



Scheduling – What First?

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Idea

In this article, I want to discuss the overall strategy I like to use for scheduling a large secondary school timetable.

If you have been a timetabler in one school for some time, you will probably have a well-defined route from the beginning to the end of your scheduling. You know what will be difficult and you know what can be left until the end.

*Whether or not you are an absolute beginner or an old hand, I hope you will be interested in the techniques I use at different stages and how I decide **what comes first!***

Preparations

Flexibility

*In general, it is best practice to schedule the most difficult blocks of lessons (the most inflexible) first. In timetabling, neglecting the difficult in favour of the easy is a sure way to disaster. **After you have scheduled the easy, the difficult may have become impossible!***

*By **flexibility**, I mean having elements of choice at each stage. As I progress through the task of scheduling the timetable, I know my choices will reduce further and further as my pool of free teachers becomes smaller. Therefore, I want to ensure that my timetable model has sufficient flexibility for me not to run out of choices completely before I complete it!*

Factors which make scheduling more difficult (creating inflexibility)

- *Part-time teachers – yes, this is generally the first topic of conversation when I meet a timetabler for the first time. If the school allows teachers to have guaranteed full days off (with no job-sharing), the restrictions these teachers impose will affect almost every decision you have to make. As the number of part-timers increases, the difficulties escalate exponentially (ie 20 part-timers is far more than twice as difficult as 10 part-timers). When the effects of a large number of part-timers causes a timetable to fail its students and staff (all staff), I say that “the number of part-timers has exceeded a **critical mass**”*
- *Specific times when a team of teachers from different subject areas meet during school timetable hours (typically for pastoral or management meetings). Apart from **option** blocks and **linear** blocks, many timetable blocks are made up of teachers from the same subject areas. Scheduling these is an expected part of timetabling. When a **mixed** team meets, it can prevent you from scheduling any subject blocks related to their areas of expertise. To timetablers, such meetings can act as a **stake through the heart of your timetable!***

Creating Flexibility in Blocks

Look at the block below. This option block contains 11 classes, which must be taught at the same time (five times) – it is tall and narrow and is therefore inflexible. The fact that I only have to schedule it 5 times means that I'll probably have lots of choices where in the timetable I place them

A	Option A	5
19	Ar ₅	5
19	Bs ₅	5
18	Fr ₅	5
18	Gg ₅	5
18	Hi ₅	5
18	Ig ₅	5
18	Ld ₅	5
18	Mn ₅	5
18	Ms ₅	5
18	Mu ₅	5
18	Pd ₅	5

What if this was a Sixth Form block and spanned 9 lessons instead of 5? This is a much more difficult proposition. To make it easier, I could **make the block wider by sharing each class between two or more teachers**. For example, the Art (Ar) class is shared DDT5 FRG4, the Business class is shared TCM6 IST3 etc. Amazingly, this adds a tremendous amount of flexibility to the block. How much?

- Every time I schedule this block I have a choice of two Art teachers
- Every time I schedule this block I have a choice of two Business teachers (making a total of 4 different Art, Business combinations)
- Every time I schedule this block I have the choice of two French teachers (making a total of 8 = 2 x 2 x 2 Art, Business, French combinations)
- In total, roughly speaking, every time I schedule this block I will have a choice of 2 to the power of 11 = 2048 different combinations of teachers

Reducing Part-Time Issues

When is a part-time teacher not a part-time teacher?

Answer:

When he/she agrees to become part of a perfect job-share with another part-timer!

Unfortunately, most teachers I speak to do not have a firm grasp of what is entailed when forming a perfect job-share whereas timetablers will appreciate every aspect of the arrangement!

A perfect job-share is when two teachers effectively become one teacher, with one and only one of them covering each day with no different rules for the classes they teach.

- A job-share, where one teacher teaches Sixth Form but the other doesn't, isn't a job share – they are two part-timers!
- A job share, which involves teaching a Spanish class when one does not teach Spanish, is not a job share – they are two part-timers!

A perfect job-share between two teachers means they agree to

- Allow the timetabler to schedule them as though they were one teacher
- Accept any distribution of lessons for a class between the two participants. For example, If they are responsible for an Economics class for 5 lessons, they could have lessons in the ratios 5:0, 4:1, 3:2, 2:3, 1:4, 0:5

When two part-time teachers agree a perfect job-share, as timetabler, you should rejoice and give thanks – you have just reduced the number of part-time teachers by two!

Sharing Classes

In the above sections, I have introduced the idea of creating flexibility by sharing classes between two or more teachers. In fact, towards the end of the timetabling process, many timetablers find themselves being forced (not originally part of the plan!) to share some classes in order to fill the remaining time slots.

I do not have any strict rules about how subject teams share or do not share classes. I prefer them to tell me how they want their subject delivered. In most cases, Heads of Subject will initially specify classes in Years 7 to 11 to have just one teacher. Although this adds inflexibility, their request is based on educationally sound principles and so is perfectly acceptable. However, Sixth Form courses which span over every day of the entire timetable cycle, often require a negotiated settlement between Subject Leader and timetabler (the latter hopefully being supported by leadership who have a more whole-school view).

Imagine you have a son who happens to be a Sixth Form student studying a two-year Maths A'Level course along with two other subjects. He is scheduled for Maths 9 hours every two weeks and he has just one Maths teacher, Mr Edwards who happens to be:

- Very uninspiring!

- Regularly absent from work
- Neglects to mark work

As a parent, I would be deeply troubled by the situation. This course forms one third of my son's work and he is entirely dependent on Mr Edwards.

This is just one of the reasons most schools insist (where possible) that Sixth Form classes are shared between at least two teachers. Another reason is that given above (Creating Flexibility in Blocks).

Most Sixth Form courses divide quite conveniently into teaching time ratios such as 6:3, 5:4 or even 3:3:3 in 9 lessons per cycle courses so that teachers can take on responsibility for specific aspects/topics of the course. Another benefit, of course, of sharing the class is that, if a teacher leaves (perhaps Mr Edwards should think about it!) the students are not stranded without a teacher or with a stand-in teacher for the entire course.

Separating Core and Option at KS4

To make the scheduling of Years 10 and 11 easier, schools will often split their option blocks into two areas, Core (compulsory subjects) and Options. There is a specific reason for using this system, which some timetablers only appreciate after unwittingly breaking it and getting into difficulties!

*The underlying concept is that the Core blocks draw their teachers from specific subject areas such as English, Maths, Science and PE whilst the Option blocks contain teachers from all subjects apart from these (with a few exceptions). **This arrangement means a timetabler can schedule Year 10 Core blocks at the same time as Year 11 Option blocks and Year 10 Option blocks at the same time as Year 11 Core blocks, with minimal problems caused by clashing teachers.***

When I go into a school to help them with a problem timetable, it is common for me to find that the new timetabler has recently tried to add a Science, English or Further Maths class as an option into option blocks without appreciating that this has made scheduling Year 10 and Year 11 much more problematical. The blocks, which previously fitted together, now contain the same teachers! They no longer fit.

Timetablers who design KS4 schedules using this strategy, will often produce attractive patterns if they colour their blocks throughout the week (see below)

	1Mon					1Tues					1Wed					1Thur					1Fri				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
U6	C	D	E	A	B	D	A	B	C	E	A	B	D	E		B	A	C	E	D	E	B	A	D	C
L6	C	D	E	A	B	D	A	B	C	E	A	B	D	E		B	A	C	E	D	E	B	A	D	C
11a	D	B	En	Sc	M	Sc	En	D	P	B	P	M	B	En	C	M	C	A	Sc	En	C	M	Sc	A	En
11b			Sc	P		P	Sc		En		En			Sc					En	Sc			En		Sc
10a	M	Sc	B	C	En	B	D	Sc	M	En	C	En	P	A	M	Sc	En	M	D	A	Sc	En	A	P	C
10b	Sc	M			P			En	Sc	M		Sc	M		En	P	Sc	En			En	Sc		M	

In the diagram, you can see the curriculum blocks scheduled for each year group for one week. For the moment, ignore the Sixth Form blocks (U6 and L6) and concentrate on the Year 10 and 11 blocks (11a, 11b, 10a, 10b)

- When Year 11 have an option block (A, B, C or D), Year 10 has two half-year core blocks – by design, there are no overlapping teachers
- When Year 10 have an option block (A, B, C or D), Year 11 have two half-year core blocks – no overlapping teachers

All Year 10 and Year 11 students have days in the form:

- 3 different core subjects and two different option subjects OR
- 3 different option subjects and two different core subjects

In addition, I hope the arrangement for the Sixth Form (where each student is guaranteed no repeated subjects and at least one free period every day), has not failed to catch your eye.

Scheduling Strategy

The Opening

After I have ensured that my curriculum model has sufficient flexibility to achieve my aims I will schedule lessons or blocks of lessons in the following order:

Using my own Excel Clash Chart utility or Sims Nova-T6, I will schedule in perfect synchronisation, Years 10, 11, 12 and 13 together. This isn't as difficult as it sounds because my pool of free teachers is large, I have ensured my Sixth Form classes are all shared (where possible) and Year 10 fits well with Year 11 as I employ the Core against Option technique described above. My initial two-week timetable may look like this (see below).

	1Mon					1Tues					1Wed					1Thur					1Fri				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
U6	C	D	E	A	B	D	A	B	C	E	A	B	D	E		B	A	C	E	D	E	B	A	D	C
L6	C	D	E	A	B	D	A	B	C	E	A	B	D	E		B	A	C	E	D	E	B	A	D	C
11a	D	B	En	Sc	M	Sc	En	D	P	B	P	M	B	En	C	M	C	A	Sc	En	C	M	Sc	A	En
11b			Sc	P		P	Sc		En		En			Sc					En	Sc			En		Sc
10a	M	Sc	B	C	En	B	D	Sc	M	En	C	En	P	A	M	Sc	En	M	D	A	Sc	En	A	P	C
10b	Sc	M			P			En	Sc	M		Sc	M		En	P	Sc	En			En	Sc		M	
	41	38	31	36	40	33	44	47	45	46	29	28	27	30	1	16	4	15	17	18	6	9	11	10	7
	2Mon					2Tue					2Wed					2Thur					2Fri				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
U6	C	D	E	B	A	E	B	A	C	D	A	B	C	E		A	D	B	E	C	E	A	B	C	D
L6	C	D	E	B	A	E	B	A	C	D	A	B	C	E		A	D	B	E	C	E	A	B	C	D
11a	En	B	Sc	M	D	En	D	Sc	B	P	A	C	En	Sc	M	D	A	M	Sc	En	C	Sc	M	P	A
11b	Sc		En			P		En	Sc		En		P	En					En	Sc			En		Sc
10a	M	En	B	A	Sc	B	M	D	Sc	En	En	Sc	M	B	D	M	Sc	P	D	C	Sc	A	En	C	P
10b	P	M			En		Sc		En	M	P	En	Sc			Sc	M	En			En	Sc		M	
	42	37	32	35	43	34	39	50	49	48	25	26	23	24	2	19	3	20	22	21	5	13	12	8	14

Notice, at the bottom of each column of activities, I have placed a number. This represents the order in which I filled the time slot. Numbers 1 and 2 were the most inflexible, containing a mixed team of teachers for the Sixth Form to meet on Wednesday afternoons. Numbers 49 and 50 were the last to be scheduled as these were the most flexible (they contained no part-time teachers and had no other associated restrictions).

Until this point, I have not paid much attention to when, in any day, each activity occurs. Therefore, I now devote some time to ensuring that each activity has a fair share of Period 1s, 2s, 3s, 4s and 5s so that the "graveyard slots" (as I've heard them called) meaning those where the students are hungry and/or tired are fairly distributed.

Note that those timetablers who claim they tend to put the **important** subjects early in the morning are not presenting the full picture. They actually mean they tend to put the **core subjects for the important year groups** earlier in the day. I'll leave it to the reader to decide what your school considers to be the important years!

To finish this first stage, I use the **Loading Utility** together with the techniques described in its accompanying article to ensure my teachers have balanced timetables over the two weeks and every day.

The Middle Game

I have now completed 4 out of the 7 years. Unfortunately, I haven't yet reached the difficult part. From this point onwards, the further you go, the fewer free teachers remain and hence the harder it will tend to get!

Looking at the bright side, I know I have set up my models with increasing flexibility as I proceed from Year 9 to Year 7. This does not mean I will complete Year 9 before I start Year 8. Let us look at what is left to do.

Year 9 (see below)

* Perf. Arts 10		* Humanities Sets 6		* Science Sets 6		* D.T. Sets 4		* English Sets 6		* M.F.L. Sets 8		* Maths Sets 6		* P.E. Sets 4	
25	Ar ₁ Cz ₁ Dt ₂ Mu ₂ Rt ₂	25	Gg ₂ Hi ₂	20	Sc ₂	20	Dt ₁	20	En ₂	17	Fr ₁ It ₂ Mn ₂	20	Ma ₂	25	Pe ₄
25	Ar ₁ Cz ₁ Dt ₂ Mu ₂ Rt ₂	25	Gg ₂ Hi ₂	20	Sc ₂	20	Dt ₁	20	En ₂	17	Fr ₁ It ₂ Mn ₂	20	Ma ₂	25	Pe ₄
25	Ar ₁ Cz ₁ Dt ₂ Mu ₂ Rt ₂	25	Gg ₂ Hi ₂	20	Sc ₂	20	Dt ₁	20	En ₂	17	Fr ₁ It ₂	20	Ma ₂	25	Pe ₄
25	Ar ₁ Cz ₁ Dt ₂ Mu ₂ Rt ₂	25	Gg ₂ Hi ₂	20	Sc ₂	20	Dt ₁	20	En ₂	17	Fr ₁ It ₂	20	Ma ₂	25	Pe ₄
				20	Sc ₂	20	Dt ₁	20	En ₂	16	Fr ₁ It ₂	20	Ma ₂		
				20	Sc ₂	20	Dt ₁	20	En ₂	16	It ₂ Ls ₂				

* Perf. Arts 10		* Humanities Sets 6		* Science Sets 6		* D.T. Sets 4		* English Sets 6		* M.F.L. Sets 8		* Maths Sets 6		* P.E. Sets 4	
25	Ar ₁ Cz ₁ Dt ₂ Mu ₂ Rt ₂	25	Gg ₂ Hi ₂	20	Sc ₂	20	Dt ₁	20	En ₂	17	It ₂ Mn ₂ Sp ₂	20	Ma ₂	25	Pe ₄
25	Ar ₁ Cz ₁ Dt ₂ Mu ₂ Rt ₂	25	Gg ₂ Hi ₂	20	Sc ₂	20	Dt ₁	20	En ₂	17	It ₂ Mn ₂ Sp ₂	20	Ma ₂	25	Pe ₄
25	Ar ₁ Cz ₁ Dt ₂ Mu ₂ Rt ₂	25	Gg ₂ Hi ₂	20	Sc ₂	20	Dt ₁	20	En ₂	17	It ₂ Sp ₂	20	Ma ₂	25	Pe ₄
25	Ar ₁ Cz ₁ Dt ₂ Mu ₂ Rt ₂	25	Gg ₂ Hi ₂	20	Sc ₂	20	Dt ₁	20	En ₂	17	It ₂ Sp ₂	20	Ma ₂	25	Pe ₄
				20	Sc ₂	20	Dt ₁	20	En ₂	16	It ₂ Sp ₂	20	Ma ₂		
				20	Sc ₂	20	Dt ₁	20	En ₂	16	It ₂ Ls ₂				

I will almost definitely leave the Perf. Arts and Humanities blocks until later – they are wide and short! In my timetabling software (Nova-T6), I will test each of the other

blocks and put them (on paper) in a rough order of difficulty. If two blocks of the same subject have equal difficulty I may decide to schedule them lesson by lesson, flicking regularly from one block to the other.

From this stage onwards, you will find that the part-timers play an increasingly important role in preventing you from scheduling lessons in the ideal time slots.

Year 8 (see below).

* Teaching Groups 21		* Technology Sets 6		* English Sets 8		* M.F.L. Sets 5		* Maths Sets 6		* P.E. Sets 4		
25	Ar ₃ Dr ₂ Gg ₃ Hi ₃ Mu ₂ Rs ₂ Sc ₆	21	20 Dt ₄ It ₂	6	20 Cz ₂ En ₆	8	20 Fr ₃ Mn ₂	5	20 Ma ₆	6	25 Pe ₄	4
25	Ar ₃ Dr ₂ Gg ₃ Hi ₃ Mu ₂ Rs ₂ Sc ₆	21	20 Dt ₄ It ₂	6	20 Cz ₂ En ₆	8	20 Fr ₃ Mn ₂	5	20 Ma ₆	6	25 Pe ₄	4
25	Ar ₃ Dr ₂ Gg ₃ Hi ₃ Mu ₂ Rs ₂ Sc ₆	21	20 Dt ₄ It ₂	6	20 Cz ₂ En ₆	8	20 Fr ₆	5	20 Ma ₆	6	25 Pe ₄	4
25	Ar ₃ Dr ₂ Gg ₃ Hi ₃ Mu ₂ Rs ₂ Sc ₆	21	20 Dt ₄ It ₂	6	20 Cz ₂ En ₆	8	20 Fr ₅	5	20 Ma ₆	6	25 Pe ₄	4
		20	20 Dt ₄ It ₂	6	20 Cz ₂ En ₆	8	20 Fr ₅	5	20 Ma ₆	6		

* Teaching Groups 21		* Technology Sets 6		* English Sets 8		* M.F.L. Sets 5		* Maths Sets 6		* P.E. Sets 4		
25	Ar ₃ Dr ₂ Gg ₃ Hi ₃ Mu ₂ Rs ₂ Sc ₆	21	20 Dt ₄ It ₂	6	20 Cz ₂ En ₆	8	20 Mn ₂ Sp ₃	5	20 Ma ₆	6	25 Pe ₄	4
25	Ar ₃ Dr ₂ Gg ₃ Hi ₃ Mu ₂ Rs ₂ Sc ₆	21	20 Dt ₄ It ₂	6	20 Cz ₂ En ₆	8	20 Mn ₂ Sp ₃	5	20 Ma ₆	6	25 Pe ₄	4
25	Ar ₃ Dr ₂ Gg ₃ Hi ₃ Mu ₂ Rs ₂ Sc ₆	21	20 Dt ₄ It ₂	6	20 Cz ₂ En ₆	8	20 Sp ₅	5	20 Ma ₆	6	25 Pe ₄	4
25	Ar ₃ Dr ₂ Gg ₃ Hi ₃ Mu ₂ Rs ₂ Sc ₆	21	20 Dt ₄ It ₂	6	20 Cz ₂ En ₆	8	20 Sp ₅	5	20 Ma ₆	6	25 Pe ₄	4
		20	20 Dt ₄ It ₂	6	20 Cz ₂ En ₆	8	20 Sp ₅	5	20 Ma ₆	6		

The Teaching Groups block is **linear**. It is also very wide and short. This will be one of the last blocks I'll deal with. The most difficult here are likely to be MFL, Maths and PE although I know that there are part-timers in the English block, which may make them difficult. As before, some preliminary testing is called for, something which is very easy to do in Nova-T6.

Year 7

* Teaching Groups 20		* Technology Sets 6		* Humanities 14		* Maths Sets 6		* P.E. Sets 4		
25	Ar ₃ Cz ₂ Dr ₂ Fr ₂ Mn ₃ Mu ₂ Sc ₆	20	20 Dt ₄ It ₂	6	25 En ₆ Gg ₃ Hi ₃ Rs ₂	14	25 Ma ₆	6	25 Pe ₄	4
25	Ar ₃ Cz ₂ Dr ₂ Fr ₂ Mn ₃ Mu ₂ Sc ₆	20	20 Dt ₄ It ₂	6	25 En ₆ Gg ₃ Hi ₃ Rs ₂	14	25 Ma ₆	6	25 Pe ₄	4
25	Ar ₃ Cz ₂ Dr ₂ Fr ₂ Mn ₃ Mu ₂ Sc ₆	20	20 Dt ₄ It ₂	6	25 En ₆ Gg ₃ Hi ₃ Rs ₂	14	25 Ma ₆	6	25 Pe ₄	4
25	Ar ₃ Cz ₂ Dr ₂ Fr ₂ Mn ₃ Mu ₂ Sc ₆	20	20 Dt ₄ It ₂	6	25 En ₆ Gg ₃ Hi ₃ Rs ₂	14	25 Ma ₆	6	25 Pe ₄	4
		20	20 Dt ₄ It ₂	6						

* Teaching Groups 20		* Technology Sets 6		* Humanities 14		* Maths Sets 6		* P.E. Sets 4		
25	Ar ₃ Cz ₂ Dr ₂ Mn ₃ Mu ₂ Sc ₆ Sp ₂	20	20 Dt ₄ It ₂	6	25 En ₆ Gg ₃ Hi ₃ Rs ₂	14	25 Ma ₆	6	25 Pe ₄	4
25	Ar ₃ Cz ₂ Dr ₂ Mn ₃ Mu ₂ Sc ₆ Sp ₂	20	20 Dt ₄ It ₂	6	25 En ₆ Gg ₃ Hi ₃ Rs ₂	14	25 Ma ₆	6	25 Pe ₄	4
25	Ar ₃ Cz ₂ Dr ₂ Mn ₃ Mu ₂ Sc ₆ Sp ₂	20	20 Dt ₄ It ₂	6	25 En ₆ Gg ₃ Hi ₃ Rs ₂	14	25 Ma ₆	6	25 Pe ₄	4
25	Ar ₃ Cz ₂ Dr ₂ Mn ₃ Mu ₂ Sc ₆ Sp ₂	20	20 Dt ₄ It ₂	6	25 En ₆ Gg ₃ Hi ₃ Rs ₂	14	25 Ma ₆	6	25 Pe ₄	4
		20	20 Dt ₄ It ₂	6						

By design, I have ensured that Year 7 is easier to do than Year 8 and Year 8 is easy to do than Year 9. The Year 7 Teaching Group blocks are going to be the very last I do – they are super-wide and short and, very importantly:

The Year 7 students are new to the school and so, in roughly speaking, I, as timetabler, can decide which teacher goes with which group

The Humanities block is quite wide so this will be done before the Teaching groups. The most difficult to schedule will be Maths, PE and Technology.

The End Game

*As stated previously, it is usually wise to leave the **linear** blocks until last. They have large teams of teachers from which to choose when trying to fill a time slot. They are usually the shortest blocks too!*

Looking at the above Year models, my final blocks would be done in roughly this order:

- 1. Year 7 Humanities (2 blocks) – the part-time English teachers will make it difficult*
- 2. Year 9 Perf. Arts (2 blocks)*
- 3. Year 8 Teaching Groups (2 blocks)*
- 4. Year 7 Teaching Groups (2 blocks)*

Note that, as you approach the very final stages, you may start to feel anxious that you are going to hit lessons impossible to schedule. You are justified in your feelings! It is almost certain you will have to make some compromises which might include:

- Sharing a class between two teachers*
- Swapping the groups of two teachers*
- Resorting to making students do the same subject more than once in a day in non-consecutive lessons (please avoid this if at all possible as it should upset you like it would upset me!)*

The Final Trick

When I first became interested in timetabling, I witnessed many occasions when a timetabler (sometimes with an assistant) could be seen miserably unpicking up to a month's work when they could not find a way to complete the timetable. Even having unpicked it and proceeded down alternative routes there was no guarantee the new pathway would lead to success.

Amazingly, I have seen situations in some schools where the timetabler is still trying to finish the school timetable after the new year has started. He/she has spent the entire Summer term and holiday rearranging teams of teachers to try to make the

last linear block lessons fit. In one school, whilst the timetabler tried to complete the Year 7 timetable, the Year 7 students spent the first three weeks in tutor groups with the form tutors agreeing to swap classes on an ad hoc basis!

*The reason for this difficulty is that most timetablers will randomly choose the teachers to teach each group in the final linear blocks. After forming their teams, they then try to schedule the lessons and invariably they fail. Many years ago, I cast a mathematical eye over this problem and came up with a systematic way to form the teaching teams for each linear group. Initially a paper method, I then converted it to an automated Excel application I named **Fill the Gaps**.*

When I first used the system, after I had formed the teams, I challenged the experienced timetabler to complete the timetable without any further help from me. His initial reaction was one of suspicion – this part of the timetable had usually taken weeks of trial and error to complete. However, he agreed to proceed and, as the teachers fell (without being forced) into the time slots suggested by the system, both he and I started celebrating. The whole process had taken under two hours and involved only a few minor compromises.

*If you would like to know the theory behind my **Fill the Gaps** system, please refer to the associated article. I also intend to publish an Excel version for Sims Nova-T6 users, which is easily customisable to fit any school timetable cycle.*

Tidying Up

Checking Student Timetables

After you have scheduled your last lesson, yes, give yourself a pat on the back but please don't be too hasty to publish it to staff. This can only lead to unnecessary misery and feelings of injustice when the only responses you get from staff are complaints about full days, shared classes, unbalanced weekly loadings on their personal timetables.

Ironically, very few staff will notice mistakes you have made with the scheduling of students lessons. Their attention usually focuses on their own personal timetables! Therefore, before you break out the champagne, perform the following checks and routines:

- 1. Using the Nova-T6 Block menu, open each block in every year and look at how you have distributed the lessons and the teachers taking the lessons. If you see an anomaly, by clicking on each lesson, Nova-T6 will highlight any possible movements you could make to help rectify the problem*
- 2. Use the **Loading Utility** to improve the distribution of the teacher's lessons over the days and weeks (covered in another article). By spending time here, you can make significant improvements with teacher timetables without affecting the students in any way so it is well worth the effort*

*Once you have completed the above, publish your **Departmental Timetables** using Nova-T6 and hand them to subject leaders for checking. The distribution of personal*

timetables to staff should be left until every subject leader had had time to analyse their subject timetables and discuss issues/compromises with members of their team on a one-to-one basis.

Don't be disheartened when subject leaders ask you to make changes. If the changes are possible, then do them, if they are not, be prepared to spend some time explaining why.

Time to Celebrate?

That depends! New timetablers will be shocked when they discover that although their lovely school timetable is complete, the classes (most or many of them) are empty after the timetable has been exported from Nova-T6 to Sims.

Some timetablers take control of this procedure whereas some hand over the task to a Data Manager or other manager.

Appreciation – A Personal Note

If, after all your hard work, all you get is complaint followed by complaint, take solace in the fact that most teachers have no idea what is involved in creating a school timetable. Indeed some think that, in order to create their personal timetable, you have taken a blank personal timetable and, over a cup of tea, decided which class they are going to teach and when. If they see they have a difficult class last lesson on a Friday, they will suspect you did this deliberately to upset them! (This is true - I have written evidence!).

In compensation (should you desire it), please accept the appreciation of a fellow timetabler who fully understands what a special job you are doing and the considerable effort and attention to detail it requires.

About the Author

Paul Vant worked for 35 years in secondary school as a Maths teacher, Senior Teacher, Timetabler and Systems Manager. He has acted as a consultant to many schools in timetabling and assessment. He designs software and web applications to solve problems relating to all his fields of expertise. In 2000 he designed the Student Sorting Kit (used for creating balanced groups of students, now in use in secondary schools throughout the UK and in other international institutions.)