

SCHOOL TIMETABLES

Main aim of a School

The main function of a school is to educate the younger generation. Education itself cannot be fulfilled merely by teaching subjects. A healthy education needs an understanding of one's religion, culture as well as good practice of manners and discipline. The responsibility of a good school would be to cultivate all these forms of education while acting as a knowledge base. In order to do so, schools have teachers, guiding rules and classrooms with various facilities. Combining these resources to successfully manage a school within an organized environment is quite a challenge.

Today's Challenge

In the old days, schools taught a limited number of compulsory subjects. The number of students as well as teachers was small and the facilities within a school environment were limited. In contrast to old days, the modern world has advanced at a great pace in terms of population, facilities and technology. With the advancement of the aforementioned areas, the number of students and teachers has increased, schools have expanded, more subjects are introduced and more facilities are required to accommodate the modern education.

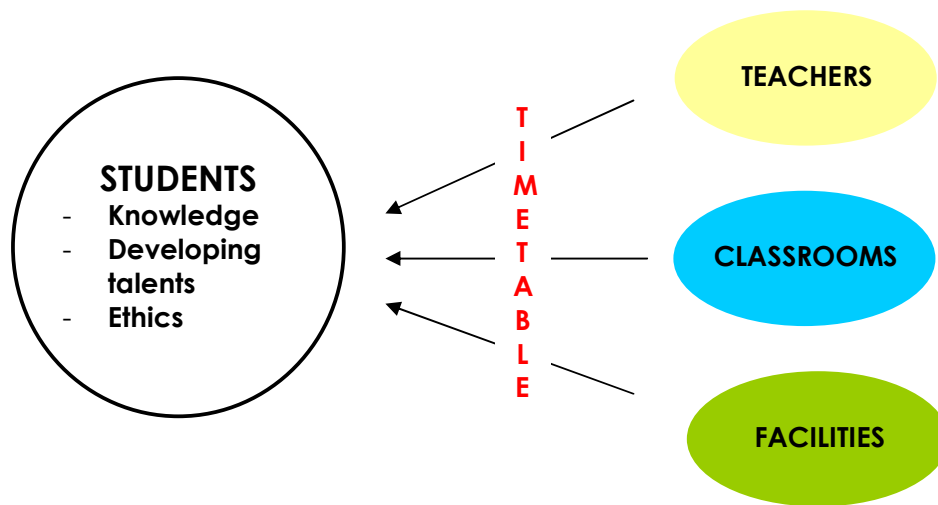
Unlike previous generations, the modern student has the opportunity to expertise in areas that are specific to their talents and interests. This of course means that the number of subjects that are available within the school has increased to suit the majority, if not each individual student. Teachers who are specialized in each subject area need to be present in order to educate different groups of students and the school should be equipped with necessary facilities for different subjects. For example, in order to make a subject like Photography available, the school needs a teacher who is qualified to teach Photography as well as space, camera and IT facilities to process the practical work.

The need to optimise resources

On the other hand, a school may have all its physical requirements such as labs, libraries and playgrounds where the school management still has the task of finding ways to use the available facilities optimally. This becomes a major need when the same facility is used by many classes. For example, you may have a Science lab that is needed by all grades from Grade 7 upwards, each grade having 5 classes and which is also used by Advanced Level Chemistry, Physics and Biology students. In such circumstances, the optimum use of the Science lab has to be well planned to suit the Science period of each class as well as the availability of the person in charge of the lab.

The importance of School Timetables

Therefore, a method of using every teacher, class and facility effectively while maintaining the educational standards is a challenge every school has to brave. A medium is required by the school management to provide a healthy control and link between these categories to reach its goal of providing education. The primary medium by which everything is linked and organized within a school environment is the timetable. Hence timetables play a pivotal role in the school management. The following diagram summarises the function of the timetable.



Complexities of preparing Timetables

Timetables are generated before the beginning of each academic year. With various subjects introduced along with national targets to pursue, the modern timetables of schools are becoming more and more complex. This complexity results due to the vast number of “input parameters” that needs to be considered. For example, there are typically 40 periods per week for each class. These 40 periods are not taught by a single teacher, nor will the students be staying in one classroom for the duration of all 40 periods. For each period a teacher is assigned for the class and that means that particular teacher would not be available to teach in any other classroom in that period. So a separate timetable should be assigned for each individual teacher. Also, if a facility such as a lab is used for this period, which means no other class should be allocated to use this lab in that particular period. Hence a separate time slot has to be assigned for each facility. Other factors include the number of subjects taught, the weighing for each subject, different group classes and school policies.

School policies vary from school to school. Often, school policies are the main reason for parents to choose that particular school. Therefore, school policies certainly have an influence over the timetable. School policies could be national, cultural or religious. For example, a school which is managed by a religious institution may have specific times for the purpose of learning and exercising the particular faith. This could be an allocation of specific time slot for meditation, prayer or offering mass depending on the rituals of the particular religious institution. Therefore, when making timetables, the allocation of various timeslots for the purpose of maintaining school policies is also very important. Taking care of all these parameters makes planning a timetable for each class, a challenge.

Characteristics of a good Timetable

A good timetable will result in utilizing the highest productivity of teachers, optimum use of facilities and classrooms, while maintaining the required number of timeslots for the respectful subjects. It further envisages the special task the school has to adapt in managing the students for a better guidance to reach the required goals of the school.

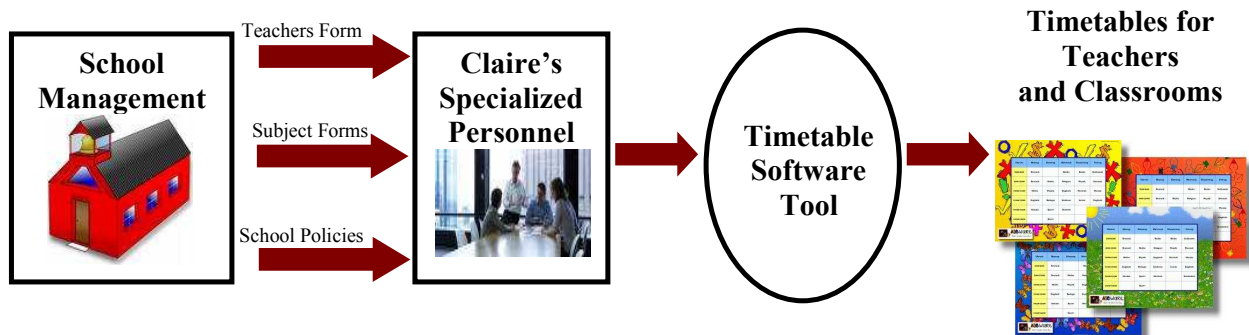
Is there any unique method of preparing Timetables?

The world today relies on systems that are able to provide direct outputs from direct inputs. But as we have realized here, the story is quite different for the planning of timetables due the variety of inputs presented. There is no uniform method of producing timetables due to the various complexities one has to consider with regard to teachers, subjects and facilities. Hence most of the schools do this difficult task manually and dedicate several months to come up with the

timetables. Similarly there is no singular software that could take into account all the inputs to produce timetables. Hence a hybrid method of using the present day computer technology along with the school guidelines will be most suitable to produce the timetable in less time. This hybrid method needs specialized personnel to utilize the computer technology matching the school needs to produce timetables that can be devised.

What Claires can offer

In line with the above concept a production for generating timetables will be carried out by our specialized trained personnel within a very short period of time with a special tool that has been developed to produce timetables.



In order for Claires to produce the timetables the management of the school has to provide the necessary details (i.e. Teacher, Subject and School policies forms).

Upon receiving these three forms, the trained personnel at Claires would proceed with generating timetables of the school. The school will receive both the hard and soft copies of timetables for each class and each individual teacher within a very short time.

Additionally, a specialized software management package called the SCHOOL MANAGER will be given by Claires to be used exclusively by the Principal or Section Head. This software provides an easier way of accessing all timetables of classes and teachers using one programme. This is an important tool for the school management.

However, it should be noted that the SCHOOL MANAGER only allows viewing the timetables which are already done and hence could not be used by the School to generate timetables by themselves. The timetables are created by a special tool created by Claires using specialized personnel and the SCHOOL MANAGER contains all the timetables resulting from this work. Hence the primary function of the SCHOOL MANAGER software is to bring all the information of each teacher, each classroom and each subject into a single platform for the benefit of the school management.

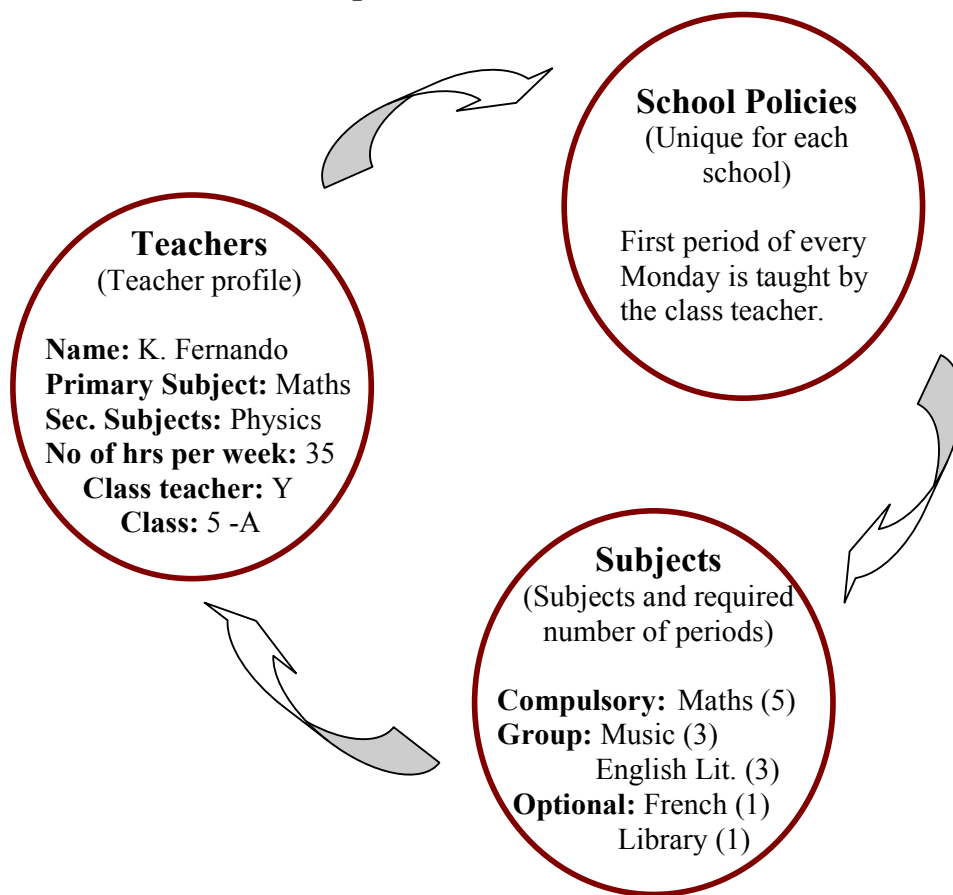
What information the school has to provide to Claires

The primary function of timetables is to act as a medium where teachers, subject and school policies could inter-link to reach good education standards. Hence, information in the following areas needs to be provided to Claires by the School Management.

1. Teachers
2. Subjects
3. School policies

The following diagram explains the interaction between the above three areas.

Preparation of School Timetables



Teacher's Format:

Teachers comprise of the details of each teacher in the school. Teachers might teach several secondary subjects along with one primary subject. The details needed for timetabling would be the subjects he/she is teaching, the number of periods he/she is expected to teach, responsibilities to a particular class (class-teacher) and any other responsibilities or conditions.

The following table is a specimen of the Teacher Subject Allocation Form that needs to be filled by the school. Further columns could be added for more subjects the teacher takes up.

Initial	Surname of Teacher	Main Subject	Intended Class to teach	Secondary Subject	Intend Class to teach	Remarks

Subjects Format:

Subjects of a particular class will be allocated by considering the following subject types.

(a) **Compulsory Subjects**

These are the subjects that are compulsory within National Standards such as Mathematics and Science.

(b) Group Subjects

There could be many groups within some grades. These are decided by the Education Ministry depending on National and cultural interests. Aesthetic subjects such as Music and Literature belong to this category.

(c) Optional Subjects

These are the subjects that are introduced for certain Grades according to the standards and interests of the School. For example certain schools could provide facilities for a gym, language learning centres or library facilities along with a particular time to use it.

The three categories above defines different types of subjects that are taught in the school. In line with this categorization, two forms have to be filled by the school management with respect to subjects in order to make the timetable more effective.

1. Group-Subjects Form

The Group-Subjects form describes the group subjects that are taught to specific grades. The following table provides an example of how the Group-Subjects Form would contain. Further rows could be added for more groups. Requests such as specific days and duration (i.e.double periods) should be put in the Remarks column.

Group No	Subjects in group	Applicable grades	Grouping of classes in a given grade	Remarks
Group no 1				
.				
.				

2. Weekly Subject Allocation Form

All the subjects that are taught within the week are listed in this form irrespective of whether they belong to compulsory, group or optional categories. This is a specimen of the Weekly Subject Allocation Form that needs to be filled by the school. Further rows could be added for more subjects. Requests such as specific days and duration (i.e.double periods) should be put in the Remarks column in the case of compulsory and optional subjects.

	Grade						Remarks
	6	7	8	9	10	11	
No of Classes							
Subject							
Science							
Math							
Sinhala							
English							
History							
Com							
IT							
Home Science							
Agriculture							
Pt & He Sci							
Tamil							
W.Music							

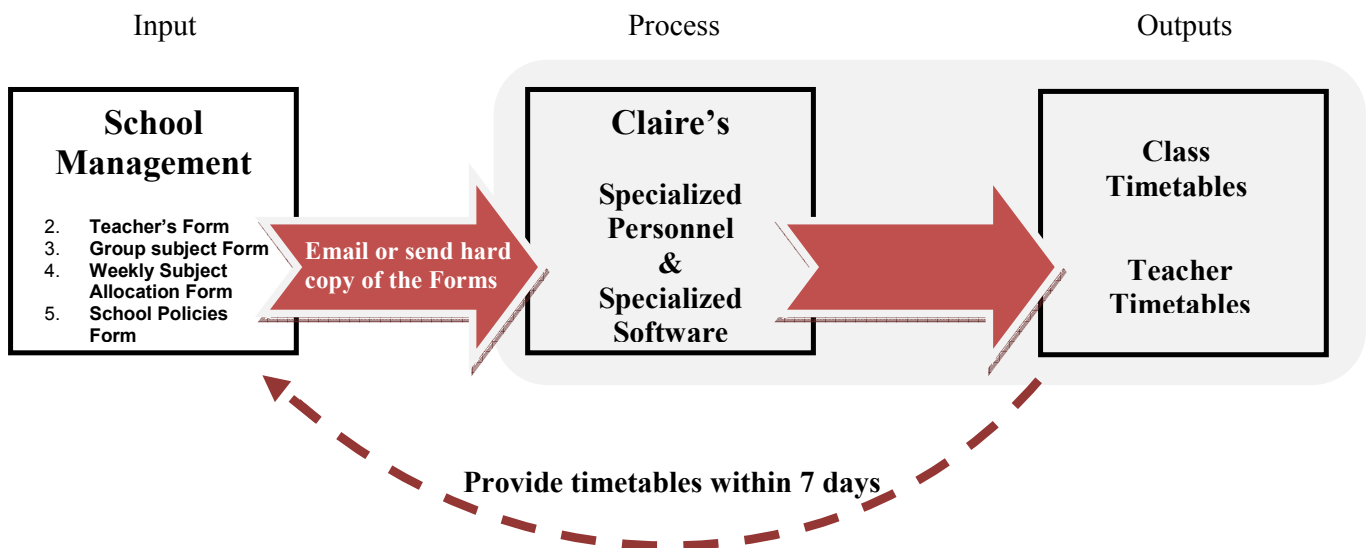
E.Music							
Art							
Drama							
Sin.Lit							
Eng.Lit							
French							

School policy Format:

The **School Policies** comprise of rules, regulations and functions that are specific to each school. For example, one school might have a policy of allocating the first period of every Monday for the class teacher. The following table provides an example of the School Policy Form. More rows could be added when necessary.

No	School Policy	Details of the policy	Remarks
1	Class teacher	First period of the week has to be allocated to the class teacher.	
2			

What will the school get from Claire’s



Once the information is provided to Claire’s the School will receive the requested timetables within 7 days.

What are the additional supports the school management will get from Claire’s

Claire’s would be providing the timetables for each class and each teacher. In addition, Claire’s would be providing the school with two software tools to help the school to manage the school conveniently. The two software tools are as follows.

1. School Manager

This tool provides easy access to reach information pertain to any given class, giving full details of teachers teaching each subject and the number of periods each subject has to be taught in that class and the individual timetable of each teacher teaching in that class. The tool also provides information such as the productivity of each individual teacher so that the school management could effectively utilize the less

productive teachers to undertake other responsibilities such as extra curricular activities (i.e. mentoring). Please read under School Manager for more details.

2. Teacher Manager

This tool provides easy access to all information related to school for each individual teacher. In case of a teacher being absent, the Teacher Manager tool would be able to direct the Head teacher to determine a substitute teacher or teachers. Also, this tool will be able to record the attendance of each individual teacher pertain to each day and archive the attendance record throughout the academic year. Therefore the school management would be able to obtain the attendance record for any teacher for any span of days.

What is School Manager tool?

SCHOOL MANAGER

The “School Manager” software developed by Claire Information Pvt. Ltd offers a helping hand to create timetables for schools while providing additional useful information such as the productivity of each teacher.

Also, it has the added benefit of not having to track down each class or each teacher or subject individually as the graphical user interface (GUI) brings all these information onto a single window. For example, in the absence of a teacher the Principal might want to find the lessons that need to be replaced that day by another teacher. The SCHOOL MANAGER software would be an immense help in situations such as these for the Person in Charge to find necessary information. Upon selecting a particular class, the School Timetable Technician brings several windows carrying the following information.

1. Timetable of the particular class along with each subject teacher’s name
2. A list of all the teachers who teach in the particular class
3. Timetables of each individual subject teacher
4. A list of subjects taught in the particular class
5. Number of periods that are not covered for each subject with respect to the requirements of the school.

Teacher's List Window

Provides a list of teachers who teach for this particular class. If a teacher is selected from this group, his/her timetable would be shown on the Teacher's timetable window.

Teacher's Timetable Window

Which other classes he/she will be teaching during the week

Name of the teacher

Teacher's Timetable Window

Subject List Window

Class Timetable Window

Class Name

Subject List Window

Provides the list of subjects taught for the particular class (i.e. class 6-D). Also shows how many periods are left from the required number of periods for each subject. Zero value means that the required numbers of periods are all allocated.

Class Timetable Window

The timetable of a particular class along with the names of the teacher for each subject i.e. timetable of 6-D

Class Name

Any class is selectable using the scroll bar. Currently chosen: Class 6-D

What is the Teacher Manager tool?

The teacher management tool will be able to do the following functions.

1. In the event of a teacher being absent the teacher manager tool will be able to suggest substitute teacher/teachers to cover up the lessons of the absent teacher.
2. The teacher management tool will have a record of each teacher's attendance.

Summary of Timetable Generating Process

Phase 1 – The school will prepare the 4 forms explained above and send it to Clairs.

Phase 2 – Clairs will prepare the preliminary analysis of the timetable and if any clarification is needed Clairs will discuss with the school management for further details.

Phase 3 – Clairs will prepare the draft time table for each class and for each teacher.

Phase 4 – School will verify the accuracy of the time table based on the above 4 forms.

Phase 5 – Clairs will provide both soft and hard copies of the confirmed version of timetables.

Phase 6 – Clairs will provide two additional software tools (The Timetable Manager and The Teacher Manager) to the School.