Rethink Flexible Working with Smarter Timetabling

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Executive Summary

Part-time staff may be seen as an obstacle in schools – difficult and time-consuming to accommodate effectively within the timetable. Quite simply this is largely a falsehood. By rethinking the problem and identifying innovative solutions, part time staff can be seen as a rich asset, not an obstacle.

There are many reasons for this unfortunately common viewpoint that need challenging in schools.

Time-off Definitions

Understanding the problem is half the solution

Fixed days off: Some staff have long years of service, or children in childcare and as such have specific requirements for fixed days off.

Non-fixed days off: Some staff (NQT's?) or those without children have requirements for days off, but may not have the political clout or reason to ask for specific days off.

Preferred days off: Middle ground, where staff place a polite request for specific days, but recognise this is a request, not a requirement – and accept variations in some years.

Two half days: The ideal is usually full days off, but some staff are flexible, and happy enough to accept a morning off, and an afternoon off, in lieu of a full day.

Criticisms of Part-time Staff

Thought obstacles needing challenging

- Part time staff have days off, which restricts scheduling classes effectively.

- Part-time staff make the 'job' of timetabling harder, time consuming and stressful.

- Part timers cause higher numbers of shared classes, which degrade teaching quality and are disruptive to students

- Part timers cause staffing difficulties as they often can't take some larger senior classes in blocks, without splits – or if they do, these blocks can't be placed properly.

- Part-time staff may not keep up with department meetings (knowledge) on days off, or may not do Sport or activities that full-time staff may do less willingly. Playing the part-time card.

Benefits of Part-time Staff

Effective assets within schools

- With reduced loads, part time staff can actually be easier to schedule in some cases.

- Part-time staff are often experienced, unlike NQT's.

- Part-time staff have more time for lesson prep in time off, unlike stressed full-time staff.

- Part-time staff can sometimes be flexible, and may cover activities on their days off like class excursions or even classes – as a slightly dynamic on-demand workforce.

- Part-time staff loads are reduced, allowing more flexible arrangement of staffing, such as used to 'make up' a small deficiency, instead of hiring another more expensive full timer.

Reasons for Difficulties in Flexible Work Scheduling

Lack of effective training

In general, there is no formal accreditation process for timetabling, no timetabling conferences, no software agnostic courses in timetabling. From a DfE perspective, there are no benchmarks on timetabling metrics, no OFSTED review process for timetabling, and no big data on timetable statistics to allow clever data scientists to work wonders in cost savings and raising outcomes. Note Vendor training in timetabling 'software' is only half the solution. We need higher level teaching of core concepts and philosophies, as a lot of work can go into planning before it is even begun in the software.

Lack of rotation

Most timetablers learn from hand-over by previous staff, work in the same school for several years, maybe moving around to one or two schools in their career. They may have a colleague timetabler in another school they chat to. Lack of rotation and exposure to different timetabling environments can breed lethargy and isolation from innovation. Educational consultants who timetable professionally may do several dozen timetables every single year, across different sectors, which can be more than some in schools do in their lifetime – and can assist, or mentor those in schools to do better in this key role of scheduling.

Poor technology

Legacy timetabling software doesn't have some key features which make accommodating part-timer needs far more effective and easier.

Legacy of process

The 'it has always been done that way' mentality. Many schools are change averse, and find it difficult to adopt new software or new processes, including the enmeshing of the HR aspects of timetabling with the technical aspects. Some timetablers might benefit from training in how to communicate effectively, even if they are very good at the technical aspects of their job.

Legacy of attitudes

This same mentality also applies to attitudes as much as the 'scheduling' or 'requirements' of timetabling having 'always been that way as a process.

Lack of oversight

Internally

Timetablers often do an amazing job, but not always. Regardless of efficacy, they are most commonly working in isolation, away from the disruption of school life. They deliver a highly complex solution which few can challenge, as who understands timetabling anyway? When asked why the part-timers couldn't get their days off, the answer can often be 'because of the timetable'. When asked why the timetable isn't that great, the answer can often be 'because of the part-timers'. While not always, these vague answers are accepted within schools, as they have no way to challenge them effectively.

Externally

One good solution to 'oversight' is to get a Timetable Audit from a third-party timetable company. This can praise success, show some areas for investigation, or demonstrate improvements. Importantly, they can dismiss out of hand and debunk myths such as 'it can't be done' by just doing it – and then showing how it was done.

Ideally the education industry should move towards an OFSTED style focus on capturing data about timetabling. This includes number of part timers and mix, lessons taught after school, part timers who were not catered for in days off properly, numbers of shared classes and more. Having access to this data with external oversight enables benchmarking, big data analysis by independent researchers, standard setting, accreditation and formal training, and finally official auditing of 'timetable' quality as a key school metric for both academic and financial success

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Solutions

Examine Staff Loading

Often schools work to 'teaching loads' when timetabling, instead of total loads that make other activities and allowances more visible within the timetable. Sometimes the calculation of teaching time is outdated.

Employment agreements have changed, timetable structures and period durations have changed, other activities are added to, or removed that may affect available teaching load. The very calculation of how many periods staff 'teach' can be reviewed and this process sometimes identifies extra capacity that means part time staff can be more easily accommodated. In some cases, schools identify they can 'globally' increase their teaching loads by a period across the board, which (if accepted) offers a significant more flexibility.

Examine Days Off

When did you last review the days off in accounting terms? What is the exact employment agreements for all staff in minutes per week? What activities does this cover, or not? What is the effective FTE values? Have FTE values been rounded? What is the actual days off requirements, and period loading available of part-time staff?

Fixed days off staff

We assume Mrs Haig needs Fridays off, as she's had them for the last ten years, and has said before she needs them. It is easy to see this as a fixed requirement and not revisit it. More effective timetablers will never accept any requirement without full and deep understanding, and without periodic review. Because 'it's always been like that' is not a suitable answer, however, all too often this is the answer to many timetable questions, if they get asked at all.

If you ask Mrs Haig to 'change' her days off, she may say 'certainly not'. A better approach may be to gently ask the reason for Friday especially. The answer may be because she has always had it, and if suggested, she may be willing to change it. She may see 'change' as threatening a regular change during the year instead of a once-off change. Or worse, that she may occasionally 'lose' her day off.

It may also be that rather than 'ask' her if she can be more flexible, the timetabler may just do a full solution and gauge the impact of Mrs Haig having Fridays off. It could be a big impact. Perhaps a number of new staff have a stronger need for Fridays off, and having a number of staff away on Fridays makes it very difficult day to timetable. By showing Mrs Haig the actual problem, you can work with her to identify solutions – when she is understanding better, and willing to help.

All too often schools neglect to periodically review the restrictions they have placed in their timetable, to properly quantify the impacts, and understand their teaching resources in full. The language and philosophy of timetabling needs good professional understanding, as the same question can be phrased in two different ways, and get two different answers. Timetablers can work with or sometimes against (subconsciously) part-time staff - or worse, just 'accept' things without question. A good timetabler will be intimately aware of the actual needs and strength of needs for all part time staff, so they can best work solutions that meet all needs equitably and fairly.

Flexible days off

A common waste of flexibility in scheduling part-time staff is to treat them all as having fixed days off. Legacy timetabling software doesn't have the features to auto-allocate days off as best needed by other aspects of the timetable. Instead, days off are set at the outset of the process, then timetabling is done, and occasionally days off may be manually reallocated.

For a school that has a large number of part time staff it can be quite inefficient, as there may actually be thousands of

different combinations of days off among the part-time cohort. It is impossible to manually identify the 'best' arrangement of days off that can be adjusted.

Modern timetabling software can assist. The timetable can be scheduled without periods being assigned, so there is no 'concept' of time. Then, classes and staffing can be adjusted when it is known all (or most) part timers can have their days off accommodated, before days or even periods are 'allocated'. Some timetablers do this in a way on pin boards, fitting all the blocks, and then deciding what periods each block has in columns. In this method of computer assisted part timer management, the staffing and class placement can both be optimised first, then days and periods are allocated, and finally the 'actual' days off for part time staff are auto-allocated. The result can be a higher likelihood the part-time staff will get their days off, while also ensuring other aspects of the timetable work better.

Preferred days off

Some part-time staff are told by schools 'no, we can't accommodate your specific days off requests, you will get what we give you.' This is a shame, and may cause the school to lose their staff member, or degrade morale, and in turn their teaching effectiveness.

Legacy timetable applications are not able to properly cater to partial requests, and some schools do not see it as important to offer this 'slight benefit'. By better meeting part timer needs in having the timetable software 'try' to accommodate requests and succeeding at least more of the time, staff are happier and more engaged. It may be that these requests can be easily accommodated, but with both parties knowing that this won't be granted if the 'impact' of satisfying this request is too onerous.

Even where such preferred days off can't be actually granted, the mere aspect that staff are consulted and aware their 'requests' are being effectively considered is important, almost as important sometimes as being able to grant them. These staff are a great resource, and showing a clear desire to 'learn' their needs, and accommodate where possible, can speak volumes about how much they are valued within the school.

Two Half Days

Sometimes schools see days off as a binary choice. We can either give them or not. It may have the part timer working nearly full-time hours, but with many gaps in their timetable, where they are partly just wasting time, wishing they were not on-site. Legacy timetable software focuses solely on class spreads, and not so on teacher spreads. Good software will always magically block up part timer classes in ways that

better meet these teacher's needs.

Without even being asked, good timetabling software automatically allocates part timers with half days off where possible, even if they are not due them. Such half days are also not in the middle of the day, but mornings or afternoons off. Where periods are off in the day, they may be encouraged together, so the teacher has some larger block time off, being more effective for lesson planning if two periods together than two single periods.

By better managing all teacher's daily work activities with respect to time off, and particularly part-time staff, they are much happier, refreshed, prepared, and able to do their job as intended!

Late start / Early finish

Returning mothers and others wanting to work part time for any reason often have needs to start late or leave early a period. It has been seen in some schools as not being part of the timetabling process to accommodate these 'requests' which can alienate good teachers. There is a world of difference from a timetabling requirement that stipulates a teacher MUST always have first or last period off, versus a PREFERENCE to not teach these periods.

The preference approach will grant the request a lot of the time, but not for the few critical days where it can't be done without major disruption. As with

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all timetabling, it's important to understand the opportunity cost, but not shy away from encouraging stakeholders to ask for everything they want. The problem isn't in the asking, it's in the granting. The more we seek to understand, the more we can accommodate to varying degrees, without significant impact.

Option Blocks with Part Time Staff

Often the option blocks are generated separate to 'the timetable' itself. In some cases, the blocks are done by a different person in the school, and in almost all cases, blocks are generated without knowing key staffing for each class. While there are plenty of great, clever, timetablers – there are also plenty who do not see option blocks as a direct 'part' of the timetabling process, instead of an 'input' to the process. Option blocks should not be done 'before' the staffing and the timetable itself, but ideally done together.

Schools often end up with great blocks they can't staff, schedule, or that do not work with part timers.

Best practice works with the actual resources during block

construction. Most legacy software doesn't support the mapping of teachers and rooms to courses, and certainly not mapping varying levels of preferences for teachers and rooms for each course. With innovative timetabling technology, blocks can be generated that not only satisfy more students than other methods, they are already set up and 'designed' to work with the existing staffing, including part timers.

An example of a blatant error in block creation would be to place the Japanese course on with Dance in the same block, only to later discover the Dance teacher needs Wednesdays off, and the Japanese teacher needs Thursdays and Fridays off. As these courses are linked together in a block, and the staffing is likely they are the only ones who can teach these courses, we have a big problem. The block itself and all the classes can only be scheduled in Monday or Tuesday for all lessons. The correct approach would be to ensure these part timers courses were on different blocks, to mitigate these problems.

The management of part-time staff on senior option block classes isn't a major problem, provided they are known at the outset, and planned for when generating blocks. It is nearly trivial to move classes between blocks at this phase to easily cater to part time staff, but nearly impossible to cater to these needs

once the timetable has been done.

Note many say they can't 'staff' or 'timetable' during the block generation process, as the heads of departments haven't made up their minds as to staffing yet. This is a fallacy. Good timetabling practice uses software that properly caters to staffing 'options', so can be timetabled in draft, regardless of not knowing the 'actual' staffing. Furthermore, good timetablers will already know, or proactively ask for staffing requests early in the process, and thus get at least some of them that will later remain correct. Always do best efforts with estimates if need be, to have something workable at all times. Being able to have 'a' solution ready ensures no surprises later, and can help sway some if you can demonstrate an existing working solution early on that is already close enough to what they want.

As always, better timetabling technology, training and support is the solution to properly catering more easily to part-time staff. Keeping them 'off' the senior blocks or for larger classes to prevent scheduling problems isn't as ideal from an HR perspective, when planning can usually accommodate many of these issues relatively easily.

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Getting Creative

Not all timetablers are aware of all their options, and not all schools 'allow' creative options to work with part-timers. Some solutions include:

Organise a job share arrangement. Maybe the solution is to replace a departing FT staff member with a part-timer that job shares with another existing PT member. Save costs, and treat both as 'one' full timer, for more flexible scheduling.

Share their class with other teachers. While some schools see part-time staff driving up 'a lot' of shared classes due to restrictive availability, better timetabling can often address this area and reduce the number of shared classes overall, with innovative scheduling.

Run some classes after school. A part timer on a senior block may be able to be scheduled to last period, and then take a second period immediately after school that same day. Then, this block can be scheduled on a day this teacher is away, as they already took their class for another lesson on the day they were here.

Consider external support from professional timetable consultants such as Edval Timetables or MIST Services. Options include collaborative scheduling support or full construction services, as well as timetabler-in-residence, where professionals are seconded to the school directly and attending SLT meetings etc, but for several schools. Get better trained experienced staff, without paying their training or replacement.

Consider timetable audits, where consultants review your school's timetable independently for brief health check comments, or detailed reporting.

Seek advice in curriculum consulting. Get help in how and what you can do in the timetable (including addressing part timers better) well before you even begin the process.

Some part time staff may be able to take a lesson with half their classes students on one period, and half the students some other. By examining when individual students have free periods (for smaller class sizes), a part-timer may be able to do more lessons in a day they are actually on-site, and allow the block which their class is in, to run on a day they are away.

Sacred Heart Catholic School ranked 15th in the country in 2017 for Progress 8. They adopted a creative solution of partnering with a creche partly on-site. This instantly addressed any early start / late departure and other part time staff concerns, allowing more flexible use of these staff, and encouraging them to be part of the school.

For years, HoD's have been quite strong in setting staffing in many schools. This approach may be best for each in isolation, but not necessarily for the school as a whole, including not just part timers but other areas. Best practice in timetabling has all processes and requirements under some periodic review. One solution to making it easier to accommodate part timers may be to see staff allocations more holistically, as a 'whole school' rather than siloed department allocations with 'negotiated changes'. Paradoxically, staffing can sometimes be better if all departments are more flexible in their staffing needs, as this gives more scope to satisfy more stakeholders overall.

Summary

For decades the job of timetabling has been seen as an administrative task to complete. While some timetablers are very dedicated, many schools suffer from tools which have been surpassed long ago in timetable technology innovation. This is a legacy of the old, familiar way of doing business.

Meanwhile curriculums are becoming more complex over time. 3D printing and video editing were not 'a thing' ten years ago, yet now may need to be offered lest you lose enrolments. It can be harder to source quality staff, while costs are rising. There is a lot of pressure on schools to perform, and they may transfer this pressure to a degree on to part time staff, which can degrade their working environments, or discourage them from the workforce despite obvious skills and experience.

The solution to better supporting flexible working is best seen in addressing one of the major causes, being the difficulty, or more accurately, the perceived difficulty in managing part time staff. They clearly have some impact, but through better timetabling software and support, and allowing some practices to be re-thought, schools have an amazing opportunity to access a rich, quality workforce. They have the ability to schedule these staff more easily, and welcome them more warmly back into the workforce, to remain as an asset and not an obstacle to success in their school.

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About Edval

Edval is a global timetabling and educational consulting group. With offices in both Australia and London, Edval has client schools all over the world, including USA, Ireland and Asia. In addition to provision of smarter timetabling technology, Edval has a large team of Educational consultants who can assist schools to improve in many areas through the use of innovative technology.

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Chris is a co-founder of Edval, a company transforming education through smarter timetabling. With offices across Australia and in UK, client sites in USA, Ireland & Asia, Edval has global reach across several sectors. Chris has consulting experience to government, and has achieved cost savings in staffing of £150k+ across several UK schools. Edval provides advanced software compatible with SIMS and NovaT6 among others, provides full 'timetable audits', and timetable construction services.