Abstract
Planning the use of university faculty time and allocating it to various tasks can be challenging since university teachers typically have a complex mix of different tasks that also often change. In this context, some Swedish universities have turned towards time management software solutions as tools for planning department activities. This paper describes the introduction of such a web-based time management system at a Swedish university, and reports from a system evaluation comprising interviews with department leaders and staff planners. The empirical material implies that the advent of time management systems in higher education give rise to challenges for academic leaders aiming for efficiency, transparency and control, while trying to maintain flexibility and autonomy among faculty members.

Keywords: time management, higher education, academic freedom, academic leadership
Introduction

Workforce planning is an essential part of every university department’s administrative work. Teaching duties, research and other tasks must be planned from available resources and in accordance with national and local collective agreements. For this reason, some universities have implemented time management software solutions to support staffing and planning. This paper reports from a study of such a time management system (TMS), used at Umeå University in northern Sweden. The TMS was introduced as an instrument for improving time management and resource planning, aiming for increased efficiency and correctness, as well as increased fairness and transparency. This paper describes how the system was developed and implemented, and also presents results from an interview-based evaluation highlighting the consequences for workforce planning by reference to the initial expectations. Finally, based on this evaluation, the paper also discusses the use of TMS in a wider academic context, where professions and practices not always are bound to time and place, and where the culture of academic freedom perhaps not fully harmonizes with a systematic approach to workforce planning.

Thus, the main purpose of this present study is to examine to what extent the initial objectives of the TMS have been achieved, i.e. has the system facilitated increased overview and control, at the same time contributing to increased efficiency and transparency, as well as improved quality and stability? Secondly the paper seeks to contribute to an increased knowledge about how academic leaders can take on the challenges of time management in higher education.

The next section begins with a brief description of the context of the TMS at Umeå University, and then continues with explaining the process of decision-making and implementation.

The TMS at Umeå University

Planning the use of university faculty time and allocating it to various commitments have always been difficult, since teachers typically have a complex mix of different tasks. However, in a past era of more fixed resources for universities in Sweden, often distributed via national centralized planning, there was little motivation to account for and elaborately plan faculty time at the department level. Since the early 1990s a decentralization of economic planning superseded the traditional forms of centralization and has changed the environment of academic departments in Sweden and many other countries (Machado & Taylor, 2010; Schimank, 2005). Characteristics of this current environment include a performance based reimbursement for higher education with decreasing rates, a pressure on faculty to perform more work, even harder competition in attracting research funding, a disappearance of centralized fiscal buffers, and last but not least a real risk of fiscal failure and closure. Therefore, balancing the traditional academic missions of teaching, research and other forms of academic service has become increasingly important and difficult. In the wake of these changes, new forms of faculty time management systems have been introduced in Sweden and in many other countries (for an early American example see Daugird, et al, 2003). This study focuses on Umeå University in northern Sweden, and especially on the faculty of social sciences.
A university-wide reference group and pilot study showed in 2007 that the procedures for staff planning throughout the university were inadequate. Faculty planning was perceived as complicated and time consuming, and depending to a large extent on personal tacit knowledge, with a high degree of vulnerability. There was no standardized system or spreadsheet for documentation as informal methods and ad-hoc solutions were widespread, typically with a low level of transparency. Also, the local representatives of the labor unions pointed at difficulties with applying the collective labor agreements, and that few departments easily could deliver adequate quality parameters for evaluations of the their activities.

Thus, when the need for a new TMS was brought to the fore, expectations were that it would facilitate and rationalize both human resource planning and overall operational planning. It would lead to increased planning quality and precision, and reduce vulnerability through reduced person-dependence. In addition, the system was expected to promote desired university-wide practices, and to facilitate the compilation and export of various quality parameters for monitoring purposes. (Ekstedt, 2010.)

Aiming for a more efficient and correct staff planning, the university decided to implement a web-based TMS. The system would support the process of staff planning, i.e. mapping all available personnel resources with various tasks/assignments. The system was fully introduced at the university in 2012, and is now (2016) being used by all departments.

The TMS eventually being procured, was initially developed as a tool for supporting project planning, but then modified to meet the specific requirements of a university context. Its primary functionality concerns matching personnel resources with the many different tasks carried out at a specific department. In line with the current working agreement, teachers have a definite amount of working hours (1980 hours, including holiday time) during one year. Since all tasks are valued with an exact amount of hours, a teacher’s working hours will increasingly be booked when being assigned to various tasks. The challenge for planners is to find a way to fit, and evenly distribute, all necessary department tasks within the collective working capacity among all available personnel. Furthermore, the tasks should ideally be distributed so that scheduling conflicts are avoided, and in a way that makes the best use of different competences.

The interview-based evaluation

In April 2014 all departments at the social science faculty were informed by e-mail about an upcoming evaluation, which initially would include teachers, researchers, and department leaders (e.g. head of department and director of studies). The purpose of also including the teachers was to obtain a full picture of how the TMS was used at the various departments. Invitations to focus groups interviews were therefore sent to a number of randomly selected teachers. However, the response was very weak. Because of the low interest in participation, the evaluation instead came to focus on department leaders with experience in the role of planners in the system.
Furthermore, the evaluation was limited to 13 departments at the faculty of social sciences, since they were among the first departments to adopt the TMS at the university. Department staff sizes were between 20 to 125 employees.

Usually the director of studies attended the interview, but in some cases both the director of studies and the head of the department attended the interview. In addition, a study coordinator and a finance administrator also participated during one of the interview sessions. A majority of the departments introduced the TMS during the spring of 2012. One department had been given access to the system already in 2010, and had therefore already several years of experience. The remaining institutions had introduced the system in 2013 and, in a few cases as late as in 2014.

The interviews were conducted orally during September and October 2014. All interviews were recorded and then transcribed before analysis. The interviews were semi-structured in nature, with key questions related to the initial expectations of the TMS. In the following sections, the findings from the interview study are presented, structured around the four main objectives lined up before introducing the system to the departments (Ekstedt, 2010; Pettersson & Skog, 2015). According to these objectives the web-based TMS should contribute to significant improvements in the areas of 1) overview and control of personnel resources, 2) efficiency through reduced administration, 3) quality and stability, and 4) transparency and clarity. The reader should note that when quotes are given to illustrate a standpoint, these quotes have been translated from Swedish by the authors.

1) Did the TMS facilitate an increased overview and control of personnel resources?

The empirical material shows that the departments, when entering the new TMS, largely stuck to the same kind of workforce planning as before, using similar methods and templates. Thus, the new planning tool was used to plan in the same way as was previously had been done using Excel spreadsheets. This applies in particular to the level of details and to what extent templates were used in staffing, where most departments that previously relied on broad templates in their planning continued to do so in the TMS. A representative planner in this group of departments argued that you can still use the “lecture hour” (assumed to include both teaching, staff meetings, course development and other common tasks), as a basis for workforce planning and that it constitutes a standard for all tasks that teachers are expected to perform during their working hours. Additionally, the same planner states that they are “in practice using the TMS as the old Excel sheet”, that is, they just moved the same structure to the TMS as they used before. Furthermore, the same planner explains that the teachers would protest against increased micro-management and that “we will probably continue to not measure time for every single task, since we are very happy with the system we have”.

A representative planner from the other group of departments, which have been planning in detail and without templates, states that “we plan teaching, research, and administration, we put in almost everything, Everything has to be entered, all types of missions, all sorts of absence”. At the same time this planner also notes that the planning still follows “the same process as before”, but that it has become “safer in terms of managing different versions”, making it easier for several people to work
with staff planning at the same time. Another planner likewise describes how the TMS is viewed as a new tool with which planning is carried out according to the same principles and rationality as before, while maintaining a high level of detail: “We have noted very clearly, exactly, how many hours all assignments have. How many hours we have for department meetings, and so on. It is very detailed in my Excel sheet also. [...] So each person still has maybe 30 lines, specifying in detail what they should do”.

It is notable how this detailed planning significantly differs from the templates used in the first example above. This illustrates the vast range of planning traditions and cultures present within the same faculty, in terms of principles and models for planning and monitoring. In this respect the TMS has not yet in any clear way contributed to a homogenization, but is rather harboring the diversity that existed since before.

However, there is also a tendency for some departments that the TMS over time has contributed to a higher degree of details in the planning. For example, one planner states that the staff planning has become “more detailed” and that the TMS has “definitely contributed to added value compared to previous solutions, with better control and documentation”.

Departments with a large number of leased teachers emphasize that it has become “easier to manage leased teachers” using the TMS. Another planners state that the system is “good in discussions with PhD-students about how much employment time they have left”, and that the TMS is generally good for the follow-up of different types of assignments. In several cases, the BPS also was perceived as a valuable aid in the dialogue with teachers about their working hours and the volume of work: “It is a very good system when you end up in situations where teachers become anxious about whether they are doing too much. [...] Very pedagogically, you can show them their workload and how much time they have to accomplish it”.

A clear pattern in the interviews with the planners is that while earlier traditions of staff planning essentially were converted directly into the TMS, the system has nevertheless over time led to changes that include less use of templates and generally more detailed staffing with a wider range of specified tasks than before.

However, there are also obstacles for better control and documentation. Planners at the larger departments state that the web-based interface was slow compared to the corresponding time management procedures in Excel and that this constitutes an impediment to exploit the system's full potential. Some planners also perceive the limited availability of output, in the form of comprehensible summaries and reports, as an obstacle to continuous evaluation.

In summary, parts of the first initial goal with the TMS have already been achieved. As for the overview and documentation there are clear signs in the interviews that time management have generally become more detailed and well documented than before the TMS, although there are differences within the group of departments. In terms of management possibilities, several planners emphasize that the TMS has facilitated for both the employee and the planner to get access to the same data in real
time, reducing the need to keep track of multiple versions of schedules or staffing documents.

2) Did the TMS contribute to an increased efficiency through reduced administration?

The second objective set out for the system was that it would make the staffing process more efficient by reducing some of the administrative work. Before the TMS, the planning was carried out in several different systems that could not communicate with each other and the same information was therefore fed into the different systems. To some extent the new system reduced this problem, reducing administration and making the staff planning more efficient.

However, the planners describe different experiences of how the transition to the TMS affected the opportunities for increased efficiency. Entering the system demanded a lot of work, since all tasks and activities had to be defined for the first time. In addition the planners had to learn to navigate in a new system. After using the system for some time, few planners testified that the TMS has reduced the administrative workload. Instead, several planners claimed that the staff planning took about the same time as before but with the advantage of better documentation and reduced complexity; “If you can do it this year too, the planning for 2015, after that, I think we are back to the time it took before the TMS. [...] As I see it you might not be more efficient, but you may get added value from the system”.

In summary, the interviews shows that the total administrative burden for planners was not reduced, but rather increased slightly after the new TMS was implemented. Not because of the effort of using the system itself, but because the TMS offered features that enabled a more detailed staffing and also offered new monitoring opportunities. These new features tended to be utilized and several planners stated that they now, with the help of the TMS, create a more detailed staff planning. This was seen as an improvement, though at the cost of increased workload.

3) Did the TMS contribute to an improved quality and stability?

High quality in the context of workforce planning can mean different things. However, one central aspect should be that the staffing are in line with current labor agreements and properly takes into account the guidelines for annual working time, sick leave and other absences. Thus, expectations were that the TMS would help planners to apply labor agreements correctly and generally contribute to better precision in the staff planning. Accordingly, most planners also claimed that the new system had helped to “create order”, and contributed to greater accuracy; “It was a boost to get this tool. [...] It is at a level of detail now that did not exist before at all. [...] In this sense, it has become better organized and more fair”.

Stability and reliability should also be considered quality aspects of staff planning. A central access and storage of staffing documentation can in that respect contribute to higher quality, compared to earlier versions of self-made documents, stored on personal laptops. This also reduces the person dependence in the staffing process, and new planners can more easily get involved in the planning process.
Several planners describe how they, when first becoming planners or department leaders before the introduction of the TMS, had a tough start when inheriting someone else’s planning material. Since the TMS is a shared system throughout the university and with regular training sessions, the introduction of new planners had become smoother. The new system also made it easier to collaborate together when working with staff planning, as several planners could work in the same system in parallel.

Some planners also emphasize that the new system serves as an excellent tool for documentation. This makes both planning and follow-ups much easier and helps not only planners but also the individual teachers who always have access to their historical staffing, with accompanying notes and comments. The complete history of the department’s workforce planning is also very helpful for new planners who need access to previous staffing materials, as well as a department head or staff coordinator when handling various personnel matters.

Overall, the TMS helped to reduce vulnerability and person dependency in the staffing process, mainly thanks to the excellent documentation possibilities and by facilitating cooperation and division of labor. By increasing accuracy and precision the overall planning also gained higher quality.

4) Did the TMS contribute to an increased transparency and clarity?

A fourth objective of the introduction of the TMS was that it would contribute to a more transparent staff planning. Most departments at the social science faculty had already before the introduction of the new system a relatively open staffing, so that the staff not only could take part of their own planning but also see how their colleagues were scheduled. However, during the interviews a majority of the planners said that with the advent of the TMS there was now an even greater clarity and transparency towards employees and that everything is even more visible.

The increased openness has to some extent also contributed to greater awareness and understanding among all employees, of the complexity involved in staffing. This also creates a greater understanding of the entire organization, including all the connections and priorities that affect the staffing process. All in all, it contributes to a higher degree of acceptance for the suggested staff planning; “The ability to always enter the system and look, also helps people to get a better understanding of what they do and how it looks, with their hours. [...] I feel that there is a greater awareness, and that staffing is not something you can negotiate and bargain with.”

All planners welcome the increased transparency and clarity, since it seems to contribute to a greater understanding and acceptance. At some departments, however, the increased transparency also has given rise to problematic comparisons between teachers who do not understand the differences between their planning. Such situations must be handled through individual dialogues, since the underlying causes of specific staffing decisions not always can be made visible in the software system. Some planners also mention a tendency for staff to increasingly “chase” hours combined with a growing reluctance to take on even the smallest task unless it is first specified and assigned hours in the system.
In summary, the TMS has greatly increased transparency and clarity of the staffing process and the final service planning. Both planners and other staff see this as a positive effect of the new system. Increased transparency and openness has also opened up for collegial discussions about appropriate levels of details when staffing, and how smaller projects that previously often were included in the larger template based assignments, now could be specified and assigned hours.

**Time management - a challenge for academic leaders**

The evaluation of the TMS at the social science departments of Umeå University shows that after having used the system for a couple of years, many of the initial system expectations have been fulfilled, at least to some extent. Even though the process and rationality of planning did not change fundamentally, when moving from former spreadsheet solutions to a web-based TMS, the staff planners perceived an increased control as well as improved quality and precision in their work. In addition the transparency throughout the organization was increased. However, with a system offering new ways of handling data, there was also an increased complexity and added workload for the planners. In that sense one of the premier initial objectives (i.e. increased efficiency through reduced administration) has not yet been reached.

It is worth noting that the TMS mainly has been adopted by department leaders, and not by other staff members. As described earlier, the interest from teachers to participate in the evaluation was very low, and during the interviews with department leaders and planners, they confirmed that many teachers were skeptical towards the TMS and consequently preferred getting their annual planning presented in print. Since no interviews were conducted with teachers, we obviously cannot know all the reasons behind this cautious approach. However, statements from planners indicate that one possible reason seem to be that teachers, although appreciating the increased accuracy and transparency of the staffing process, still view the TMS as a tool for controlling and monitoring, having negative impact on their freedom to control their work.

Thus, besides giving vital feedback to the initiators of the TMS at the university, and also providing some indicators for continued work on implementing the system, the results from this evaluation study also highlights the complexity of time management in the context of higher education. While supporting an accurate, legitimate and transparent staffing, ideally contributing to good working conditions and a productive working environment, the TMS also can have the opposite effect, being a potential tool for increased control and excessive micromanagement.

In context of these opposing demands and expectations, the TMS offers the possibility (not yet tested in practice at Umeå University) for teachers to retroactively report back to the TMS how they have used their working hours. This would turn the TMS into a system for giving the academic leaders feedback on how teachers have used their working hours, rather than into an instrument for controlling the use of resources top-down. This bottom-up strategy might reduce the aversion against the TMS as a controlling and rigid instrument. On the other hand, this strategy would also increase the administrative workload for the teachers, since they have to log into the TMS and in rather high detail enter how they have managed their working hours. Another strategy could be to assign rather broad tasks (i.e. “teaching” rather than on what
courses) and leave the micro-management of courses and working hours to the teachers, without the need to give any feedback as long as they manage within the total sum of working hours. This way the TMS would be a template-based system for reporting the use of resources back to the government authorities, but that might suffice in some regulatory settings.

To conclude, the introduction of TMS represents a challenge for academic leaders who need to find a balance between the urge for efficiency and control, and the value of maintaining flexibility and autonomy among faculty members. In this context we have suggested some possible approaches, but further studies are needed to reach a better understanding of the challenges at hand.
References


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