

Can we Help our Science Students?

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Abstract

The class twelve board results are considered life changing. The pressure of doing well in these exams begins much earlier than when the student reaches class twelve. The conflicts and stresses experienced by a class eleven student of Science are only furthered by the pressure of studies. This paper presents reflections of the author on what her son's experiences of preparing for class eleven examinations

This paper is a reflective account of the academic stress which a class XI science student has to deal with; complexity of science content (both in terms of quality and quantity) in comparison to class X, coaching for competitive classes, pressure of expectations of parents, teachers, school and society make their life challenging. The author being a teacher educator and a parent too thought of sharing how stressful the life of the class XI science student is and how he/she is left to struggle on their own.

The author being the parent of a class XI science, observed and analysed the lives of class eleventh science students closely and felt sorry for the kind of academic stresses these students face. It led me to wonder if the teachers, parents and our education system at large in a position to help our students in dealing with the academic stress.

To begin with, some voices of parents, teachers and peers are shared to highlight the stressors that students face and then the authors' reflections follow.

Parents----“our child has scored a very good CGPA in class X, so we have decided that he will take up science stream. We will enroll our child

in competitive coaching as well. We are ready to spend money on our child, but he must clear the competitive exams, at any cost, so that we have a good reputation among our relatives and in the society.”

The child is not asked, whether he has an aptitude or interest for science or, whether he can or if he wants to simultaneously handle school and coaching classes. He has to simply follow the routine what his parents set for him.

Teachers----“You are in class XI now. Irrespective of whether you have joined any competitive class, you have to be regular in attending the school. Sitting for Monday tests and unit tests is compulsory. As next year will be board exams, so this is the last year when you can participate in co curricular activities of the school, but mind it no exemption from Monday tests and unit tests”

Here again the child is the sufferer, Whether he plays for school's football team or participate in theatre/ debate/dance competitions, he is left to fend for himself to compensate for any theory and practical classes which he might have missed. No extra classes are organized to help these students. They are also not provided any relaxation with respect to

Monday tests or the amount of content covered in these tests. It would appear that participation in co-curricular activities is a punishment for the child.

With lots of expectations to perform, a child enters the class XI. As a child is very clearly told that the ultimate aim of life is to clear competitive exams, so he hardly pays any attention to what a teacher is teaching in the class. Then comes the Monday test and suddenly the child realizes that the syllabus which is coming for Monday test is not being covered at coaching class, and in the class when teacher was doing it, they didn't pay attention, so a very panicky situation and stressful too. The content of class XI science books is quite complex in comparison to class X and so the child finds it difficult to manage on his own. As a result some children end up taking some special lessons from private tutors while some struggle on their own.

Friends-----“Hey guys, irrespective of any busy schedule, please keep posting, sharing and messaging on Facebook, Instagram, Snapchat, Whatsapp etc.”

Under peer pressure, whether a student gets the time to eat or not but he must take out some time for engagement with peers on social media as this is the only recreational platform he feels he is left with. Moreover the fear of losing friends compels him to hook on to the mobile phones.

The daily routine of most of the students is: school, coaching classes, private tuitions, and the most compulsory task of the day; facebook, instagram, snapchat, whatsapp etc. No time for self study/ outdoor activity or to even reflect on what's happening in their life?

By the middle of the class XI, many students start feeling highly pressurized, frustrating and feel like quitting. But they can't. They continue with this stressful journey till the final stress test i.e. the final exams. Till now, somehow, the students manage, as preparing one and a half chapter for Monday

tests or five chapters for first term exam is still manageable in comparison to preparing fourteen to sixteen chapters for final exam.

Thorough preparation of one chapter includes: reading the chapter in between the lines, understanding it, doing solved example questions, doing NCERT book questions (which are ~40 to 70), going through reference book questions (which are ~ 200 to 300). And all learning(definitions, laws, theories, application, conceptual understanding, structures, formulas, derivation etc.) is to be done in the form of questions only as in the exams only questions come. So approximately for a particular chapter a child will have to prepare ~100 to 200 questions and for fourteen chapters the number of questions to be prepared are ~1400 to 2800.

Now the question comes why for attempting 27 questions in the final exam of three hours, a child has to prepare almost 2800 questions? Further to be able to answer questions confidently in the exams, one has to keep practicing them again and again. Is it easy practicing such huge questions again and again? Aren't we promoting rote memorization, drill and practice which is very contrary to aims of teaching science as specified in 'NCF 2005'? Why all the chapters have to be tested in those three hours? What are we testing? Whose brain nerve is most strong and robust that it can retain these huge questions at a time and whose can burst? Why only a three hour test is the only decisive criteria of how much proficient a child is in a particular subject?

During final examinations, students are seen making frequent calls to their friends. Some of their conversations are, “yaar itna saara syllabus kaise hoga teen din mein? Pehle kiya hua saara bhool gaya. Chaar numerical paper mein aane hain par ye nahi pata kis chapter se, uske liye saare chapters ke numerical kyon karne?

“I used to love science and now I hate it. I feel like crying. I am feeling very nervous. Sometimes I feel like running away or committing suicide”

By working so hard, somehow managing with

stress and pressure, helping each other, giving pep talks to each other, these students brave the exam and when it comes to result most students satisfy themselves with 40 to 70% only. While many students are not able to clear their exam. They have to again prepare for their re exam. From this whole exercise the objective of teaching science seems to be creating non thinking machines who work from morning to night, doing drill and practice all the day to get some good percentage in final exams. Irrespective of any percentage a student of class eleven is getting, after completing one year of class XI science, how many students are trained in the processes of science? How many have developed scientific attitude, problem solving

abilities, logical thinking, sensitivity towards environment? How many have become aware of the nature of science? How many have inculcated the value of truth, objectivity and honesty? Why so much of gap between what is written in our policy documents and what we practice? Can we help our science students?