Test Anxiety and Motivational Incentives in Web-Based Learning

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Abstract: - Learning styles, motivation and test anxiety seem to be dynamic and surprising forces, which interact and collide, increasing or decreasing the effectiveness of the instruction process in unquantifiable ways. The relationship between nervousness, motivation and proficiency is even more complex, as they could be mutually altered in the process of acquiring a foreign idiom. For instance, the more successful the learner is, the more he wants to learn and the more resourceful and confident he becomes in mastering the new linguistic code, seen mostly as a gateway to a new cultural identity, and not merely as a set of communication patterns. They interact differently in traditional learning versus e-learning, and the particular aspects of web-based acquisition of foreign languages, in so far as it is possible, constitutes the focus of this approach.

Key-Words: - test anxiety, motivation, foreign language acquisition, effectiveness, didactic approaches

1 Introduction

Target language acquisition is influenced by many factors, such as age, language aptitudes, cognitive styles, personality, motivation, anxiety coping strategies and general attitudes, all responsible in some measure for the various competence levels the learners may achieve.

Anxiety in adjusting to new communication contexts, stress generated by public speaking and nervousness before exams are common among students, irrespective of involvement in traditional or web-based modalities of evaluation. They all have experienced it with variable intensity and have tried to minimize the negative consequences.

Test-taking nervousness and fluctuation in learning motivation may be a specific example of a more generalized academic stress that has long-lasting consequences upon performance, whatever type of assessment might be in use at a certain moment in time. On the other hand, it could also be a response to the particular circumstances in which the test is being taken. What exactly the unique characteristics of that stress might be will depend on the cognitive appraisal of the perceived situation.

2. Problem formulation

Anxiety acts to distort performance, and makes motivation fluctuate, focusing it constructively, or annihilating it totally, in a sense of uselessness and hopelessness. Therefore, it can be rightly regarded as a source of error in measurement, which affects the reliability and the validity of the tests. When tests are used at crucial decision-making points for students, the associated stress may be sufficient to interfere with the results that would have been anticipated under customary non-stressful circumstances.

2.1 Definition of test anxiety

It is a feeling of agitation and distress. It can be labeled as anticipatory anxiety if distress is felt while studying thinking about what might happen during the test, and it can be labeled as situational anxiety if it occurs while taking a test. Some anxiety is natural and keeps the student mentally and physically alert, but too much may cause physical distress, emotional upset, and concentration difficulties. Anxiety occurs in a wave, it will rise from onset, come to a peak, and then naturally subside. Test anxiety is not the same as doing poorly on a certain test because one’s mind is elsewhere. The conditions of anxiety arousal in the context of testing are similar to those which emerge in other situations: stress, perceived outer threats or restrictions, and, particularly, threats to self-esteem.

Causes of anxiety:
- real or perceived activating agents
- prior negative experience with test taking (blanking out, being unable to retrieve answers to questions, previous low performance)
- lack of preparation for an exam
- errors in time management
- poor study habits
- failure to properly organize material
There are several types of motivation:

- situational motivation: varies according to learning context and situation
- task motivation: to perform particular tasks.

All these facets of motivation should be regarded as complementary and not oppositional, sometimes simultaneous and not necessarily distinct in their manifestations (e.g. learners can be integratively and instrumentally motivated at the same time, motivation generates efficient learning and also results from it, motivation varies in time and depends on the task and context, etc.). Better coping with test anxiety increases motivation.

2.3 Brief historical overview of research in this field, correlating performance levels, anxiety, and motivation

Test-taking anxiety is important in education from both the educator and the students’ point of view. This is why the extensive review of test anxiety performed by Sarason in the 1980s marked the end of more than two decades of considerable theoretical development and empirical research in the area, finally pointing out to the close relationship between performance, intelligence, intellectual working styles and the emotional stress present before exams, which could simply ruin the entire previous learning effort of the individual.

It all began in the late 1960s, when Spielberger formulated a theory on anxiety that distinguishes anxiety as a trait from anxiety as a response or state. The first refers to individual differences in anxiety proneness, whereas the latter points to the individual differences in the actual response to a particular stressful circumstance. Measures of both kinds of anxiety tend to be positively correlated. The definition of the trait/state dichotomy has been most useful in clarifying not only the conceptual, but also the experimental comprehension of the issue on debate.

Still, the trait/state formulation is not quite explicit about the origins of anxiety trait, though the theory clearly states that it has both biological and experiential components. It is more than a residuum of anxiety state experiences, as it influences the cognitive appraisal which triggers the anxiety state. However, there are substantial individual differences and they are related to the responses in test and test-like situations. Persons high on anxiety trait would experience greater agitation than the others.

Surprisingly enough, there tends to be a negative correlation between measures of anxiety trait and intelligence, and this appears to influence the cognitive appraisal of any test-like situation. There are interactions between test anxiety and intelligence in the determination of performance, such that at the highest level of ability, where anxiety paradoxically appears to have a facilitating effect on performance.

A cross-cultural inquiry, focusing on English and American children, their motivation and their performance levels, lead to further intense
research on the impact of anxiety upon ability grouping or streaming. Given the British educational practice of streaming by ability in the later years of study, and the selection examination for further education, it was predicted that English children would be more test anxious than their American counterparts. The outcome of the study confirmed the prediction. Similar results came in 1979, when Gaudry and Spielberger reviewed the Australian research efforts. They showed that mean test anxiety scores tended to be higher in the lower streams than in the upper streams. Evidence suggested a pre-existing negative impact of test anxiety on ability. Failure experiences caused the level of reported test anxiety to rise. Even a single failure experience could produce a significant increment in test anxiety scores, while the reverse is true for a success experience. As the authors point out, it is the lack of flexibility in the method and context of assessment, not streaming per se, that appears to be the cause of higher test-taking anxiety in the lower streams.

Assessment methods may vary from many perspectives. For instance, variations occur in the degree of formality/informality, as well as in form and content, and they affect testing context perception. So, the more important the examination is in terms of consequences emerging from it, the more disadvantaged the anxious students will be, because of the reduction in performance it produces.

Under such circumstances, the way the test is presented is very important. Emphasis on the importance and difficulty of tests / examinations before their beginning, particularly by prestige figures, increases anxiety and inhibits performance.

Instructional effects on test-taking anxiety are well established experimentally, and they indicate that high anxious students tend to perform better than low anxious when the examination instructions are non-anxiety provoking. The opportunity to comment on difficult or ambiguous items has also been shown to facilitate improvement in the performance of high anxious students.

Students can pay more attention to an item in the exam when they are not distracted by feelings of anxiety. Thus, arranging test items in order of difficulty mitigates the negative emotions, with consequent beneficial effects on performance.

On the other hand, in standard situations, stress varies according to whether the evaluation procedure is progressive or terminal. Progressive assessment occurs in the context of usual school days, without special arrangements. In Australian universities, for example, it is based on homework or assignments, or short tests on regular topics. Terminal examinations, on the other hand, tend to be conducted under special circumstances. They predominantly occur in unfamiliar places, such as an examination center, and are conducted with a high level of formality, being used for purposes of selection and reporting, thereby affecting future educational and personal opportunities. Accordingly, it can be predicted that the high anxious will tend to perform better in the progressive than in the terminal situation, proving the interactive hypothesis right.

Although it is tempting to regard test-taking anxiety as a debilitating condition that has inhibitory effects on performance, its effects can be avoided or diminished. Unpleasant consequences emerge from interactions between the characteristics of the person and the nature of the assessment situation. If the appraisal is that the situation is threatening, in particular to self-esteem, increased anxiety responses occur and modify the behavior towards the test.

Experimental evidence suggests that test-taking anxiety acts to distract attention from the veridical appraisal of the assessment situation, turning it into an excessive preoccupation with one’s emotions. The capacity to cope with the exam is, thereby, impaired. However, there is evidence that this outcome is affected by further interactions. A significant variable here is the difficulty of the test, which is partly determined by the form and the content of the test, and the skills, knowledge, and abilities of the assessed student. Additional variables such as competition might also be important.

The interactive effects of all these factors sometimes facilitate the performance of highly able but anxious learners. Presumably their attention to task-relevant aspects would be impaired by very intense anxiety. Studies on optimal levels of arousal for effective performance, summarized in the Yerkes-Dodson Law (relation between motivation and learning is expressed by an inverted U-shaped curve), indicate that performance is facilitated at a middle level of motivation (anxiety) rather than at high or low level. Therefore, as tasks increase in difficulty, the optimal motivational level becomes lower. There is sufficient evidence concerning test-taking anxiety to overwhelmingly show that it interferes with optimal performance. Even where highly able students appear to have their results facilitated by anxiety, it can be stated that their performance would be impaired where the difficulty level of the test was beyond their capacity. The nature of difficulty is not simple and obvious, and both test and personal characteristics contribute to it.

Test-taking anxiety is affected by a history of failure whether in the long term or the short term, and such history creates habits of avoidance and aversion. The cumulative effects of such a history
are suggested by the increasing magnitude of the negative correlation between anxiety and performance as students move up through grades.

3 Problem Solution

Practical remedial actions to counter these effects include making tests and examinations less formal and stressful.

Techniques such as the provision of memory supports, grading the difficulty of test items to avoid early failure, progressive rather than terminal assessment, and allowing students to comment on difficult items have all been used in attempts to minimize the effects of test taking anxiety with some success.

More recently, there have been attempts to raise the levels of self esteem among poor performers by the use of cognitive behavior /rational emotive therapy. The long-term consequences of these procedures on the cognitive appraisal of test situations, and the reduction of test-taking anxiety, have not yet been clearly and finally established.

3.1 Steps for increasing motivation in web-based learning

The cultivation of meaningful and long lasting motivation for study is a main didactical concern. Already a complex and intricate process in normal classroom, it seems to be even more complicated and difficult to achieve in open distance learning.

For web-based learning and teaching, the following suggestions may prove helpful in reducing the effort while making work more efficient.

• a pre-training module (including technical skills, learning strategies, language level and a detailed course description) in order to ensure the quality of the future course and a constant level of motivation
• avoid exterior de-motivating factors (lack of sufficient preparation of tasks, lack of necessary equipment and materials, low level computer skills)
• provide balanced input (spoken and written) not emphasizing what the learner feels comfortable with
• set clear and rigorous standards of quality
• ask students to reflect on learning experiences
• stimulate interest for target language culture
• be specific in addressing the learner’s individual needs, taking into account their background (age, language skills, interests)
• lead learners to be realistic about their abilities and achievements
• elaborate contingency plans for the learners who drop out, so that they do not lose self esteem
• provide access to an English-English dictionary
• avoid clichés and banal vocabulary
• set a moral contract in which expectations, duties, responsibilities, commitment should be clear from the very beginning.
• set up a supportive communication network meant to increase empathy and reduce inhibitions
• encourage learners to be as creative as they can in expressing themselves and their views
• encourage the learners to take risks in learning and using the target language
• discuss progress with learners
• praise progress in refining learning strategies and in enhancing cognitive skills
• encourage self-assessment and peer-assessment
• stimulate learners’ awareness of needs and goals
• maintain learner’s self-esteem as a person by involving him/her in the decision making process
• enhance learners’ freedom in choosing their strategies (in learning and in time management)
• stimulate learners to become increasingly responsible in organising their own working agenda
• point to the relevance of each step in the course for achieving the long term goals
• encourage cooperation and awareness of their role in the group
• synchronise different personal rhythms and different concentration spans
• organise competitions between learners
• cultivate a certain degree of constructive anxiety in order to keep the learners interested, alert, ready for the difficult tasks obeying the time table limits
• cultivate active attitudes towards world events
• stimulate manifestations of each learner’s cultural identity (different views on the same issue)
• make all learners feel that they are attended to

3.2 Steps for decreasing e-test anxiety

Test anxiety can create a vicious circle: the more a person focuses on difficulties, the stronger the feeling of anxiety becomes. People with a certain predisposition and perfectionists are more likely to experience test anxiety. They find it hard to accept mistakes or low scores. Thus, they put pressure on themselves. Students who are not prepared but who care about results may also experience test anxiety. People can feel unprepared for several reasons: they may not have studied enough, they may find the material difficult, or perhaps they feel tired.

Types of web-based foreign language tests are: objective tests (true-false, multiple choice, fill-in-the-blanks), and subjective texts (short answer, essay, or oral exams). Students may also be confronted with open book exams where they are evaluated on understanding rather than on recalling
A structured approach to cramming

- preview material to be covered
- be selective: skim chapters for main points
- concentrate on the main points
- do not read information with no time to review it
- list key concepts in the test. Write the definitions. Compare with the notes. Prioritize them.
- obey the study guidelines advertised on the test site, given by instructors, required by the exercise.
- note down the questions you need to ask
- review previous tests graded in a similar manner
- create study checklists
- create summary notes and maps that help retrieving information from scratch
- useful in emergencies, not for long term effort

During the test

- start in advance: knowledge brings confidence.
- review notes briefly before the next class
- study the most difficult material when rested/alert
- organize material to be studied in a step by step approach, not to get overwhelmed
- accept mistakes and put them in perspective, considering them learning opportunities
- health care (enough sleep, balanced meals)
- effective learning strategies, study habits and skills
- study in advance: knowledge brings confidence.
- practice team work, journaling, checklists
- conduct short daily review sessions with more intense review prior to major exams
- read assignments, to identify concepts that the professor considers important or familiar
- review notes after lectures for unclear information
- review with a group, to cover overlooked issues
- review previous tests and sample tests
- break up big study tasks into manageable ones
- studying three hours in the morning and three in the evening is more effective than studying uninterruptedly. If tired, studying is a waste of time
- study the most difficult material when rested/alert
- note down the questions you need to ask
- preview material to be covered
- take clear notes in lectures /from textbooks
- review your notes soon after class/lecture
- review notes briefly before the next class
- schedule time at week-end for a longer review
- organize notes, texts, and assignments according to the test requirements
- take an active approach: stress is a body warning mechanism meant to prepare for important events. Some anxiety may provide energy and focus.
- positive thinking with realistic messages (‘I’ve studied hard and I know the material, so I’m ready to do the best I can.’)
- stress management, a valuable skill
- arrive early, sit comfortably, avoid anxious people, and do not doubt personal knowledge
- upon receiving the test look it over
- read the directions twice
- organize time efficiently during the test
- work at a comfortable pace without worrying about the other candidates’ progress
- keep on mind that all answers must be correct
- look away from the exam if you feel stressed
- review previous tests and sample tests
- review with a group, to cover overlooked issues
- review notes
- pay close attention to negatives, qualifiers, absolutes, and long strings of statements (qualifiers are sometimes, often, frequently, ordinarily, generally, and are more likely to reflect reality, opening possibilities and indicating true answers. Absolute words restrict possibilities: no, never, none, always, every, entirely, only imply the statement must be true 100%, being a mark for false answers in a test. Long sentences often include groups of words set off by punctuation; attention should be paid to the truth of each of these phrases. If one is false, the whole answer is false).
- true/false tests often contain more true answers than false ones.
- in a multiple choice test, question the options that grammatically do not fit the stem context, the ones that are totally unfamiliar, and the ones that contain negative or absolute words. Eliminate the ones that mean the same and cancel each other out. When dealing with double negatives, create a positive synonym. If two options are opposite each other, chances are one of them is correct. A guess made with common sense could bring more test points than leaving a blank.
- give concise, accurate, thoughtful answers that are based in evidence.
- proofread spelling, grammar, punctuation, decimal points, incomplete words and sentences, miswritten dates and numbers, etc.
- ignore outside stress: consequences (grades, graduation), peer pressure, competitiveness
- use all the time allotted to solve and review your results. There is no reward for being the first to leave the examination room.
After the test

- reflect on your performance and list the strategies that work, for further use.
- draw up a schedule for units of time and material
- test yourself on the material

Specific traits of online exams

- different locations: classroom, computer resource center, or at home
- timed/not timed
- scheduled/not scheduled
- uninterrupted/saved and returned
- part of an online course, traditional classroom, or blended option
- graded or not graded
- scores immediately returned for feedback, or posted later
- mastering technology, navigating skills, passwords required for the test
- working on a technically capable computer, with appropriate connection speed, security settings, clear website address, etc.
- access to a clock for answers in a limited time
- possibility to save and return if interrupted
- possibility to change the order of answering questions and checking unanswered items
- modalities to save and exit without losing your work
- possibility of a paper backup for the responses
- know if there is a penalty for guessing: guess when there is no penalty for guessing or you can eliminate options

4 Conclusion

The basic suggestions presented above will most certainly be enriched by further application. The attempt to cover many areas (from information input to the development of cognitive skills, or from moral qualities to vocabulary) was not meant to be comprehensive and minute, but rather illustrative of the fact that test anxiety, learning motivation and performance are interconnected in any learning process, be it traditional or web-based.

References: