

ACADEMIC WORKLOAD MODELLING

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1. Introduction

This paper summarises key findings on academic workload modelling (AWM), drawing on practical experience from work undertaken with SUMS' Members.

The following pages explore:

- Background
- Potential benefits of effective AWM
- Setting some principles
- Scoping AWM
- Good Governance
- The Workload Model
- Workload modelling software
- Roles and Transparency
- Changing a culture.

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2. Background

Academic workload modelling (AWM) is important for all universities especially in the context of recent changes to sector funding and student numbers. Reasons why a university may wish to change its existing AWM arrangements include enhancements to *equity, transparency and efficiency* and/or to simplify preparation of TRAC returns. However, these changes can present considerable complexity and challenges and can sometimes feel like a poisoned chalice to those responsible for the implementation of new AWM arrangements. Fortunately, there is much to learn from the experience of others.

The early work on academic workload models was done by academics from the University of Salford and the below document is useful for those new to the subject.

[http://www.research.salford.ac.uk/maw/cms/resources/uploadsbarrettfinalsept09\(2\).pdf](http://www.research.salford.ac.uk/maw/cms/resources/uploadsbarrettfinalsept09(2).pdf)

Two other early pioneers of academic workload modelling who went on to develop systems to support their models are UWE and Sunderland. Both web-sites links below provide useful resources:

<http://services.sunderland.ac.uk/hr/forstaff/moreacademicinfo/academicworkloading/>

<http://www1.uwe.ac.uk/aboutus/departmentsandservices/professionalservices/strategicprogrammesoffice/innovationandtransformation/academicworkloadmodel.aspx>

3. Potential benefits of effective AWM

Fairer and more transparent workload allocations are considered the key benefits of enhanced AWM, but it is important not to overlook other potential benefits that may include enhancements to:

- Course costing information
- Benchmark information to support institutional performance improvement
- Information on use of contract staff
- Time allocation information that is superior to the Time Allocation Survey (TAS). Depending upon specific AWM arrangements, it might enable automation or replacement of previous TAS
- Ability to calculate staff/student ratios and their effect on league table positions
- Information to support allocation decisions and reduce over/under staffing
- Information on staff time allocation and alignment with institutional strategy
- Institutional awareness of potential issues such as workload stress.

4. Setting some principles

It is useful to set some guiding principles at the outset of the project that can be revisited as the project proceeds. A typical set of principles could be:

- Transparent workload
- Fair, consistent
- Students entitled to an equitable experience
- Staff entitled to an equitable experience
- Workload planning is not a tool to drive teaching practice but to enable best practice and sustainability

At this early stage, a decision needs to be made as to whether a uniform institution-wide approach is sought. Is the model to be standard across all subjects, with some local discretion on multipliers, or will each Faculty be allowed to specify their model themselves? Does the university feel standard software is sufficient and there is a degree of discretion around the model. Note: if using excel/access as the software, control of the model becomes difficult and local variances soon emerge.

Lower research intensity may be an indicator of propensity to adopt more uniform approaches. Findings from SUMS' Members seem to indicate difficulties in finding agreement on uniform tariff structures for research. Research time is often treated as a "balancing figure". In a wider sense, standardising AWM can require cultural and organisational changes of a sort that seem to be particularly challenging for research-intensive universities. Research intensity should not be the sole criteria to decide whether a more uniform approach or a single model will be appropriate.

Case study example – A university has adopted a single institutional model for AWM with institution-wide tariffs including tariffs for research. The tariff framework is quite detailed. An important feature of the migration programme was the "workload planning group" which acted as a forum and a driver of changes to policies. Schools were represented in the planning group and their views and needs were reflected through this group. The uniform approach to AWM has evolved through detailed consultation and iterations to a point of high consistency across the university.

5. Scoping AWM

Care should be taken when scoping work in this area to set up a project that is achievable in the first instance to get something working. Whilst there are undoubtedly additional elements that can be brought into the project these may be better left to a later date. This is particularly true of the amount of integration initially sought. Other areas that should/could be considered as more mature refinements are:

- Using the workload allocation process in performance review and tying it in with NSS scores and staff development
- Only gathering teaching event data once i.e. aligning timetabling and workload processes
- Bringing technicians or other professional services staff into the model
- Attempting to align workload allocation with student number planning and timetabling.

6. Good Governance

In the initial implementation of a workload model there needs to be clear senior academic commitment and sponsorship to ensure that difficulties surrounding the model can be resolved.

A successful roll-out of a WLM needs ongoing support with it in “Business as Usual” mode. Universities need to put in place clear ownership of the model AND any system that supports the model implementation. Faculties are key stakeholders in the process but ownership of the model should reside with a central service. There is a spread of ownership in the HE sector and this depends on the emphasis the university wishes AWM to have, for example:

- Planning – tight alignment with budget round
- HR – tight alignment with standard contracts
- Finance – tight alignment with TRAC.

Salford chooses to have the model owned by HR but the system supported by Finance.

AWM can be used to align strategy and resource. For example, the institutional strategy might include objectives such as “to become a leader in enterprise activity” or “to grow student placements rapidly”. These objectives need to become embedded into the institutional fabric including AWM. The resulting changes can disturb workload balance but this can be one of the real benefits of an effective and integrated approach to AWM. It can help to confront the wider implications of new objectives or the legacy of an existing misalignment. A relevant observation is:

“To make the strategic and cultural changes that were needed a few years ago there had to be honest and open discussions. The model and tariffs has helped to open these discussions and flushed out some historic anomalies.”

There needs to be a tariff committee that adjudicates on requests for changes to the workload tariffs.

Many universities have rolled out models in spreadsheet or access form that are soon adapted to local circumstance and the centre has to then resort to reconciling variants on a theme in order to do a TRAC report. Some flexibility is possible in parameter variations whilst retaining a single activity model.

Union consultation is another key success factor in ensuring the model is successfully implemented. The University and Colleges Union has published a paper on evaluating workload models which includes a useful checklist to use when accessing a university’s workload model;

https://www.ucu.org.uk/media/3595/Notes-on-evaluating-workload-models-Dec-09/pdf/ucu_evaluatingworkloadmodels_dec09.pdf

7. The Workload Model

Universities often categorise activities into three categories:

- Teaching and Learning
- Research and Knowledge Exchange
- Management and Administration.

This last category is the most contentious.

The baseline number of hours for AWM tends to vary, but somewhere in the region of 1,600 notional hours per annum is commonly used. The RCUK and TRAC standard year for 1 FTE is 1650 hours. There are likely to be significant differences between “notional” model hours and actual hours. Staff contracts set a framework but significant variations from day to day and annually are likely to occur in practice. Commonly, a starting point for AWM is the teaching commitment. Appropriate allocations are needed to fulfil teaching. Other activities tend to be layered around teaching commitments although staff roles and staff development are relevant parts of AWM.

Other important aspects include potential tariff variations between disciplines – for example, differences between STEM and Arts and Humanities.

Models based on hours are popular but a fundamental question is whether they are optimal – some feel that points based models are better. Points-based models can shift the focus of AWM discussions away from notional hours onto activity value and balancing activity allocations. A model based on hours will depend upon the accuracy of tariffs – for example, it might indicate that everyone is over or underworked but this could be because tariffs are inaccurate.

Case study example - A university using points-based modelling has set a guideline target (1,000 points) with points for activities and guidelines for balanced allocations. Activities are discussed and agreed during annual appraisals. There is flexibility around guideline targets but within upper/lower bound ranges.

Case study example – A comparator study of time allocated to research in Arts and Humanities faculties of several research-intensive universities found that research was often a balancing item. Research tended to fall in a range of around 33-40% of total time.

8. Workload modelling software

Whilst many universities initially undertook in-house development using Microsoft Office (Excel™ or Access™) to implement workload models, there are now three commercial packages that can be bought. These are:

- Strenton software called WorkLoadPlan (developed with Sunderland)
- Simitive software called WAMS (developed with UWE)
- Switch software called SWARM (developed with Exeter).

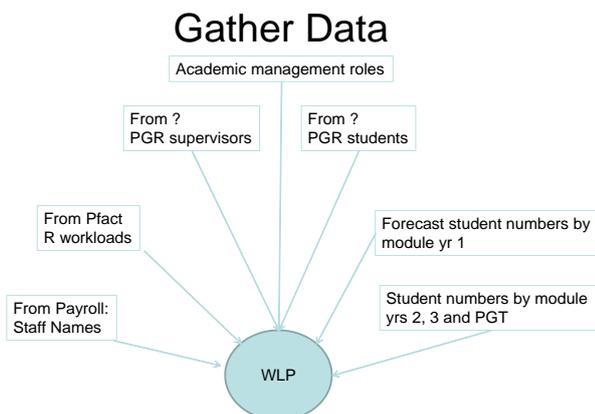
Strenton and Simitive have both gained university clients in recent years whereas Switch has not. SUMS consider either Strenton or Simitive software as capable of supporting university-wide workload planning. Both these systems are sold as cloud services.

Scientia who provide timetabling software to the marketplace also provide an add-on to their system for workload allocation modelling. SUMS have not found a good reference site for this in the UK. Recently SUMS recommended a post '92 against this approach because the proposal was too technology driven whereas issues about the timing of data collection and workload allocation needed to be resolved first.

Key features of these systems that distinguish them from their inhouse precursors are:

FEATURE	DESCRIPTION
Web-based service	Can be accessed securely via a web browser
Multi-user	Concurrent user access
Parameterised Model	Many configurable parameters allowing the university to replicate their existing model
Permissions	Rules based permissions allowing a University to set up its chosen role structure
Ease of use	Intuitive use of standard web browser features
Reporting	Various standard reports
TRAC	An ability to generate a standard TRAC report
Workload Approval/comments	Workloads can be approved
Multiple instances	Can be used for scenario planning

Ideally these systems would be integrated so that data is automatically transferred from the key corporate systems. However pragmatically data downloads and uploads on an as needed basis may be more appropriate in the first instance. Data feeds and their frequency are key to a successful AWM.



9. Roles and Transparency

Transparency of a member of academic staff's workload plan to themselves is a key feature of web browser based systems. Consideration then needs to be given as to whether security structures are set such that:

- Everyone can see everyone's workload allocation (Be aware this could raise potential equality issues)
- Team members can see their team's workload
- The only workload seen is your own.

Similarly, allocation rights must also be decided as to who allocates workload, whether the role is the same in every department or not, and whether the role is administrative or academic.

10. Changing a Culture

Workload planning rightly implemented can change the culture of a university. Some would argue that the project is not successful unless it changes the culture. In a straightforward implementation, it provides data and numbers to academic managers. In a successful implementation, it enables a conversation about over/under allocation of resource. Whether academic management take the opportunity to have some of those conversations now that they have some data to support them is key. As always, the academic manager has to exercise judgement on which conversations to have and to be sensible about the granularity of the data. The risk is that the collegiate culture, widely present in universities, is lost and the relationship between management and academics becomes more transactional.

One university uses a 3-year rolling average to assess over /under utilisation recognising that yearly fluctuations can mislead.

11. Summary

AWM is a tool for academic managers to support them in their work to achieve equitable staff workloads. AWM can be a rather blunt tool if it is applied in isolation from other important activities such as effective appraisals, communications and career planning. Integration of AWM with these other activities is critical and, if it is effective, it will inform and support these other activities.

There is commercial software now available to deliver AWM but it needs both initial academic sponsorship and ongoing professional service support to keep the model alive and responsive to a changing market.

AWM is becoming increasingly important and will evolve. Yet making changes to AWM can be a daunting prospect. Input and support from an independent source can be helpful. SUMS has undertaken various assignments to assist universities with enhancements to AWM together with a detailed comparator study of the arrangements and practices of six SUMS' Members. SUMS can bring this knowledge and experience into projects to change AWM.