

The Parents' Guide To The 10 + 2 Science Know Before It Happens

<http://parentsbell.weebly.com/index.html>

ACHALA JHA

POWER
PUBLISHERS
www.power-publishers.com

Copyright:	©Achala Jha
Published by:	Power Publishers, www.Power-Publishers.com Swabhumi Residency, P-12 Motijheel Avenue, Block 2, 1st floor, Kolkata 700074.
Composing & Printing:	JÑANALOK Infotech www.jnanalok-books.com 24 Baghajatin Road Kolkata - 700036
Cover Design:	Showvhick Nath
First Published:	May 2013
ISBN number:	978-93-82792-70-3
Price:	` 225/-
Available from:	www.purushottam-publishers.com www.Power-Publishers.com www.Flipkart.com

Printed on recycled paper. No trees were cut for the production of this book. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without the prior permission of the publisher and author. The views expressed in this book are those of the author. The publisher is not in any way responsible for the views expressed in this book. All legal actions are subject to the jurisdictions of courts of Kolkata, India.

***To my parents, my family, plus two students,
parents and teachers***

Contents

Acknowledgements	i
Preface.....	iii
Introduction.....	1
Monthly Calendar For Parents	4
Parents Can Be The Best Guide	9
An Early Bird Catches The Worm	13
Parent Student Study Relation ..	Error! Bookmark not defined.
Selection Of Education Institutions & Study Material.....	Error! Bookmark not defined.
The Two Year Journey Begins....	Error! Bookmark not defined.
How To Plan Study In Class XI/XII	Error! Bookmark not defined.
Taking The Mock Tests	Error! Bookmark not defined.
Developing Strategy For Examinations	Error! Bookmark not defined.
Case Study Of A Class 11 Student.....	Error! Bookmark not defined.
Improving The Performance.....	Error! Bookmark not defined.
Case Study Of A Class 12 Student.....	Error! Bookmark not defined.
Mistake Corrections And Understanding Patterns	Error! Bookmark not defined.
January, February Class 12	Error! Bookmark not defined.
Examination And Results.....	Error! Bookmark not defined.

A Note For The Non-Science Parents..... **Error! Bookmark not defined.**

Conclusions **Error! Bookmark not defined.**

List of tables:

Table 1: Class 11 calendar

Table 2: Class 12 calendar

Table 3: Monthly study & test schedule for class 11

Table 4: Logbook for measuring study hours

Table 5: Monthly study plan for chapter & test (physics)

Table 6: Monthly study plan for chapter & test (chem & maths)

Table 7: Monthly study plan for chapter & test (biology)

Table 8: Speed versus accuracy

Table 9: Expected rank versus marks and cut-off percentage

Table 10: Azad's score card for the chapter test for the first three months of class 11: strong, medium, weak report.

Table 11: Azad's half yearly test report card

Table 12 A: Azad's half yearly test report: strong, medium, weak (physics chapters)

Table 12 B: Azad's half yearly test report: strong, medium, weak (chemistry chapters)

Table 12 C: Azad's half yearly test report: strong, medium, weak (maths chapters)

Table 13: Azad's annual test report card

Table 14 A: Azad's annual report: strong, medium, weak (physics chapters)

Table 14 B: Azad's annual report: strong, medium, weak report (chemistry chapters)

Table 14 C: Azad's annual report: strong, medium, weak report (maths chapters)

Table 15: Azad's annual test report for chemistry with remarks

List of figures

Figure 1: Parents' contribution

Figure 2: Logbook- weekly self study hours distribution (30 hrs/week)

Figure 3: Logbook- monthly self study hours distribution (100 hrs/month)

Figure 4: Monthly self study hours versus total hours

Figure 5: Gradual increasing of self study hours

Figure 6: Determination of optimum speed

Figure 7: Cut-off percentage versus rank probability in a major exam

Figure 8: Azad's chapter test – strong, medium, weak report analysis

Figure 9: Azad's half yearly test report card analysis

Figure 10: Azad's half yearly test report for physics

Figure 11: Azad's half yearly test report for chemistry

Figure 12: Azad's half yearly test report for maths

Figure 13: Azad's logbook hours distribution for past three months

Figure 14: Azad's comparison of half yearly versus annual test results

Figure 15: Azad's annual test – 30 chapters' strength analysis

Figure 16: Azad's logbook self study hours distribution for the whole year as a percent of total self study hours

Figure 17: Logbook hours distribution (Ideal) for the whole year as a percent of total study hours

Figure 18: Method 1(Main)

Figure 19: Method 2(Advanced)

Figure 20: Azad's overall improvement in class 11 due to systematic study

Figure 21: EMD (Easy, Medium, Difficult) questions distribution in a major exam

Figure 22: Azad's response vis-à-vis EMD (Easy, Medium, Difficult) questions

Figure 23: Physics- Topic wise percentage of questions asked in a major exam

Figure 24: Chemistry- Topic wise percentage of questions asked in a major exam

Figure 25: Maths- Topic wise percentage of questions asked in a major exam

Figure 26: Figure for question no. 8

Figure 27: Student's academic signature analysis

Acknowledgements

The author is grateful to all friends and family members who provided necessary encouragement for writing the book. The author is also grateful to the teachers of various schools/coaching institutes and numerous educational websites/blogs for their valuable views.

Rajiv Kumar Jha- my husband, who constantly encouraged me to write my views, publish it and provided valuable opinion. My children, Apurva and Ishita, for giving me the insight to write the book.

The createspace community forum for sharing valuable tips and giving the courage to write a book for the first time in my life. The members of the yahoo group [<pod_publishers@yahoo.com>](mailto:pod_publishers@yahoo.com) for sharing their valuable experience regarding writing and publishing the book and about print on demand publishing.

The editor and the entire team of power publishers, Kolkata for being friendly by replying to each of my mails in spite of most of the information being there on their FAQ page. The valuable tips and information provided by the publishers helped tremendously in completing and publishing the book.

Lastly, the authors Ruskin Bond & Chetan Bhagat. Ruskin Bond for the beautiful children story books and also for his simplicity and connect with his readers. Chetan Bhagat for his hugely popular and entertaining books, his style of writing and above all giving a big hope to first time authors.

Preface

I was standing in front of a school on a hot summer day as my son was appearing for a national level engineering examination. The examination was to continue throughout the day in two separate three hours sitting, with a two hours lunch break in between. There was a huge field outside the school where scores of parents were sitting and talking to each other. I was amazed to see the knowledge level of some guardians regarding the examinations. Parents whose second child was appearing in the examinations seemed to know better as they had gathered enough experience in their previous forays. There were also first time parents who thought they had done enough in guiding their wards but their confidence had now taken a beating and were revising their opinion. The discussions continued for three hours until lunch break when the students came out with question papers. The papers were tough as all types of questions having single answers as well as more than one answers etc were asked. The break period was spent with the students having lunch and very soon the school bell rang and students went for the second sitting of examination. As most parents had nothing much to do for the next three hours, so questions from the first paper were discussed and some parents were found to have some idea of solving the questions with their knowledge. They had also the idea of the method of study, course curriculum, books and study material to be followed and most important what not do during preparation of such exams. However, majority of parents were feeling that they were lacking in their efforts compared to vigilant parents. Some of them were ruing the fact that had they also kept up to date, then it would have been an additional

advantage to students, apart from what the students have learned on their own through self study and teachings of school/coaching institutes.

This book is written for parents of science students studying in class 11 and 12 and preparing for engineering or medical entrance examinations with an aim to give practical suggestions regarding how they can contribute in the studies of their wards. The student's youthful energy and the parent's experience if mixed properly can achieve good results in studies.

The view expressed by the author is purely personal and it is expected that the mature parents may or may not agree with some or all of the views. However, this book will give the parents a line of thinking and some idea on guiding the students. The book will help them in deciding when to start, what to do, the assessment of child's present level of performance and how to improve upon. This book will provide a comprehensive action plan for taking the plus two exams and various engineering\medical entrance examinations. Just like a sports coach enhances the performance of a sportsperson, similarly a study coach can guide the student for improving the performance and help the student achieve his best potential and what better than the parent if he himself chooses to be the study coach.

Although this book is primarily written for parents, students may also read it, but for best results it has to be read along with the parent/guardian. It will be preferred if both the parents read the book as two minds are always better than a single mind. It may so happen that one parent may understand a subject better where as the other may have a knack in understanding the other subject.

The parent's educational qualification is not of much importance, but their zeal is must and it scores over the qualifications. Author wants to emphasize that immediately after reading the book rushing to guide the student should to be avoided. The student is to be just watched for a few months based on the methods mentioned in the book, gather sufficient information about his studies and get aware of his actual status regarding the progress in studies. The parent has to also increase his knowledge about the subject and then decide on guidance with a calm mind based on mutual consent and student capabilities.

Education is a dynamic process and the guidance process requires frequent correction depending on the student performance and feedback every three months. The book offers several suggestive ideas and methods and parent may try those and see the efficacy on the results and modify them accordingly depending on the potential of student.

This book also tries to address the common refrain of students that everybody tells to study but nobody tell how to study. For instance, if one goes to a successful senior student for guidance then the name of books and study material referred by him gets known, but not the techniques he used to study in an efficient way. This book will give some guidelines for systematic study to be done by the student in a timely manner.

1

Introduction

When a student goes from class ten to eleven, there is a quantum jump in syllabus. The student has to not only prepare for the intermediate examinations but also has to cope with the vast syllabus for competitive examination in these two years. It is obvious that time is at a premium and a student has to be properly guided so that he achieves the results to the best of his ability. A common pitfall is unnecessary wastage of time due to wrong method of study and overemphasis on some chapters/subjects at the cost of others and awaking after much time has been lost. This is where the role of a parent comes in, as parent can be the best advisor for student.

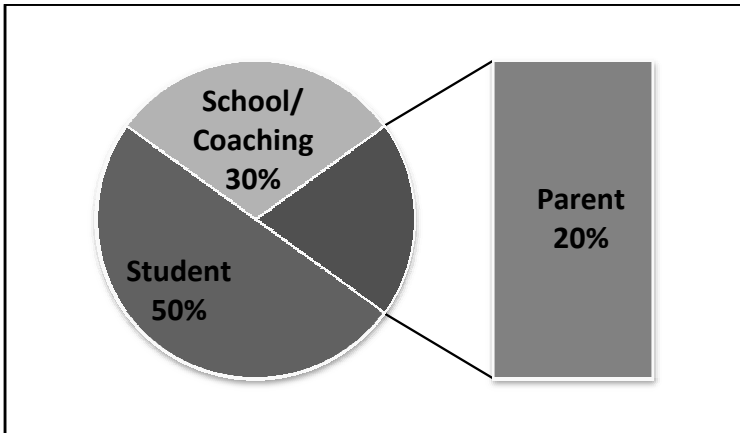


Figure 1: Parents' contribution

Success in any competitive examination can be broadly divided into 50% student's self study effort, 30%

educational institutions and 20% parent's contributions. The parent's contribution is very crucial for making or marring a student success in the examinations. This is because a parent knows his child best and is aware of his strong and weak points. The young child may not be aware of his shortcomings but a parent knows his child inside out. It may be debated about the distribution of percentages and some may be of the opinion that it all depends 100% on student labor, some may keep it as a 60:40 student school affair, but it is beyond debate that a proactive parent will always add over to the student and school efforts by bringing substantial improvement in the student's studies.

It will be also naive to expect from a school/coaching institute to cater to each and every student individual needs by analyzing his specific strong and weak points. For instance, lakhs of students appear for engineering/medical examinations in a year. Schools/coaching institutes are teaming with students and individualization of students needs and guidance is not possible. If we compare this scenario with the home front of student then a parent has only his child to guide. A parent has also the advantage of understanding his child better as he is seeing him from birth and a child spends the maximum time at his home in a day. In fact, many a time's parents can feel the need of child without their explicitly expressing it up due to the emotional bonds.

A situation may also arise when either the parent or student are not able to continuously interact because of distance limitations. This may happen due to professional compulsions of parent or student residing in hostel. In this situation also, with the help of modern communications aids and online courses having both parental and student access, parents can successfully guide the students. Student will take the test and parent will access and analyze the result at separate times and locations.

In this today's changed circumstances, this book aims to guide a parent about how to be with their children in these two years at an easy pace. The book advocates a well planned disciplined approach of study so that the predicament of going fast nowhere is replaced by going slow somewhere. Many a times, it is seen that good students also do not achieve desired academic performance, due to poor planning and bad time management, which often leads to unfinished syllabus before the examinations. The book will provide the parents and students to know in advance what may happen in future and correct it with ample time remaining rather than to do it after the event is over.

Proper guidance by parents will improve the student's performance by a minimum of ten to a maximum twenty percent, if not more on top of what a student could have individually achieved. Besides that it will improve the communication with the student and provide them immense satisfaction of doing their bit for their children. Additionally, the student usually leaves home for higher studies after class twelve. So, this also is a golden opportunity to nurture the child skills and make him aware of his strong and weak points and how to overcome them and above all how to study properly which will prove to be crucial to his success in the later part of his life.

2

Monthly Calendar For Parents

Two years monthly plan calendar

The monthly calendar for parents for two years period is given below. The terminology used in the calendar is explained in various chapters of the book. The calendar can be followed as per parent's convenience.

Table 1: Class 11 Calendar

Sl no	Month (class 11)	Things to do
1.0	April	(i) Prepare Bar chart (ii) Prepare Logbook (iii) Text books selection (iv) School admission (v) Coaching admission (vi) DLP course enrolment
2.0	May, June, July	(i) Bar chart, Logbook review (ii) 10hrs/month, 30 hrs /subject /month self study plan to be reviewed (iii) Result of Chapter test given to be reviewed
3.0	Aug	(i) Result of Terminal test given to be analyzed. (Subject /Chapter wise) (ii) Silly mistakes to be noted and again asked randomly after a period. (iii) Unattempted questions solutions

		to be asked again after a period of time
4.0	Sept, Oct, Nov	(i) Bar chart, Logbook review (ii) 10 hrs/ month, 30 hrs /subject / month self study plan to be reviewed (iii) Result of Chapter test given to be reviewed
5.0	Dec	(i) Terminal test result to be analyzed.(Subject /Chapter wise) (ii) Silly mistakes to be noted and again asked randomly after a period of time (iii) Unattempted questions solutions to be asked again after a period of time
6.0	Jan, Feb	(i) Result of remaining Chapter test given to be reviewed (ii) School board class 11 preparation starts as per School/Board guidelines (iii) Text books to be read by student thoroughly (iv) Revision database of chapter /terminal/ full test for 30 chapters to be revised vis a vis Wrong/Unattempted questions only
7.0	March	(i) School board exam class 11 to be taken (ii) Final full test of class 11 to be taken and result analyzed after school exam is over

Table 2: Class 12 Calendar

Sl no	Month (class 12)	Things to do
1.0	April	(i) Class 12 study starts (ii) Chapter test given to be analyzed (iii) Bar chart/ Logbook to be continued and maintained
2.0	May, June, July	(i) 10 hrs / month, 30 hrs / subject/month self study plan to be reviewed (ii) More than planned self study hours in any chapter to be avoided
3.0	Aug	(i) Result of Terminal test given to be analyzed. (Subject /Chapter wise) (ii) Silly mistakes to be noted and again asked randomly after a period (iii) Unattempted questions solutions to be asked again after a period (iv) Get free entrance exam alerts in your email by subscription to websites
4.0	Sept, Oct, Nov	(i) Review the progress as per Bar chart / logbook (ii) Coaching ends in Sept./Oct (iii) Revision of class 11 subjects starts from September (iv) Study hours to be increased from 100 to 120 hrs. 100 hrs/month to be allotted for class 12 and 30- 50 hrs / month to be allotted for class 11 (Rev). Possible only after school/coaching ends (v) Revision database of 30 chapters of class 11 to be utilized with special emphasis on wrong and un attempted questions

		<p>(vi) All India Test series (Mock test) starts covering both class 11 and 12. Test series result to be analyzed subject/chapter wise</p> <p>(vii) The complexity analysis in the result vis-à-vis Easy, Medium and Difficult questions.(EMD Report)</p> <p>(viii) Application form filling starts for major Engg/Medical competitive examinations. Parent to fill forms online in student's presence</p> <p>(ix) Sequence and style for mock tests to be experimented</p>
5.0	Dec	<p>(i) 30 chapters of class 12 finished</p> <p>(ii) 30 chapters of class 11 revised</p> <p>(iii) All India Test series/Mock test to be taken. Minimum two per month</p> <p>(iv) Sequence and style for mock tests to be finalized</p>
6.0	Jan, Feb	<p>(i) School board class 12 preparation starts as per School/Board guidelines</p> <p>(ii) 70 hrs/month to be devoted for board exams and 70 hrs /month for competitions</p> <p>(iii) Textbooks to be read thoroughly by student</p> <p>(iv) Board exam pattern to be seen by reading last ten years question Bank</p> <p>(v) Revision database of chapter test /terminal test/ for 60 chapters to be fully utilized vis-a-vis wrong/Unattempted questions only</p> <p>(vi) All India Test series/Mock test to be given. Minimum two per month</p> <p>(vii) Travel arrangements to be made for test scheduled in April/May outside home</p>

		centre
7.0	March	(i) Month Fully devoted for reading textbooks and Board exam preparation (ii) After Board exam, Mock test to be given for competitions (iii) Admit card arrives for Competitions
8.0	April	(i) Mock tests to be given every week (ii) Minimum 4 competitions to be planned in the month. It helps to keep up the tempo for the major competitions (iii) Competition Test starts. (iv) Sequence and Style adopted in Mock tests to be strictly followed on competition day (v) No sudden last minute changes in style to be developed for competitions
9.0	May	(i) Revision and mock tests (ii) Major competition to be taken (iii) College list and branch choice to be finalized
10	June	(i) Results Declared for Board / Competitions (ii) On-Line Counseling starts (iii) College/Branch to be decided as per rank obtained.
11	July	(i) Admission in college

3

Parents Can Be The Best Guide

The student passes class 10 and decides to pursue science in plus 2. The parent tries to get him admitted in a good school in town and a popular coaching centre. Sometimes, if the town does not have good education facilities then the child is sent to a nearby town or sometimes to even far away metro towns or famous coaching towns. The parent is satisfied that that he has done his best under the present circumstances. The student is then totally guided by the concerned school and coaching centre in his studies. The parents have numerous reasons to do that such as being too busy in their professions/business or they do not have much idea of the science subjects themselves as they have studied a different stream (arts/commerce) in their student life. They think that the school/coaching centre knows best and their child is in best hands.

Lets us take the example of a student "A" who is studying in a good school in town and also enrolled in a reputed coaching centre. Slowly the time passes by and the student study progresses in class 11. Half yearly results of school/coaching for class 11 is declared. The student's performance is average and the overall percentage in school exam is 50% and the coaching test is 25%. The parent tells the student to make more efforts and try to improve the percentage. The student also tries to step up the efforts and sincerely studies to the best of his ability. The class 11 final exam results of school/coaching is declared and student results are again mediocre hovering to about 60% in school test and 30%

in the coaching tests. The student has tried his best, given his most available hours in self study, but the result do not commensurate to the efforts. The parent is bewildered what to do. The blame game starts regarding the school/coaching centre but in the same school /coaching centre some students are faring well with the same set of teachers. Typically, a student spends 6 hours in school, 4 hours in a coaching centre and the rest at home. On holidays, he is 24 hours at home. A parent has to realize that some guidance on his part has also to be given at home where the student spends his maximum time.

The parent again advises the student at the start of class 12 to put more sincere efforts and other generalities but nothing specific in nature. The studies in Class 12 progresses and soon half yearly examination and coaching test result are declared .The result is predictable in the range of 30 – 35% in coaching test and 60% in school. The month is August of class 12. Now the parent is worried. He suddenly starts finding time from his busy schedule. In the next six months, the class 12 board examination will be there followed by a string of competitive examinations. 75% course for class 11 and 12 have been completed and only 25 % remains which will be finished by October. The all India mock tests for competitive examinations are also going to start from September covering syllabuses of both class 11 and 12.

The parent and the student are now bewildered that whether the student should only concentrate on class 12 board examinations or should he also study class 12 as well as begin revising the class 11 syllabus for the mock exams. The parent takes stock of the situation and decides that class 12 has to be successfully cleared with good percentage and also prepare for the competitive examinations. Another two months passes and October of class 12 comes. Examination for major competitive

examinations is announced and their forms are filled. The board exams forms are also filled in the mean while. Board exams are in March and competitions are from April to June. The parent is now dedicating at least one hour daily, interacting with student on daily basis evaluating the mistakes in answer papers of mock exams. But now the time is short. The parent is ruing the fact that had he taken some interest in student studies from class 11, the results would have been much better as he could have given some useful inputs contrary to his belief that he was not capable of guiding.

The role of a parent can be compared to that of a General Physician (GP) to whom the patients go in the first instance when they have medical issues. The GP attends the patient carefully, listens to their ailments and treats them. If need be, then the patients are referred to the specialists for further improvement. A patient directly going to specialist without getting his ailments diagnosed from GP is not advisable as this is the domain of GP. The parents can compare themselves to GP and teachers may be considered as specialists. This is the reason that all leading educators agree to the fact that role of parents is vital for the academic progress of the child and a vigilant parent is an educator's delight.

A parent can be the best guide to the student. A parent can suitably judge the child using his emotional intelligence and intuition. This view is acknowledged by most in academic fraternity but generally parents are afraid that they may misguide the student as their student life has long been over or they are out of touch with the current academic scenario. It may be noted that science subjects have not changed for the last fifty years and the fundamentals are still the same. Generally the parents have studied science subjects till class 10 if not higher. But when it comes to guiding their own child, they think

they are outdated, but it is not so, as they realize this fact much to their dismay in the later months of class 12. In further chapters the book will deal on this subject further.

4

An Early Bird Catches The Worm

It is truly said that an early bird catches the worm. So, the preparation for the competitive examination post class twelve should start a bit early but not very early otherwise it may lead to fatigue and burn out. These days a student is exposed to a competitive atmosphere from early days say class seven by virtue of appearing in various exams like science Olympiad, math's Olympiad, NTSE scholarship etc apart from class tests. So, a student gets a fair idea of the competitive world and things to come in future apart from the regular school examinations. A student should concentrate on the basic NCERT textbooks for science and maths in junior classes and read them thoroughly a couple of times so that he gets the fundamental's right. A guide/help book of various publications may be used but only after one revises the textbooks a number of times. Self study of textbook is a must, everything comes after that. Excessive tuitions /coaching etc from an early age are only advisable if neither of the parents have time or keep away from home. Otherwise, a parent teaching his student for half an hour a day is also good enough in junior classes, up to class 8.

The syllabus of class X is not specifically made for students who wish to opt for competitive exams. The level at the X standard is quite easy compared to the level which the students face in various entrance examinations after class XII. In order to bridge the gap, a student must be given a feel of the basics in class IX and X through easily understandable concepts and exercises. The aim of

such a course is to develop the analytical skill of students which play a decisive role in attaining success in competitive exams in future. Therefore, in class 9 and 10, a parent can enrol a student in some extra coaching classes after school to have a feel of subjects to come in class 11 and 12. The best approach is to do a preliminary study of NCERT textbooks of 11 and 12 in class 9 and 10 with help of some postal/classroom coaching.

After class 10, a student has to be enrolled in a good coaching institute in addition to his regular school. A parent can help in choosing a good institute, the selection of the same is dealt in another chapter. Most parents think that their role is over once their child is admitted to a good school/coaching institute, but this is not so. A parent has to brush up their knowledge so that they can interact with student just like they did in junior classes. One of the best ways to update the parent's knowledge is by seeing videos available on the internet on science subjects. This will give them a feel of the topics and help in interacting with the students, analyzing their mistakes and guiding them. A good number of videos are available on the internet. The videos are to be selected based on the number of views, more the views better is the video on a particular topic. Video by a common author to be preferred as it is easy to understand once the author style becomes known and there is continuity in narration. It may be noted that the videos are to be seen by parent and not by the student. The parent may ask some basic questions related to the video and the answer given by student will let him know whether the student has understood the topic. The best way is to view the video topic wise. On an average, there will be about 400 videos to be watched in a two year period with each episode ranging between 10 to 15 minutes in duration. The videos connect the science with real world by giving some real life examples and help to grasp the concept. The basic

aim of parents in watching the videos is to come to the student level so that the parent can talk to him on matter related to studies on the same wavelength. Another good source of knowledge is the Wikipedia. Any topic can be seen in Wikipedia and a broad understanding of the topic can be gathered without going too much in detail.

It may be noted that asking questions are very easy and requires not much knowledge but it helps the student in its own way. Also, seeing the videos takes time and parent can tell the student to see videos of only those topics where student is facing difficulty. This is because a parent may see the videos for hours but for students time is at a premium and it will be better if he uses it in studying the traditional way with the help of books.