clark & Artiles, 2000; Hargreaves, 2000). Research has shown that many teachers are quite sensitive to their pupils' feelings (e.g. Hargreaves, 1998). Therefore, it is reasonable to assume that teachers are likely to experience a great deal of empathy in relation to their pupils' feelings of despair and frustration following temporary failure, even if those feelings are mild and temporary. Thus, when we asked the teachers why they were so reluctant to allow temporary failure, one teacher said: 'my pupils experience enough frustrations in their natural environment … I wouldn't like to discourage them … I want school to be a corrective experience for them'. This type of response, which was fairly common, appears to reflect teachers' image of their pupils as carrying a heavy burden consisting of many negative past experiences. Given that burden, teachers are careful not to add additional frustrations that may make it unbearable.

This cautious attitude might reflect teachers' assumptions that temporary failure would create a helpless reaction (Dweck, 1999). It appears, then, that many teachers believe that a major part of their role as SE teachers is to protect pupils from experiencing failure and frustration. This perception is reflected in teachers' image of the school as a 'hothouse' and themselves as its keepers. Thus, empathy and concern for their pupils' present emotional states may dominate the thoughts of SE teachers in a way that prevents them from recognising the long-term benefits of temporary frustration and temporary failure.

The Cognitive Motive

Another possible motive for teachers' reluctance to allow frustration is lack of sufficient understanding and conviction regarding the value of temporary frustrations. As part of their basic education, many teachers probably encounter the notion that mistakes are essential for learning.. However, this knowledge might not be integrated with their professional perceptions and practices. Moreover, even when teachers can articulate the possible benefits of temporary and controllable temporary failure, they may lack knowledge of the specific contextual conditions and educational practices under which temporary failure would be beneficial. Lacking clear understanding of this contextual and educational knowledge, they prefer to act cautiously and avoid taking the risk of allowing temporary failure.

It appears, then, that the two influences led teachers in our school to try to protect pupils from experiencing temporary failures. It can be argued that this over-protective orientation prevented pupils from gaining some valuable benefits that coping with temporary failure can yield. In the next section we expand on these potential benefits.

THE BENEFITS OF COPING WITH TEMPORARY FAILURE

The experience of temporary failure can yield unique psychological gains that can be achieved *only* through *effective coping* with temporary failure and the frustrations that accompany it. The major gain for pupils concerns an increase in their capacity to cope with temporary failure in a variety of domains (i.e. development of general coping skills). Two additional gains for pupils are specific to the subject in which they encounter temporary failures, and involve intrinsic motivation due to optimal challenge and actual skill and knowledge development. Finally, it is assumed that allowing temporary failure also contributes to teachers' intrinsic motivation and professional development. It is because of those gains that teachers should learn to become less over-protective and allow their pupils the experience of temporary failure. The benefits of temporary failure are presented in three sub-sections. The first focuses on pupils' gains in general coping skills, the second involves specific subject-related benefits for pupils', and the third describes potential teachers' gains.

Pupils' General Benefits: capacity to cope with temporary failure in a variety of domains.

Seigel and Sleeter (1991) in their discussion of the school-to-work transition state: 'The mission of special (or general) education is not restricted to the teaching of academic subjects, nor is it to protect students from a harsh adult environment. It is to prepare them to participate fully in the mainstream of the adult world' (p. 27). Their argument represents the most basic rationale for exposing special education pupils to temporary failures. Since temporary failure is an unavoidable component of daily life, and might be especially prevalent in the lives of SE children, school should provide them with the means to cope with present and future temporary failures and the frustration evoked by these experiences. This logic suggests to us, that exposure to temporary and controllable temporary failure, under appropriate conditions, allows children to develop various coping skills, which, in turn, help them to cope with future challenges. In contrast, eliminating exposure to temporary failure actually deprives children from the possibility of developing skills that would allow them to cope well with temporary failure, perhaps even substantial failure.

We propose that the relevant coping skills may be roughly divided into three general types: cognitive, emotion-regulation and social. This classification is presented mainly for analytical purposes. However, we acknowledge that in reality, there is considerable overlap and complementarity among the different types of skills.

Cognitive Skills: analytic skills and causal beliefs

The cognitive skills consist mainly of analytic skills and dispositions that allow pupils to perform a useful analysis of the reasons for their temporary failure. A large body of research suggests that an effective analysis of the reasons for temporary failure leads to better coping. This effective causal analysis is based on a set of beliefs regarding the causes of success and failure that can be termed mastery oriented. Mastery oriented beliefs

are based on the assumption that success and failure in a certain domain depends largely on internal controllable factors rather than on uncontrollable factors (Dweck, 1999; Skinner, 1995).

Dweck (1999) and her colleagues have shown that carefully designed learning experiences and contexts can bring children to change their beliefs regarding the causes of success and failure and adopt beliefs that are more mastery oriented. Similarly, Assor and his colleagues (Assor *et al*., 2000) have designed a school reform programme aimed at helping children develop realistic mastery oriented causal beliefs. Zeligman (1996) have developed a highly effective programme in which children learn to develop mastery oriented attributional orientations.

Common to all the theories and projects focusing on mastery oriented causal beliefs is the assumption that children need to experience contexts in which they face temporary failure. This is because the occurrence of temporary failure provides children with the opportunity to apply, test and then strengthen their mastery-oriented analytic skills. If the application of children's analytic skills indeed leads to successful coping, then children's mastery oriented beliefs and analytic skills are strengthened and they become more confident in their ability to cope well with temporary failure. In addition, the occurrence of temporary failure enables teachers to discover that some children hold harmful causal beliefs and analyse their temporary failure in helplessness oriented ways. Consequently, the teacher can work with the child on developing a more adaptive set of causal beliefs and analytic strategies (using, for example, the strategies suggested by Zeligman, 1996).

Overall, then, absence of temporary failure experience is likely to deprive children and teachers from the opportunity to develop and strengthen children's mastery oriented analytic skills (and the causal beliefs on which those skills are based).

Emotion-regulation Skills

Temporary failure usually evokes negative emotions that often undermine pupils' capacity to cope well. For example, anger often causes aggressive reactions that make it difficult for the child to learn from the teacher or from others how to do the task well. Sadness, shame or anxiety may lead to withdrawal from the task and to lack of commitment to learning. Considerable research in the areas of coping and motivation has shown that effective coping depends, to a large extent, on the ability to regulate negative emotions (see Zeidner & Endler, 1996). Many programmes concerned with promoting social-emotional learning (Elias *et al*., 1997) teach children skills that are expected to allow them to regulate their negative emotions.

However, emotion-regulation skills are not likely to develop in the absence of practice opportunities. Thus, in order for pupils to learn how to regulate their negative emotions following temporary failure, they first need to experience temporary failure. Successful application of emotion regulation skills would then lead to the actual development of those skills as well as to the belief in their availability.

Social Skills: help seeking

One of the most powerful ways of coping with temporary failure involves help seeking. Considerable research has shown that many pupils feel uncomfortable asking for help (Newman & Schwagner, 1992). Moreover, pupils who actually ask for help differ considerably on the amount of skill they show when seeking instrumental or emotional support from others (Cowie & Wallace, 2000). As with other types of skill, the occurrence of temporary failure can be viewed as an important opportunity for learning how to ask for help skilfully, and moreover, how to feel comfortable with one's request for help.

The foregoing brief review has argued that effective coping with temporary failure requires pupils to possess a number of different skills. In order to develop those skills and believe that one is able to use them well, repeated experiences of temporary failure seem essential. Depriving pupils from such experiences is, to a certain extent, tantamount to depriving the pupils from practice opportunities that are necessary for the development of any kind of skill and self-confidence.

Pupils' Domain-specific Benefits: motivation and knowledge in specific subjects

So far we have been discussing general coping skills that might be developed following successful coping with temporary failure in a variety of domains. However, temporary failures in a specific school subject is also likely to yield two more specific gains that involve pupils' motivation and knowledge in the subject in which temporary failures have occurred. These two gains are presented below.

Intrinsic Motivation and Sense of Efficacy due to Optimal Challenge

According to a number of motivational theories, optimal challenge is an important cause of task-engagement, flow, intrinsic motivation, and sense of efficacy (Skinner, 1995). Schunk (2001) claims that 'Students are not motivated by goals that they believe are too easy or overly difficult. Rather, a goal viewed as challenging but attainable can motivate and build a strong sense of efficacy' (p. 132). Optimal challenge, by definition, entails the possibility of temporary failure and frustration. In fact, the possibility of such temporary failure makes tasks optimally challenging, and therefore interesting and intrinsically motivating. Because the continual elimination of any possibility of temporary failure also means continual elimination of optimal challenge, it is likely to result in a gradual decrease of interest in the subject being learned. Alternatively, repeated opportunities to cope well with temporary failure are likely to enhance interest in the subject being learned.

Development of Skills and Knowledge

Some research suggests that instructional processes that encourage pupils to set challenging yet realistic goals (and, therefore, allow occasional temporary failure) contribute to optimal skill acquisition and conceptual development (Alchuler, 1969; Zimmerman *et al*., 1996). In addition, research highlighting the value of misconceptions for learning (e.g.

Tobin, 1993) also suggests that temporary failure is important for knowledge development by enabling teachers and pupils to uncover pupils' misconceptions thus misconceptions leading to a deeper level of learning.

Teachers' Gains

The psychological gains from instructional processes allowing pupils' temporary failure are not limited to the pupils. This is because when teachers respond to the challenges (and risks) involved in setting tasks that may lead to temporary failure they also challenge themselves and test their professional skills. Teachers who set optimally challenging learning tasks are likely to face many professional questions that they would have to solve adequately in order to increase the likelihood that temporary failure would be followed by actual success. In trying to design those tasks, and the learning environments in which they occur, teachers are likely to develop knowledge and skills that contribute to their own sense of competence, professional satisfaction, interest in teaching, and, perhaps, what Huberman (1992) terms 'craftsmanship' or 'artistry'.

ASPECTS OF TEACHING THAT ENABLE PUPILS TO SUCCEED IN THEIR STRUGGLE WITH TEMPORARY FAILURE

Obviously, temporary failure is likely to have beneficial outcomes only if it is temporary, controllable, and followed by success. Moreover, if temporary failure turns into a prolonged failure it can lead to helplessness and despair. Given the risks involved in temporary failure we can expect responsible teachers to allow it only if they understand and master practices that help pupils to succeed in coping with temporary failure. Drawing on Self-Determination Theory (SDT), we suggest three general types of teacher practices that may help pupils to turn temporary failure into success: competence support, relational support, and autonomy support. A more detailed discussion of such practices may be found in Deci, Ryan and Williams (1996) and Assor, Kaplan and Roth (2002).

Competence Support

Pupils are likely to invest considerable effort in coping with temporary failure (thereby turning it into success) if they think that there is a series of actions that can lead to mastery of the task and they are sufficiently competent to perform those actions (see Skinner, 1995).

To support such perception of the task and pupils' self-perceived competence teachers may engage in the following competence-supporting practices:

(1) conduct an initial assessment of the pupil's current knowledge that allows the setting of optimally challenging tasks (i.e. tasks that would allow temporary failure but not massive failure)
(2) assist pupils in planning their work on the task
(3) provide continual, informational, non-comparative feedback that instructs pupils re-

garding components of the task they have mastered and components they can master following some additional practice
(4) help pupils to cope with temporary failure by using the various skills described previously, including the identification of specific steps that can help them master the components that caused the temporary failure
(5) Foster pupils' view that success in the type of tasks learned in class depends mostly on internal controllable factors rather than on inborn talent.

Autonomy Support

SDT argues that pupils are likely to invest a great deal of effort when they feel autonomous regarding their involvement in the task in which failure has occurred. Research based on SDT (see Assor *et al*., 2002) further proposes that there are four types of autonomy supportive teacher behaviours that are particularly likely to enhance pupils' persistence as they cope with initial failure:

(1) Minimise coercion and interference
(2) Provide a relevant rationale for engaging in the task
(3) Provide choice by allowing pupils to participate in task and goal selection, as well as by allowing pupils to choose their work methods and the mode of evaluation
(4) Allow criticism and some expression of negative feelings.

Relational Support

Teaching practices that support peer acceptance and empathy in the classroom are important because they create a context that serves as a secure base for learning and exploration. In the absence of such a supportive context pupils might feel that initial failure in a specific task might cause others to ridicule them. In some cases, pupils may even fear that serious investment in studying would lead to loss of social status. Thus, supportive teacher practices increase pupils' sense of security as they cope with temporary failure, and the sense of security then enables pupils to cope well with it.

In the light of studies conducted by researchers examining the 'Caring Community' approach to schooling (e.g. Solomon *et al*., 1992) it can be recommended that teachers' who would like to help pupils feel protected and related as they cope with temporary failure would use the following practices:

(1) Demonstrate affection and interest in relation to each pupil
(2) Enforce rules that do not allow violence in the classroom
(3) Encourage empathy and pro-social behaviour in class
(4) Foster non-competitive, cooperative, learning structures.

To recapitulate, pupils can fully benefit from temporary failure only if teachers use educational practices that enable pupils to cope well with temporary failure and prevent it from deteriorating into massive failure. Luckily, it appears that the teachers in our ARC programme understood the potential danger of temporary failure when teachers do not

support effective coping, so that we did not have to emphasise this point too much in our in-service programme.

After clarifying the possible value of temporary failure and describing teaching practices that enable pupils to succeed in their struggle with temporary failure, the following section will briefly describe our attempt to work on these issues in the same special education school where we first encountered the reluctance to allow failure. The purpose of this phase in the intervention programme was to teachers' internalisation of a more positive view of temporary failure. In addition, the next section also indicates some general implications of our approach for the area of teacher education.

PROMOTING INTERNALISATION OF A MORE POSITIVE VIEW OF TENTATIVE FAILURE: A CASE STUDY AND THE GENERAL IMPLICATIONS FOR TEACHER EDUCATION

Consistent with the view that motivation is a powerful instrument for developing educational change (Givvin *et al*., 2001) we established our work with the in-service participants on a broad and extensively researched motivational approach, namely, self-determination theory (SDT, Ryan & Deci, 2000).

SDT argues that principles and practices proposed by various external agents (including people defined as experts) are likely to be internalised only to the extent that people feel that the adoption of those principles and practices is consistent with their basic psychological needs. In our work with the teachers we attempted to get teachers to think and feel that the practice of allowing temporary failure is likely to enhance their sense of autonomy and competence as teachers' in the school in which they worked.

To support teachers' sense of competence in relation to the allowing temporary failure we trained teachers' in teaching practices that enable pupils to cope well with failure (i.e. the practices that were previously described as allowing pupils to turn failure into a success). For example, we worked with the teachers on skills such as: providing specific non-comparative feedback to pupils following failure, helping pupils to analyse their failure in a mastery-oriented way, and helping pupils to develop emotion regulation and social skills that allow constructive coping with temporary failure.

To support teachers' sense of relatedness and psychological safety we fostered norms of caring, empathic listening, non-judgemental attitudes, constructive criticism, and non-comparative feedback among teachers in the in-service meetings. Those norms were emphasised most strongly when teachers discussed their difficulties and uncertainty in their attempts to allow temporary failures in their classrooms.

While support for teachers' needs for competence and relatedness was important, the major focus in our work with the in-service participants was on the need for autonomy. Thus, we posited that a major aspect of the need for autonomy is the striving to act in ways

that reflect one's core values and convictions, and allow the realisation of one's personal goals (see Assor *et al*., 2001).

We referred earlier to teachers' reluctance to allow temporary failure had its origins in their lack of conviction regarding the value of temporary failure for their pupils. Furthermore, teachers' disbelief in the value of failure appeared to have originated, in part, from their lack of familiarity with teaching practices that can enable pupils to cope well with success, and prevent temporary failure from deteriorating into a harmful failure. Given our definition of the need for autonomy as involving value-consistency and ideal-realisation, it was clear that the teachers would not feel autonomous in their attempts to allow failures if they would think that those failures might be harmful to their pupils.

Thus the major goal in our work with the teachers was that the participants in the in-service courses would understand the value of temporary failure and would be convinced that there are teaching practices that can enable special education pupils to cope well with temporary failure. We assumed that such understanding and conviction would enable teachers to view attempts to allow temporary failure as an expression of their personal values and professional ideals. In terms of SDT, we sought to foster a process in which teachers attain deep internalisation of the strategy of allowing temporary failure. In SDT, such internalisation is termed integrated internalisation because the strategy that is internalised becomes integrated with one's core values and identity, an experience that creates strong feeling of self-determination and autonomy.

In our attempts to promote internalisation of the value of temporary failure we employed two types of attitude-change processes. The first process involved presentation of research-based knowledge demonstrating the value of temporary failure and teaching practices allowing constructive use of failure. To enhance understanding, we continually attempted to tie the abstract concepts to concrete examples. The second process involved the elicitation of personal, emotion-laden, experiences exemplifying the value of temporary failure.

The research-based knowledge component involved the presentation of the potential benefits of temporary failure and teaching practices that support the realisation of those benefits (thereby minimising the likelihood that temporary failure would turn into prolonged failure). The concepts taught were the same as those presented in the previous sections, and were explained gradually and with minimum jargon. Short written explanations and outlines of the relevant concepts and processes accompanied the presentation (i.e. a structured, competence-supporting, instructional approach). Each presentation was following by discussion and suggestions for testing or applying the new concepts in teachers' classrooms. Participants' attempts to apply or test the concepts were then discussed in the next session.

While knowledge component was viewed as highly important, perhaps the more innovative aspect of our work involved the personal-emotional aspects of our in-service programme. The emotional-personal component included two major elements: (i) using

teachers' life-stories to demonstrate the potential benefits of temporary failure and the teaching practices that allow the realisation of those benefits; and (ii) using the learning process that occurred in the in-service group to demonstrate potential benefits, problems, and appropriate teaching practices. In this respect, analysis of the facilitators' instructional strategies (and temporary failures) was particularly valuable.

TEACHERS' LIFE STORIES

Life stories can serve as a useful tool in influencing teachers' feelings and behaviours (Whelan *et al*., 2001). In our intervention, the use of personal life stories involved focusing on teachers' past experiences of temporary failure and feelings of competence. It included attempts to connect those experiences and memories to theoretical and practical knowledge concerning the benefits of tentative temporary failure and teaching practices allowing competence-supporting temporary failure. Particular attention was devoted to instances in which temporary failure produced personal growth.

An example of such a story was offered by one of the teachers. She told about her first year as a young, inexperienced teacher. During that year she was assigned to teach in a class that was known to include pupils with severe emotional and behavioural problems. Her experience with the class was one of continual frustration and failure. She very nearly had to leave in the middle of the year. However, due to her willing to seek and accept staff support (including clear displays of empathy, understanding, and structured guidelines), not only did she stay, but she also developed new skills promoting her personal and professional growth. She learned how to divide her attention in the class, how to make personal contact with pupils, and how to provide pupils with a wider range of tasks that would interest each one of them. Applying these skills, she managed to achieve desirable educational outcomes such as improved social climate, pupil participation, and academic achievement.

Most important from the perspective of this article, the teacher developed a sense of confidence and coping-skills that would help her to cope effectively with other instances of temporary failure in her professional life. In this teacher's case, the connection between abstract theoretical concepts and personal-emotional experiences seemed to have enabled appreciation and understanding of the potential value of a type of temporary failure that was rather prolonged and extreme. Being able to appreciate the value of this rather frustrating type of temporary failure allowed the teachers to accept the value of more moderate types of temporary failure that are appropriate for pupils.

Analysing the Learning Process in the Teacher Group

A second method for promoting internalisation involved focusing on what might be termed a 'parallel process'. The process is thus termed because it highlights parallels between a teacher's experience with us (the group facilitators) and the experiences the teacher's pupils have with their teacher. The parallels, of course, concerned encounters with temporary failure and the frustrations associated with it. For example, as teachers

discussed their feelings about the learning process in the group, some of them admitted that exposure to the notion of valuable temporary failure and the teaching practices that help pupils to benefit from temporary failure temporarily undermined their sense of professional competence.

Paradoxically, then, it appears that exposure to the concept of temporary failure and the practices associated with it resulted in an experience of temporary failure for teachers. Thus, teachers were concerned that they do not have the professional skills (and, at times, the personal qualities) that are necessary to support pupils as they cope with temporary failure. Moreover, they claimed that exposure to the notion of temporary failure caused them to feel that their past work was not so professional or valuable. However, as the learning process continued, they not only regained their sense of competence, it even increased. However, they noted that this happened only after they felt that the facilitators and other group members were empathic to their difficulties (i.e. relational support) and also gave them an important and active role in determining the specific goals and structure of the in-service programme (i.e. autonomy support).

In addition, they also noted that the structured conceptual outlines and examples helped them to understand the new concepts (i.e. structure, competence support). Thus it appears that discussing teachers' learning experiences in the group and directing their attention to the parallelism between their own experiences and those of their pupils helped them to understand both the benefits of tentative temporary failure and the conditions that help to make such temporary failure useful.

Overall, then, it appears that as teachers gradually learned to understand and appreciate the merits of temporary and controllable temporary failure, they became more capable of containing pupils' frustration and their own distress, as pupils' experienced temporary failure.

ADDITIONAL IMPLICATIONS FOR TEACHER EDUCATION

Given the potential psychological benefits of temporary failure and teachers' ambivalence regarding this issue, it appears that it may be important to include the subject of temporary failure in programmes of teacher education and training. As special education teachers might be particularly reluctant to allow temporary failure, it appears that this issue may be especially important in their training.

The training may include the same type of knowledge and skills that were learned by the teachers in our in-service programme. Thus, student teachers may learn research-based knowledge demonstrating the value of temporary failure, possible risks, and teaching practices that enable pupils to cope well with temporary failure. For example, they may learn on the benefits of specific, non-comparative feedback following temporary failure, and practice how to provide such feedback in a number of different subjects. Relevant texts may include Ames (1992), Dweck (1999), Covington (1992), and Ryan and Deci (2000).

To help student teachers develop a generally positive (yet responsible) approach to temporary failure, they may need to participate in two types of learning processes. The first process involves mainly declarative knowledge and theoretical understanding of concepts and research evidence pertaining to temporary failure. This type of learning may be facilitated by a theoretical course on learning processes, that places a substantial emphasis on motivational issues, including the phenomenon of coping with temporary failure and failure.

The second process involves mainly procedural and situated knowledge pertaining to the effective enactment of practices that enable pupils to cope well with temporary failure in specific subjects and contexts. This type of learning may occur in courses that require student teachers to teach small units in specific subjects to one pupil or to a group of pupils, as well as in supervised field training.

While the theoretical course would lay the foundation for the development of an articulated and complex abstract schema of the concept of temporary failure, supervised application experiences would help student teachers to develop what can be termed basic 'craft-knowledge' (Huberman, 1992). Supervised teaching experiences may also help student teachers to develop an emerging sense of mastery in allowing constructive temporary failure in specific contexts. We assume that the formation of abstract concepts, the development of specific application skills, and the accumulation of positive experiences pertaining to temporary failure in a variety of different subjects and contexts would cause student teachers to understand the value of allowing temporary failure as a general educational strategy.

It appears that the methods of using personal life stories and analysing the learning process in the learners' group that were previously discussed in relation to the in-service group can be very useful also in the case of the first phases of teacher education. For example, when the benefits and risks of temporary failure are presented in the theoretical course, it is possible to ask student teachers to recall instances in which they temporarily did not succeed in some task, and what were the effects of this experience on them. Similarly, student teachers may be asked to recall an incident in which they coped well with temporary failure versus an incident in which temporary failure deteriorated into a massive failure. Comparison of the two incidents may help student teachers to identify teaching practices that enable pupils to succeed in their struggle with temporary failure.

In closing, let us note that temporary failure can be viewed as a double-edged sword. On one hand, if it turns into prolonged failure it might be destructive to pupils' sense of competence; on the other hand, totally avoiding it might also be harmful. Thus, in the area of special education in particular, teachers might not have been too wrong in their apprehensive approach to temporary failure. It appears, then, that teachers should be encouraged to allow temporary failure only after they have reflected on this issue and have developed practices that allow them to support their pupils in their struggle with temporary failure.

NOTE

[1] The order of the authors is random.

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