**COURT MOOR SCHOOL**

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# Case Study: Edval Timetabling

## Overview of our School

Court Moor School is a mixed comprehensive school located in Fleet, Hampshire, UK. There are 1100 students on roll, aged between 11-16 years.

Our school adopted Edval initially in 2016 on the recommendation of an Australian colleague. After two years of working with the Edval timetabling software and team for a positive outcome, we agreed to document our experiences of the changes that resulted and hope it may interest other schools.

As assistant head of the school, I was tasked with the job of writing the school timetable, but had not done a timetable previously. My predecessors had worked in NOVA T6 but I have no experience of that programme, although I have used SIMS for many years.

It was a challenge to learn both the art of timetabling, as well as the Edval software to manage the process,  within the time available to get the process completed. It was a steep learning curve and not without some difficulty and stress, and I needed, at times, a high level of support. Two years now from beginning the process, it is clear the ongoing effort is much less than the initial learning, and the outcome and direct benefits to the school are certainly compelling.

## Time to Learn Edval

It must be noted there is a learning curve in the Edval software. It's complex, and takes quite some time to fully master, something I am still working towards. A significant time investment in the first year paid real dividendes in the second year. There are practical training manuals which I worked through with Edval consultants who were readily available and spent time training and supporting me through the process.

## Significant Budget Savings

Through the use of the Edval software, the school estimates a saving of around £88k on staffing  in 2016 and £69k on staffing in 2017. This saving is significant as it prevented us from having to move to staff redundancies and, during a period where school budgets across the country are being reduced, meant that we could impact positively on the school budget. I predict that we could make further savings next year, depending on the curriculum area, but we are close to our optimum staffing to cover our timetable, so this is less certain.

The usual practice in our school, as may be common, was for any staff resignation to prompt us to replace a teacher with similar skills. Less frequently did we more closely examine the staffing in some depth, to see if savings could be made, noting it is often difficult and laborious to do this. The best time was at the beginning of any timetabling process, by which time it was a bit late to make decisions that covered the next year.

The new process using the Edval software has been much simpler and faster;we have been able to deliver results the school wasn't able to achieve previously. At any time, on request

from the head, I could model any anticipated or planned staff departures, using the Edval software. We were also able to hypothesise about where we would need to replenish staff or not, depending upon different scenarios. This meant that, to some extent, we could strategically plan for a range of eventualities. Completely re-staffing the whole school with one less teacher or reduced part timer loads is relatively simple and can be done in minutes. Similarly, 'testing' of suggested staffing has also been very helpful.

Without needing to spend weeks doing a different timetable model and staffing manually, I was able to use Edval to answer questions and showcase alternatives 'on the spot'. This allowed our head to make more informed decisions, and also to have greater confidence and understanding in the process, one that has traditionally been made by a single timetabler, who has spent a lot of time working on only one or two variations. As a result, the school has been able to very quickly identify that exisiting staff may not need to be replaced or could be replaced by part timers or staff with different skill sets to achieve a full staffing arrangement.

The savings achieved on our staffing are very significant and would not have been possible without using the software to model opportunities so quickly and easily. While there were obviously some costs in the timetabling software, training and implemention – it was a fraction of the savings we have made.

## Speed to Change

I am becoming more confident in using the software and am increasingly making use of the automated functions. These are a time-saver, and especially helpful for those, like me, with limited timetable experience. During the latter half of this year, a colleague has collaborated with me to work on the timetable and has been able to work competently with the software in a relatively short space of time. This has been really beneficial in terms of strategic decision making and succession planning.

An example of this is when, at a late point in the process, the head of English realised that he had not requested the pairing of groups he wanted in year 7. Previously it would have been a major job to unpick all the classes to make the adjustemnt. Instead, we simply indicated to the Edval software how we wanted these classes linked, pinned our other year groups and activated the automated fix function. Very quickly this rearranged our existing clash free solution, to accommodate the entirely different class links.

Similarly, the rearrangement of these KS3 classes resulted in the previous rooming assignments being invalid in many cases. Again however, the software was able to re-room all classes very effectively within minutes.

The simplicity and the speed which major changes can be accommodated automatically has proven to be very effective in allowing our school to achieve a great result.

## Rooming and Science Lab Saving

Like many schools, we are limited in our ability to room all science classes into labs. We can fit most, but some must share theory rooms at times. We were considering an expensive conversion of an existing room to become a new science lab to address what we felt was a shortfall. Edval has a function to automatically room all classes in the timetable, which works surprisingly well and requires almost no manual adjustments. It is also easy to make changes to a solution to see impact. These factors allowed us to model variations and, together with Edval's support, we found we could increase our lab occupancy rates enough

without having to build a new lab. This resulted in a significant financial saving, as well as no disruptions needed during construction. We also then retained the use of the room we were going to convert which could continue to be used for other subjects.

We were encouraged by Edval to do rooming by computer algorithms. This seemed to deliver very good results but we did like to make some manual adjustments. The beauty of this is that you can factor in requirements at an individual level and is very easy to do. We did notice a clear improvement to the auto generated rooming over the two years, which seems to be from improvements in our file, in our knowledge of the software, as well as improvements made to the software itself. Some changes were made in response to our comments which was great, such as improving the way teacher movement is limited in automated room allocations, keeping staff in one building far more often.

## Staffing Splits

With many part timers, especially in our MFL and English departments, it has always been necessary to split classes to accommodate the timetabling requirements. Using the Edval software, we were able to generate a solution without any split classes at all. This has never occurred before in the history of the school, and resulted in more consistent teaching, as well as reduced administration effort in teachers managing shared classes.

The initial surprising result of no splits did require a few more double periods, The following year, Edval showed us how we can better establish compromise. We were able to deliver a new timetable which still had far lower levels of split classes than previous years, while also reducing instances of doubles in MFL.

The ability to finely adjust the balance between competing requirements has been very effective.

## KS4 Options

Having previously only ever run our options through the NovaT6 programe, we were thrilled to discover that Edval was able to achieve a far greater level of satisfaction of students to courses. Both years, we achieved 100% success in granting course requests, which has never previously been the case in our school. This works on the idea that the timetable works around student choices, rather than students fitting into the constraints of a timetable programme.

It was interesting to see how Edval manages the process, including the ability for the software to suggest which courses to run or not. Previously we had made these decisions manually, and based on the raw 'number' of student requests. Edval showed that while it was entirely possible to do things our traditional way, it wasn't necessarily the best approach.

By measuring the 'value' of classes according to several different metrics such as the students' level of interest in the course, it became clearer which was the best number of classes to run or not. The whole process was completed online, from students inputting their choices directly into Edval, to emailing students to confirm choices. Similarly, there is a very simple way to change options, where a student changes their mind.

## Construction of Timetable

The second year of using Edval proved to be so much faster than the first, which seems obvious perhaps. As I have mentioned, there was a point when we thought we were all finished and then had a request to pair year 7 English classes, which were not previously paired together. This change request came just prior to distributing final timetables to staff. It would have ordinarily been a major change to the timetable to adjust so many classes and then rooming, but we were keen to try the automated tools in Edval. We entered the requirement to link these English classes, and then pressed the automatic button to have Edval 'adjust' the solution to accommodate the change requested.

It was so quick and easy to do that we decided to push on and fully block year 7 into two year halves again (the ideal solution for the head of department). We had thought this too difficult due to us having already completed the whole school timetable. Edval was again able to rapidly reconfigure our existing timetable to achieve what we wanted. This was without us having to manually move anything and with just a small amount of technical, strategic problem solving. It was a sense of achievement and certainly a benefit to the school to be able to make critical changes relatively rapidly and without much difficulty.

## Software Features

The software already seems advanced, catering to our needs well. We had some minor irritations in how the rooming functions worked, where if teachers were unable to get their 'home' rooms, they may be assigned an alternate that was across the other side of the school. In some cases, teachers were being roomed across several different buildings within the timetable cycle which was disruptive, especially where resources were being stored for their classes in multiple locations.

Edval listened to our requests and were able to add some new features to address this area. Now, when we run the automatic room assignment process, the results are great in this area. All our teachers are far better roomed, with a noticeable improvement in keeping them to only one room, or one building in most cases. We may not have been able to achieve this improved level of rooming quality without the software and, at any rate, it would likely have taken several days to complete the rooming process if done manually and this would need to be adjusted if there were any later changes.

## Break Duty Rota

Usually the job of allocating break duties has been allocated to another deputy head to do, once the timetable has been completed. It is a job that usually takes most of a day to draft and then continuously tweak with ongoing change requests from staff. We decided to do the rota in Edval. It was very quick, done in a few minutes, negating the need to do the job manually. Where manual changes might be needed, again, it is extremely quick and easy to do. Furthermore, the quality of the rota was found to be very good and there seems to be less staff making change requests, because Edval has found good time slots for duties for each staff member, having considered their timetable each day.

## Conclusion

While it was some effort to learn what seems highly complex software, the benefits were significant in a wide range of areas. Once the initial set up has taken place, the software is easy to manipulate and fine tune, creating increasingly good results. It also facilitates involving staff in decision-making, where they can easily see different solutions to different scenarios and you can draft changes to show possible outcomes to any suggested changes in staffing or curriculum. We appreciate the benefits this affords our school, and are happy to encourage other schools to consider investigating this as an alternative to existing timetable processes.

We welcome any school to contact us with any questions on the timetabling experience we have had and would be happy further to discuss Edval and its many benefits.

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