

ASPECTS OF STRESS MANIFESTATION IN LANGUAGE TEACHING AND LEARNING

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Abstract. *As numerous neuroscientific researches demonstrate the complex and highly paradoxical action of stress on the learning and teaching process, the author, who is a teacher of English as a foreign language himself, considered a few significant aspects of this intricate bilateral action. Setting out from a number of remarks in the literature, as well as his own observations, he presented some (hopefully effective) possibilities for (bad) stress to be turned into the positive/good variant of stress (which can be termed eustress). Some of the main adequate ways that TEFLs can adopt in this country include the communicative type of teaching (CT), essentially based on genuinely motivating the students.*

Key words: *stress, positive stress, learning and teaching foreign languages, EFL, motivation, communicative approaches.*

1. INTRODUCTION

A lot of research has been conducted into stress over the last hundred years. Some of the theories behind it are now settled and accepted; others are still being researched and debated. During this time, there seems to have been something approaching open warfare between competing theories and definitions; views have been passionately held and aggressively defended. What complicates this is that intuitively we all feel that we know what stress is, as it is something we have all experienced. A definition should therefore be obvious... except that it is not.

Hans Selye was one of the founding fathers of stress research. His view in 1956 was that "stress is not necessarily something bad – it all depends on how you take it. The stress of exhilarating, creative successful work is beneficial, while that of failure, humiliation or infection is detrimental". Selye believed that the biochemical effects of stress would be experienced irrespective of whether the situation was positive or negative. Since then, a great deal of further research has been conducted, and ideas have moved on. Stress is now viewed as a "bad thing", with a range of harmful biochemical and long-term effects, which have rarely been observed in positive situations.

2. Nowadays the most commonly accepted definition of stress (the definition which is mainly attributed to Richard S. Lazarus) is that *stress is a condition or feeling experienced when a person perceives that "demands exceed the personal and social resources the individual is able to mobilize.* In short, it is what we feel when we think we have lost control of events. Still, we have to also recognize that there is a combined instinctive stress response to unexpected events. The stress response inside us is therefore part instinct, and part attributable to the manner in which we think. Stress can also come in the form of the world-wide famous (or maybe notorious?) phenomenon the Japanese are credited to have named (or else, generated), i.e. *karoshi*... exhaustion through too much working. (We may wonder what are some of the most

celebrated or widely respected Japanese proverbs or old saws illustrating this state of affairs, or work as a general notion)...

3. By far the best way of learning (and teaching) a foreign language is, in almost every educationalist's opinion today, language **immersion**. It is only fair to be so, because immersion gives you the possibility of having not only direct and relevant contact with the reality of the language being studied, in real-life surroundings and circumstances, but also continuous, repetitive, (culturally) genuine and massive contact with natural-sounding, structurally congruous and authentic language models and patterns. This is a complex (and also natural) situation, where, on the one hand, stress is generated, and, on the other hand, there is a noticeably strong tendency towards facilitating language use through linguistic *exposure*. In a way, it is quite easy to understand that getting accustomed with oddity and incongruity (which is the very source of stress) means getting used to that stress, which in turn means (partial) alleviation of stress! Hence, immersion and exposure *are* stress, but they are demonstrably (and dialectically) illustrative of what is usually called *positive stress*, which can be one of the efficient tools pertinent for the language teacher in his/her interaction with the class of students.

4. Likewise, learning and teaching by means of (longer or shorter) *chunks* of language is one of the ideal methods available for the foreign language teacher. It is true that it can create a fair amount of stress, particularly in the initial stage(s) of the process of learning-and-teaching, because we deal with rather long (or, at any rate, rather unwieldy fragments, which are naturally harder to memorize), but it will eventually turn out to be a most rewarding approach, since it is able to reduce some of the stress related to memorizing and remembering the many various jumbled, disparate, (apparently) cross-purpose language items, be they shorter (mainly words, with all their idiosyncrasies) or longer (typically phrases and syntactic structures), or usage and combinational issues (collocability / collocation, grammatical regimen semantic-syntactic and restrictions, etc.), which actually engenders further stress. In such a way, one can convincingly that some of the fundamental stress associated with learning and teaching a foreign language can be mitigated: i.e. the deep-seated tension holding between the speaker's main targets – *accuracy* vs. *fluency*.

However, *immersion* (etymologically) also implies the danger of *drowning*. (Currently, the term is used as a synonym for *engagement, concentration, interest, fascination and raptness*, but its original root is the same as that of *submerge* – compare also with related phrases like *to be engrossed* or *absorbed into something*) For the learner not to be *submerged* by the deterring, distracting multitude of odd, strange (compare with the related term *stranger*), unnatural (!) elements involved in the messages couched in the target-language – from phonetics, semantics and grammar structures, to cultural and stylistic implications, which exposure to the foreign language naturally and massively generates (all the more as it is more dissimilar

in point of typology from the source-language e.g. Japanese vs. Romanian, as compared with Italian vs. Romanian), the learner will have to be helped along in managing his/her learning process and/or programme. This can be effectively done through short steps, creating and maintaining a certain type of incorporable logic (or substitutive logicality, so to speak, as this is not necessarily a really *logical* logic), as well as a set of user-friendly learning-and-teaching procedures, which can facilitate progress and, at the same time, (seem to) bridge the linguistic gap without (major) pains and hitches. So the teacher has to be the main source in providing the learner with the much needed mediation.

5. Having established that stress is both a hindrance and a motivation element, we should be interested in noting some of the effects and implications of stress as far as didactic theory and practice are concerned. In relation to challenge and hindrance stress – i.e. relationships with exhaustion, motivation to learn, and learning performance – authors LePine and Jackson (*Journal of Applied Psychology*, vol. 89(5), Oct. 2004, pp. 883-891) found that stress associated with challenges in the learning environment had a positive relationship with the learning performance (of the 696 learners surveyed), and that stress associated with hindrances in the learning environment had a negative relationship with learning performance. They also found evidence suggesting that these stress-learning performance relationships were partially mediated by exhaustion and motivation to learn. Both forms of stress were positively related to exhaustion, and exhaustion was negatively related to learning performance. Hindrance stress was negatively related to motivation to learn, challenge stress was positively related to motivation to learn, and motivation to learn was positively related to learning performance.

Most research suggests that there is *fight or flight* reaction (cf. the results of Walter Cannon's 1932 research on stress, which established the existence of the 'fight-or-flight' response: an organism experiences a shock or perceives a threat, it quickly releases hormones that help it to survive), which may be useful in some situations, but it is highly detrimental in the classroom. Whether anxiety stems from test taking or from an unstable home environment, the brains of students experiencing high levels of stress look different than those who are not – and those brains behave differently, too. Let us now take a look at the neural and hormonal responses that underpin a student's stress response, so as we can make a few tentative suggestions for continuing to teach through the challenges it presents.

The body and the brain respond to stress with a complex cascade of hormones and neurotransmitters. When a child's senses perceive danger, their hypothalamic-pituitary-adrenal (HPA) system releases steroid hormones (glucocorticoids). This includes the primary stress hormone, cortisol, which has a direct effect on the heart, lungs, circulation, metabolism, immune system and skin. The HPA also stimulates the release of catecholamine neurotransmitters like dopamine, norepinephrine and epinephrine (adrenaline), which activates the *amygdala* (part of the limbic system in the temporal lobe), which in turn triggers a response of apprehension. The brain then releases neuropeptide S, which increases alertness and feelings of anxiety.

Together, the HPA system will keep a child's stimulated and ready to run. But while this may be good for truly life or death situations, this stress response makes learning difficult, as the

stimulated senses are not those associated with deep learning. Let us consider this situation: would you be able to memorize the multiplication table when you were being chased by a bear?

The answer is, naturally, *no*. But while this may be obvious, the reasons why this is the case is more complex than one might expect.

6. In the short term, acute stress prevents memory storage. According to a 2008 study by University of California Irvine researchers, when cortisol reaches the hippocampus, the brain's primary structure for consolidating information from short term into long term memory, the structure's dendritic spines disintegrate rapidly. Learning and memory storage takes place effectively when neurons are constantly and repetitively activated across their synapses – a process that effectively tells the brain that a stimulus, behavior or habit is important to retain. When dendritic spines disintegrate, the brain's capability of identifying and storing significant information is greatly inhibited. As it happens, dendritic spines can grow back (though in the long term, their loss may actually reduce the hippocampus). Basically, the brain learns how to stay stressed or to rapidly intensify its function up to a stress response. This occurs very much like any other type of learning: even very simple addition or subtraction drills can turn a person's thought process from a rather complicated to a comparatively more efficient (possibly even instantaneous) operation.

Specifically, executive functions like self-control, impulse control, memory, and reasoning – skills that are essential to successful learning. Some studies suggest that cortisol even has the ability to quickly generate a switch in stem cells so that they can actively inhibit the forming of new connections in the prefrontal cortex, while strengthening pathways that run between the amygdala and the hippocampus.

Of course, stress is bad for students of any age, in both its acute and chronic form. Nevertheless, the effects of stress are typically dangerous in early child development. Therefore, educators and didacticians at every level should take action against it. Here are some of the main paths conducive to success in learning and teaching: (1) Considering resilience and grit as higher human values. Indeed, rewiring the brain, just like persevering through skill mastery, requires determination, continual effort and pushing through perceived failures. Educators can teach this skill by creating lesson plans on grit and exploring the concept explicitly. (2) Actions that teachers can take to reduce anxiety in the classroom, e.g. encouraging self-awareness, teaching time management, giving As for effort, teaching mindfulness and meditation, providing exemptions for especially anxiety-inducing activities, etc.

7. The neuroscientific research about learning has revealed the negative impact of stress and anxiety and the qualitative improvement of the brain circuits involved in memory and executive function that accompanies positive motivation and engagement. The effects of positive motivation are both proven and efficient. This particular piece of information has led to the development of brain-compatible strategies to help students through the bleak terrain created by some of the current trends imposed by the current standards in EFL. Carefully chosen brain-based teaching strategies can drastically reduce classroom anxiety and increase student connection to their lessons, so educators can help students to learn both more effectively and more rapidly.

Such brain researches demonstrate that superior learning takes place when classroom experiences are really motivating and engaging. Positive motivation visibly influences brain metabolism, conduction of nerve impulses through the memory areas, and the release of neurotransmitters that increase executive function and attention. Relevant lessons help students to feel that they are partners in their education, and so they became engaged and motivated. We live in a stressful world and in troubled times, which can hardly be considered the normal way for children to grow up. Schools can be the safe sanctuary where academic practices and classroom strategies provide children with emotional comfort and pleasure as well as knowledge. When teachers use strategies to reduce stress and build a positive emotional environment, students gain emotional resilience and learn more efficiently and at higher levels of cognition.

8. Implementing the so-called *communicative* method should amount to having a communicative, stressless, rather than a communicative *and* stressful scheme. Exercising with the drills, language chunks, real-life-like reactions to real-life-like stimuli, functional interaction, etc. should add up to something very similar to play – a kind of serious play, though.

Native-like, or near-native-like **fluency** is a very interesting case in point, in this context. Such opinions can be heard all over the world, coming from students of language, teachers, or former learners who are now (more or less) proficient in speaking a given foreign language: “I have heard that regardless of where you live (language spoken) if you are a foreigner you will always count, pray and curse using your native language. And, of course... dream!”; or “The more interesting thing of being truly fluent bilingually is that I sometimes don’t remember what language I had a particular conversation in. What I mean by that is when I touch on a topic, I might remember a specific story about it being told by someone I had a conversation with a while ago. If I don’t remember exactly who told me the story, chances are I’ll struggle to remember if an English friend of mine or a Chinese friend of mine told me that story. I’d try to replay that conversation in my head, and both the Chinese version and the English version seemed just as likely to have happened, because my brain processed the story without a specific language and remembered the story only instead”.

The closest we as FL teachers can come to implementing a learning-efficient environment in the classroom seems to be the use of the so-called communicative method (or approach). Jack C. Richards (2006) gives the following succinct hints about this approach: (1) People learn a language through communicating in it. (2) People learn a language best when using it to do things rather than through studying how language works and practicing rules. (3) Classroom activities should be meaningful and involve real communication. (4) CLT is usually described as a method of teaching. On the other hand, using and praising this approach (and teaching method) should not make one overdo the strengths of the approach and erroneously think that: (1) CLT is only concerned with teaching speaking. (2) Grammar is no longer important in language teaching. (3) Errors are not important in speaking a language. (4) Dialogues are not used in CLT. (5) The main goal of CLT is fluency (vs. accuracy). By and large, communicative language teaching can be understood as a set of principles about the goals of language teaching, how learners learn a language, the kinds of classroom activities that best facilitate learning, and the roles of teachers

and learners in the classroom. Thus, the main goals of language teaching are related to the teaching of *communicative competence* (vs. *linguistic competence*).

Actually, in more recent years, language learning has been viewed from a very different perspective. It is seen as resulting from processes such as: ● Interaction between the learner and users of the language ● Collaborative creation of meaning ● Creating meaningful and purposeful interaction through language ● Negotiation of meaning as the learner and his or her interlocutor arrive at understanding ● Learning through attending to the feedback learners get when they use the language ● Paying attention to the language one hears (the input) and trying to incorporate new forms into one’s developing communicative competence ● Trying out and experimenting with different ways of saying things.

9. In the context of the teacher’s contribution to making it easier and more unstressful to learn a foreign language, the communicative approach to language teaching can be considered as an excellent case in point (the following considerations are mainly based on William Littlewood’s 2000 book *Communicative Language Teaching*). Thus, these actions, standards and general considerations must be paid attention to in order to effectively help students: ● Choosing what to teach (choosing course-content); ● Predicting communicative needs: The Council of Europe’s ‘Threshold Level’: (a) the most important communicative needs that are likely to arise in everyday situations, (b) suitable language forms that could be learnt for coping with these needs.

The teacher may find himself/herself in the situation to answer the following in order to predict communicative needs: 1. what situations might the learner encounter? 2. what language activities is the learner most likely to take part in? 3. what functions of language are likely to be most useful? 4. what topics are likely to be crucially important? 5. what general notions are likely to be (more, or specifically) important? 6. what language forms should the student learn, in order to satisfy the communicative needs described? (The Threshold Level lists these under three main headings: ● forms which express communicative functions (mostly grammatical patterns); ● forms which express general notions (grammatical patterns and items of vocabulary); ● forms which express topic-related notions – mostly items of vocabulary).

The teacher should consider a balance between the focus on form, and the focus on meaning. There should be a varying degree to which the different activities encourage learners to focus on (a) linguistic forms to be practised, or (b) meanings to be conveyed. In our everyday language use we normally focus our attention primarily on the meaning of what we say or hear, rather than on its linguistic form. From this perspective, we can define the goal of foreign language teaching in the following terms: to extend the range of communication situations in which the learner can perform with focus and meaning, without being hindered by the attention he/she must pay to linguistic form.

The following categories of activities will be typically considered: (1) Pre-communicative activities aim to give the learners fluent control over linguistic forms, so that the lower-level processes will be capable of unfolding automatically in response to higher-level decisions on meanings. Although the activities may emphasize the links between forms and meanings, the main criterion for success is whether the learner produces acceptable language. (2) In communicative activities,

the production of linguistic forms becomes subordinate to higher-level decisions, related to the communication of meanings. The learner is thus expected to increase his/her skill in starting from an intended meaning, selecting suitable language forms from his/her own total list, and producing them fluently. The criterion for success is whether the meaning is conveyed effectively.

There are situations when the learner is required both to use structures specified by the teacher, and to communicate meanings for a purpose. In such activities, the focus might be equally distributed between the forms to be produced and the meanings to be conveyed. The teacher may reinforce this twofold focus not only through his/her preparation and presentation of the activity, but also through the feedback he/she provides in response to the learners' performance.

If the purpose is to produce certain pre-determined linguistic structures, success will be measured according to corresponding structural criteria, namely: how accurately and/or fluently the structures are produced. If the purpose is to convey or comprehend meanings, success will be measured according to communicative criteria, namely how *effectively* communicative takes place.

Likewise, feedback may focus on the level of form and/or meaning. If the teacher consistently corrects linguistic forms, this indicates that success is now being measured by formal criteria, and that the learner should therefore focus his/her attention on the production of correct linguistic forms. When a teacher wants his/her learners to focus on the effective communication of meanings, he/she must reinforce this focus by providing them with feedback about how successful communication has been (indicated by the task in itself).

It is important for the teacher to monitor the type of feedback that his/her learners receive, so that it supports the methodological purpose of the activity. For example, in pre-communicative activities, he/she will need to provide feedback related to linguistic form, which does not exclude communicative feedback. For example, while he/she is drilling a new structure through question-and-answer practice, a teacher may react to the meanings of the learners' responses as well as to their formal accuracy. This can help to create the illusion of a 'communicative' exchange and thus reinforce the links between structure and meaning. In communicative activities, the teacher will need to provide communicative feedback, which does not necessarily exclude structural feedback altogether. However, the teacher must be aware that excessive correction will encourage learners to shift their attention from meanings to forms.

10. Significantly, the role of the teacher is a bit different in the communicative method. A teacher might decide not to correct errors that he/she observes. To many teachers, this might appear to conflict with their pedagogical role, which has traditionally required them to evaluate all learners' performance according to clearly defined criteria. Certainly, it suggests that a communicative approach involves the teacher in redefining, to some extent, this traditional role. Thus, the teacher may be: a general overseer of his/her students' learning; a classroom manager; a language instructor; an observer through independent activity (communicative activity); a consultant or advisor, helping where necessary; a communicator with the learners. Our own didactic activity and reflective writing (see also bibliography below) has presented us with numerous examples of effective dealing with the challenges, hitches and paradoxes of learning and teaching under stress.

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