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MEASURING INFORMATION OVERLOAD WITHIN THE PRIVATE UNIVERSITY SYSTEM

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ABSTRACT

This paper focuses on measuring information overload within the private university system since management of private universities depends mainly on Heads of Departments (HODs) unlike public universities where there are clear defined structures for proper management of various departments. The method uses time as a measurement unit and describes five information load situations that may be encountered by Heads of Departments. These situations are identified in an information load matrix (ILM) representing key principals in private universities and distinct stages of a semester. Data for the ILM was gathered using a questionnaire, which was sent to one hundred and fifty (150) Heads of Departments of private universities. A weight scale is introduced for each situation in order to calculate information load points (ILP).

A graphical representation of the ILP suggests that there are three distinct information load areas in a semester. Area 1 is an information overload free area. In area 2, information overload is normally at an acceptable level, but sometimes the circumstances in this area can easily rise to area 3, where information overload is at its highest. The method sets a numeric norm on identifying the degree of information overload. Some implications of the results and potential applications of the method are discussed, and suggestions, based on time management principles, for managing information overload are made.

Keywords: Information overload; Semester; Time; Information load matrix; Measurement of information; Information load point

INTRODUCTION

Private Universities and their members are affected by the ever increasing quantities and varieties of information they are required to process during a semester. However, even the most able HODs are limited in their capacity to process information. This mass of information is mainly due to the advancing level of technology which has resulted in fragmented expertise, thus increasing the need for co-ordination, integration, control and in particular, communication. The combination of surplus information and finite information processing capacities has led to the phenomenon called information overload.

Although information overload has interested researchers in management [28] accounting [25] marketing [21] and information science fields [13], relatively little attention has been given to it in education industry literature. Some recent studies in the 20th Century show that advances in computer and information technology introduced the internet contributes to information overload on executives [14].

In more recent years, of the information age, information overload is experienced as distracting and unmanageable information such as email spam, email notifications, instant messages, Tweets and Facebook updates in the context of the work environment [14]. As a result, an interruption from such information negatively affects the attention of HODs. It can take upwards of

twenty-five minutes before the HODs returns to their assigned tasks after viewing an email [14]. It is therefore instructive to note that unless information overload is understood and managed well, information overload can be a critical information problem which prevents HODs from performing their tasks effectively. Although the problem has been acknowledged, effective solutions have yet to be found.

It is generally accepted that HODs are overloaded with information from time to time, and on numerous occasions are very busy with information processing. However, there is conflicting opinion regarding the extent of the problem of information overload. Some argue that the real problem concerning information management are issues such as missing, late or unclear information. The ensuing impact on information processing can be more damaging than most other information related problems. Others argue that dealing with paper work and attending meetings prevents HODs from finding sufficient time to deal with other management responsibilities. It is also claimed that to rectify any information problem, indirectly contributes to the need to process more information. The same diverse opinion is also present in attempts to deal with information overload. The lack of knowledge about the circumstances in which HODs are prone to excessive amounts of information, and how the degree of that information overload fluctuates from situation to situation, hinders attempts to manage information overload efficiently. One reason for this is that no technique or method is available on defining information overload and measuring it in a numerical fashion. Following the principle that 'if you cannot measure it, you cannot manage it'; subsequent attempts to prevent the occurrence of information overload are ill-defined and ineffective, both in literature and practice [11]. Therefore, there is an urgent need to develop a technique to illustrate the extent of information overload in private university management.

In this paper, the definition of information overload is made and a measurement unit is defined. The methodology used to measure information load is then described. Following this, the data collection method in the form a questionnaire survey is explained. Finally, the results and their implications are discussed.

DEFINITION OF INFORMATION OVERLOAD

In order to measure information overload, a precise definition of the term needs to be made and a practical measurement unit identified. At the most basic state, information overload refers to the simple notion of receiving or having to go through too much information [7]; [27]. In order to go to a deeper definition of information overload, researchers have taken two major paths: objective sense and subjective sense.

Objectively, information overload can be defined based on the information processing view that information overload occurs when the information processing requirements (IPR) exceed the information processing capacities (IPC) of an individual (IPR>IPC) [30].

Subjectively, information overload has been investigated by researchers who believe that information overload cannot be investigated under experimental conditions as time constraints and forced absorption set in; experimental conditions do not apply in most real life situations [23]. These researchers define information overload as being burdened by a large supply of information that cannot be assimilated, leading to breakdown: feelings of stress, confusion, pressure and anxiety when in an information overload state [6]; [8]; [9]; [15]; [23]; [18].

Both definitions are adopted in this paper. The terms ‘requirements’ and ‘capacities’ in the above definition can be measured in terms of the available time. The requirements refer to a given amount of information that has to be processed within a certain time period (Information needed to complete a task). The capacities refer to a given amount of information that has to be used within a certain time period (The quantity of information one can integrate into the decision making process).

The definition of information overload in this paper is based on the notion that time for processing information is used on the interactions HODs have with other key members of the university and relevant outside authorities, and on internal information processing. The meaning of the term 'information processing time' is taken as time spent interacting with key members and outside legal and local authorities, and time to perform internal information processing, such as thinking, reading, planning, problem finding, problem solving, attending to visitors and other stakeholders. Time is used to measure HODs' information load so that the information processing demands placed upon their time is seen as equivalent to their information load. The number and nature of the demands are measured by the actual time for information processing. Thus, information overload occurs for an HOD when the information processing demands on time (information load) to perform information processing exceed the supply of time available (information processing capacity) for such processing [25].

In personal situations, the symptoms exhibited when HODs are overloaded are demotivation [2], satisfaction negatively affected [16]; [17], stress, confusion and cognitive strain [17]; [19]; [25]. The HOD lacks learning anything since too little time is at his disposition [29]. There is greater tolerance of error in jobs performed [29] and lack of perspective [25]. The HOD exhibits sense of loss of control which leads to a breakdown in communication [26].

Although the use of time makes it possible to determine whether or not information overload has occurred, it is not the only criteria. The volume of information can also be used as a measurement unit, but has many shortfalls from the researchers' point of view [11]. Having received a high volume of documentation does not necessarily mean that the HOD is overloaded with information. Without considering the amount of time spent on a particular document, the thickness of it fails to provide a meaningful indication of the level of information overload.

A difficult and intriguing aspect of information overload is its measurement. In reviewing the literature, it appears that the measurement of information has always been very context-specific. [5] uses the number of telephone calls as a measure of the interactions between countries based on communication. Other measurement units for the volume or amount of information are; bits in an electronic mail setting, words for an article, pages of a book, time for a TV commercial, and so on [24]. The common element in these examples is a type of unit that is appropriate for the purpose of measuring information overload. Therefore, the unit to be used to measure departmental management information must provide a meaningful explanation of how, where and how much information overload has occurred. Using the time element is ideal to serve this purpose as time links information load with information processing capacity [11].

METHODOLOGY

It is inappropriate to say that HODs information load is very high (information overload) or low without investigating the level of information processing at different stages in the semester and with different stakeholders in a private university. In another way, HODs cannot be labelled as overloaded with information during the whole semester, although this may sometimes be the case. As a semester progresses from the beginning to the end, the level of information load for the HODs will change. The blend of stakeholders who interact with the HOD also will change. Therefore, any system designed to identify the level of information load should first consider that information load changes with time, and second, the mixture of people who contribute to that information load also change. The information load of the HODs is identified in the form of a matrix. Using a matrix format enables one to identify the level of information load that HODs have and to see how the pattern of the information load changes with activities and stakeholders. The information load matrix (ILM) designed for HODs represents activities on the x axis and stakeholders on the y axis, or vice versa.

Activities in which HODs are involved in a semester are divided into eight stages. These are: Admissions, Preparation for Lectures, Lectures, Mid-Semester Examinations, Revision/Exams, Processing of Results, Declaration of Results and Post Declaration of Results. The way these different stages are established in literature depends on the purpose of the individual studies. The reason eight stages are considered in this study is that these are the key stages where the tasks of HODs and as a consequence the level of information load changes. Another important factor that limited the researcher to keep the stages to a minimum, but still observe the change in information load pattern, is that the ILM is put to use in the form of a questionnaire. If it had been chosen to divide the semester into more detailed stages, to complete it would have been much more difficult and time consuming. Therefore, eight stages are seen as ideal for simplicity to complete, but still sufficient to study the changing pattern of information load.

The stakeholders who interact with an HOD are classified into twelve different groups. These are: Chancellor, Vice Chancellor, Deans, Registrar, Unit Heads, Accountant, Receptionist, Students, Parents/Guardians of Students, Visitors to the Department, Friends and Lecturers. These groups cover all the key expertise that an HOD interacts with. The ILM, having 8 stages and 12 stakeholders, consists of 96 stakeholder-stage cells. The sensitivity of the matrix can be improved by increasing the number of stakeholders and/or semester stages. Another characteristic of the ILM, as explained earlier, is using time as a measurement unit in order to determine the level of information load. If the time available to HODs is less than the time needed to process information, this scenario is defined as the HOD being overloaded with information. Ideally, based on this definition and conceptualisation of information overload, the amount of time HODs have and the amount of time they need to spend on processing information, should literally be measured. This concept of measuring the amount of time available and needed to process information during the semester is considered, but because of the following reasons it is not seen as feasible for this study. These reasons are:

i. It is not practical to measure it for the duration of the whole semester as it requires the researcher to spend the whole semester with a number of HODs. This can be done only on a case study basis, with investigations that look at a particular stage in the semester, function or interaction with one stakeholder, although it would be a tedious job.

ii. The second option is to ask HODs to keep a record of how they spent their information processing time by providing specially designed diaries. This option is not practical either, due to the difficulty of keeping a diary regularly for the semester. Other drawbacks are the difficulty of finding willing participants and the time limitations of the research waiting for the semester to come to an end. Applications of this approach can be seen in Mintzberg's work [22].

In summary, the nature of the problem with measuring information overload is to operationalise the concept definition of information overload. The following method has been developed to overcome these difficulties of measuring information overload. It is accepted that those who should know best whether or not they are overloaded with information are the HODs themselves, even though they may not be aware of this situation, or know how to determine it. Based on the definition of the information overload used in this research, five real life information load situations that may be encountered by HODs are defined. These situations describe the information overload in terms of information processing time and are described in Table 1.

Table 1: Description of possible information load situations of HODs

Situation 1: No Communication: no communication or information processing time spent.
Situation 2: Very Little: very little interaction or communication occurred. It did not affect HODs' information processing.
Situation 3: Some: HODs had reasonable information processing or interactions. They could deal with information processing most of the time without affecting their performance or working schedule. However, there were times when they had to process more information than was possible in the time available. This ranking shows that they were sometimes overloaded with information.
Situation 4: High: often, the amount of time needed to process information and interactions was much higher than the time available. This ranking indicates that most of the time they were overloaded with information.
Situation 5: Very High: very often, the amount of time available to process information was less than the required time. This ranking shows that information overload was very high, and present almost all the time.

The data for the ILM is gathered by using a questionnaire survey with one hundred and fifty (150) HODs in private universities in Ghana. The HODs are asked to mark the situations best suited to them in the ILM provided in the questionnaire. They are given a scale of 1 to 5, each number representing the same real life situation, for example the score of 3 indicates situation 3. HODs who are targeted work full-time and are asked to consider their information load situations in the semester.

The nature of the data gathered to identify the level of information load is nominal [3]. Therefore, analysis of the data requires the application of nominal data analysis techniques. One of these techniques is to allocate weights to each information load situation [11]. Through this, relative comparisons of the information load between different HODs, and between stages in the semester can be made. A weight scale of 0-4 is allocated to information load situations of 1 to 5 respectively. The score of zero indicates no information processing and eliminates the relevant activities. In this way, it is possible to calculate a total information load point for each activity in the ILM. This is done by multiplying the number of HODs who identified each situation by the weight of that situation. The scores of each situation are added to calculate the grand total of that activity. The total is then divided by the total number of HODs to calculate the information load point (ILP) of that activity. These calculated points are a representation of the information overload situations and used for relative comparison purposes only [11].

The studies of Haksever & Fisher, [11] is used in this paper for the interpretation of results. The higher the value of the ILP, the higher the level of information load of the HODs in that activity. Scores of less than 1, or around 1, indicate that information overload has not occurred. If the ILP is between 1 and 1.5, the information load is at an acceptable level and is easily manageable. Scores higher than 1.5 indicate information overload is at

a high level and needs to be managed carefully if the effectiveness of information processing is not to be lost [11].

Table 2 illustrates an example of how ILP are calculated for Lecturers during revision/examinations periods during a semester.

RESULTS

The results are presented in an ILM in Table 3. The mean values of information load situations (ILP) vary between 0.593 and 2.947, on a possible scale of 0 to 4.

A graphical representation of the ILP has also been developed, which enables the results to be displayed in a more explicit way, see Figure 1. This illustrates that there are three distinct information load areas in private university management which are in a continuation norm. Area 3 is where information overload is at its highest. In area 2, information load is normally at an acceptable level, but sometimes the situations can easily rise to area 3. Area 1 is an information overload free area.

Table 2: An example of information load point calculations

IL SITUATIONS	IL WEIGHTS	NO. OF HODS	TOTAL POINTS	ILP
S1	0	0	0	
S2	1	21	21	
S3	2	68	136	
S4	3	19	57	
S5	4	42	168	(382/150)
TOTAL		150	382	2.547

Table 3: ILP for each stage-stakeholder circumstance in the ILM

	Admissions	Prepar-ation for Lectures	Lectures	Mid-Semester Exams	Revision/ Exams	Process-ing of Results	Declara-tion of Results	Post declara-tion of results	OVER ALL
Chancellor	0.593	0.640	0.900	0.640	0.900	1.680	1.613	1.473	1.055
Vice Chancellor/ Principal	1.467	1.613	1.607	1.160	1.240	1.607	2.040	1.880	1.577
Deans	0.660	1.320	1.000	0.800	1.200	1.200	0.980	0.720	0.985
Registrars	1.440	1.007	1.373	1.000	1.373	1.560	1.373	1.500	1.328
Unit Heads	1.600	1.840	1.873	1.867	1.873	2.507	2.407	2.280	2.031
Accountant	1.180	0.800	1.020	1.007	0.580	0.653	0.700	0.840	0.848
Receptionist	1.353	1.073	0.980	1.100	0.960	1.060	1.227	1.240	1.124
Students	1.553	1.720	2.947	2.413	2.653	2.433	2.267	2.620	2.326
Parents/ Guardians	1.233	1.360	1.020	0.933	1.480	1.560	1.513	1.587	1.336
Visitors	2.147	1.293	1.187	1.380	1.526	2.113	1.882	2.107	1.704
Friends	0.967	1.020	1.107	1.107	1.247	1.547	1.567	1.367	1.241
Lecturers	1.647	2.213	1.700	1.793	2.547	2.313	2.393	2.500	2.138
OVERALL	1.320	1.325	1.393	1.267	1.465	1.686	1.663	1.676	1.474

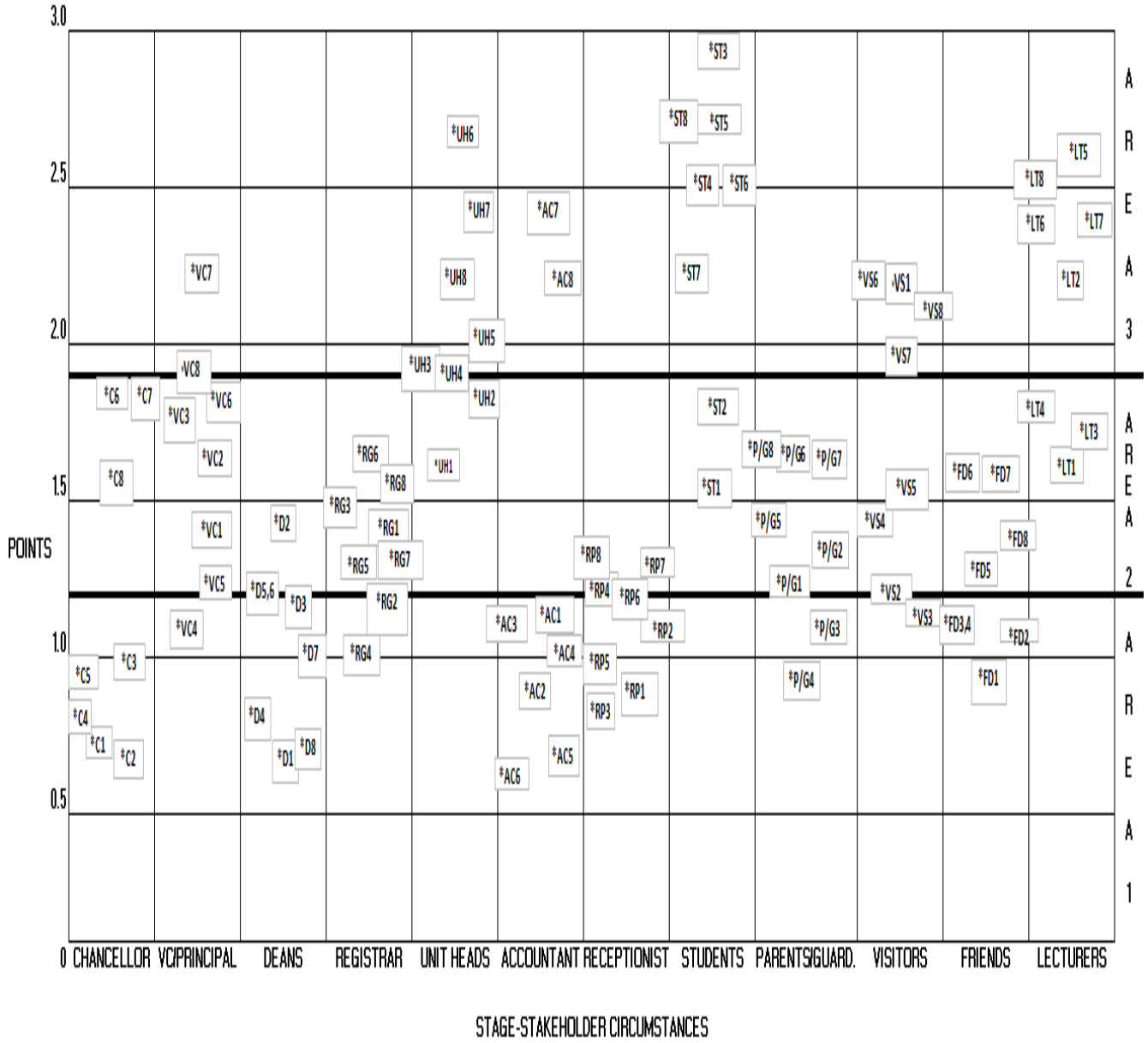

Figure 1: Graphical representation of Heads of Departments' information overload situations

The activities which fall into each information load area are given below in Table 4. Examination of the common points of the activities in each category provides some insight into understanding in which situations HODs are more likely to be overloaded. The level of information overload is at its highest in situations where HODs interact with Students in the lecture, revision/exams and post declaration of results stages, with Lecturers in revision/exams and post declaration of results stages and with Unit Heads in the processing of results, declaration of results and post declaration of results stages. This is followed by interaction with visitors in admission stage, processing of results stage and post declaration of results stages, the Vice Chancellor/Principal in declaration of results and post declaration of results stages.

Table 4: The circumstances which fall into each information load area

AREA 3	Circumstance ST3: HODs overload with students in lecture stage (2.947) Circumstance ST5: HODs overload with students in revision/exams stage (2.653) Circumstance ST8: HODs overload with students in post declaration of results stage (2.620) Circumstance LT5: HODs overload with lecturers in revision/exams stage (2.547) Circumstance UH6: HODs overload with unit heads in processing of results stage (2.507) Circumstance LT8: HODs overload with lecturers in post declaration of results stage (2.500) Circumstance ST6: HODs overload with students in processing of results stage (2.433) Circumstance ST4: HODs overload with students in mid-semester exams stage (2.413) Circumstance UH7: HODs overload with unit heads in declaration of results stage (2.407) Circumstance LT7: HODs overload with lecturers in declaration of results stage (2.393) Circumstance LT6: HODs overload with lecturers in processing of results stage (2.313) Circumstance UH8: HODs overload with unit heads in post declaration of results stage (2.280) Circumstance ST7: HODs overload with students in declaration of results stage (2.267) Circumstance LT2: HODs overload with lecturers in preparation for lectures stage (2.213) Circumstance VS1: HODs overload with visitors in admission stage (2.147) Circumstance VS6: HODs overload with visitors in processing of results stage (2.113) Circumstance VS8: HODs overload with visitors in post declaration of results stage (2.107) Circumstance VC7: HODs overload with Vice Chancellor in declaration of results stage (2.040) Circumstance VS7: HODs overload with visitors in declaration of results stage (1.882) Circumstance VC8: HODs overload with Vice Chancellor/Principal in post declaration of results stage (1.880) Circumstance UH5, UH3: HODs overload with Unit Heads in lectures stage (1.873) Circumstance UH4: HODs overload with Unit Heads in mid-semester exams stage (1.867) Circumstance UH2: HODs overload with Unit Heads in preparation for lectures stage (1.840)
AREA 2	Circumstance LT4: HODs overload with lecturers in mid-semester exams stage (1.793) Circumstance ST2: HODs overload with students in preparation for lectures stage (1.720) Circumstance LT3: HODs overload with lecturers in lectures stage (1.700) Circumstance C6: HODs overload with Chancellor in processing of results stage (1.680) Circumstance LT1: HODs overload with lecturers in admission stage (1.647) Circumstance VC2: HODs overload with Vice Chancellor/Principal in preparation for lectures stage (1.613) Circumstance C7: HODs overload with Chancellor in declaration of results stage (1.613) Circumstance VC6: HODs overload with Vice Chancellor/Principal in lectures stage (1.607) Circumstance VC3: HODs overload with Vice Chancellor/Principal in processing of results stage (1.607) Circumstance UH1: HODs overload with Unit Heads in admissions stage (1.600) Circumstance PG8: HODs overload with Parents/Guardians post declaration of results stage (1.587) Circumstance FD7: HODs overload with Friends in declaration of results stage (1.567) Circumstance RG6: HODs overload with Registrar in processing of results stage (1.560) Circumstance PG6: HODs overload with Parents/Guardians in processing of results stage (1.560) Circumstance ST1: HODs overload with Students in admissions stage (1.553) Circumstance FD6: HODs overload with Friends in processing of results stage (1.547) Circumstance VS5: HODs overload with Visitors in revision/exams stage (1.526) Circumstance PG7: HODs overload with Parents/Guardians in declaration of results stage (1.513) Circumstance RG8: HODs overload with Registrar in post declaration of results stage (1.500) Circumstance PG5: HODs overload with Parents/Guardians in revision/exams stage (1.480) Circumstance C8: HODs overload with Chancellor in post declaration of results stage (1.473) Circumstance VC1: HODs overload with Vice Chancellor/Principal in admissions stage (1.467) Circumstance RG1: HODs overload with Registrar in admissions stage (1.440) Circumstance VS4: HODs overload with Visitors in mid-semester exams stage (1.380) Circumstance RG7: HODs overload with Registrars in lectures stage (1.373) Circumstance RG5: HODs overload with Registrars in revision/exams stage (1.373)

Table 4 (Continued)

AREA 2 (Cont.)	Circumstance RG3: HODs overload with Registrars in declaration of results stage (1.373) Circumstance FD8: HODs overload with Friends in post declaration of results stage (1.367) Circumstance PG2: HODs overload with Parents/Guardians in preparation for lectures stage (1.360) Circumstance RP1: HODs overload with Receptionist in admissions stage (1.353) Circumstance D2: HODs overload with Deans in preparation for lectures stage (1.320) Circumstance VS2: HODs overload with Visitors in preparation for lectures stage (1.293) Circumstance FD5: HODs overload with Friends in revision/exams stage (1.247) Circumstance VC5: HODs overload with Vice Chancellor/Principal in revision/exams stage (1.240) Circumstance RP8: HODs overload with Receptionist in post declaration of results stage (1.240) Circumstance PG1: HODs overload with Parents/Guardians in admissions stage (1.233) Circumstance RP7: HODs overload with Receptionist in declaration of results stage (1.227) Circumstance D6: HODs overload with Deans in revision/exams stage (1.200) Circumstance D5: HODs overload with Deans in processing of results stage (1.200)
AREA 1	Circumstance VS3: HODs overload with Visitors in lectures stage (1.187) Circumstance AC1: HODs overload with Accountant in admissions stage (1.180) Circumstance VC4: HODs overload with Vice Chancellor/Principal in mid-semester exams stage (1.160) Circumstance FD4: HODs overload with Friends in lectures stage (1.107) Circumstance FD3: HODs overload with Friends in mid-semester exams stage (1.107) Circumstance RP4: HODs overload with Receptionist in mid-semester exams stage (1.100) Circumstance RP2: HODs overload with Receptionist in preparation for lectures stage (1.073) Circumstance RP6: HODs overload with Receptionist in processing of results stage (1.060) Circumstance PG3: HODs overload with Parents/Guardians in lectures stage (1.020) Circumstance FD2: HODs overload with Friends in preparation for lectures stage (1.020) Circumstance AC3: HODs overload with Accountant in lectures stage (1.020) Circumstance PG2: HODs overload with Parents/Guardians in lectures stage (1.020) Circumstance AC4: HODs overload with Accountant in mid-semester exams stage (1.007) Circumstance RG4: HODs overload with Registrars in mid-semester exams stage (1.000) Circumstance D3: HODs overload with Deans in lectures stage (1.000) Circumstance RP3: HODs overload with Receptionist in lectures stage (0.980) Circumstance D7: HODs overload with Deans in declaration of results stage (0.980) Circumstance FD1: HODs overload with Friends in admissions stage (0.967) Circumstance RP5: HODs overload with Receptionist in revision/exams stage (0.960) Circumstance PG4: HODs overload with Parents/Guardians in mid-semester exams stage (0.933) Circumstance C5: HODs overload with Chancellor in lectures stage (0.900) Circumstance C3: HODs overload with Chancellor in revision/exams stage (0.900) Circumstance AC8: HODs overload with Accountant in post declaration of results stage (0.840) Circumstance D4: HODs overload with Deans in mid-semester exams stage (0.800) Circumstance AC2: HODs overload with Accountant in preparation for lectures stage (0.800) Circumstance D8: HODs overload with Deans in post declaration of results stage (0.720) Circumstance AC7: HODs overload with Accountant in declaration of results stage (0.700) Circumstance D1: HODs overload with Deans in admissions stage (0.660) Circumstance AC6: HODs overload with Accountant in processing of results stage (0.653) Circumstance C4: HODs overload with Chancellor in preparation for lectures stage (0.640) Circumstance C2: HODs overload with Chancellor in mid-semester exams stage (0.640) Circumstance C1: HODs overload with Chancellor in admissions stage (0.593) Circumstance AC5: HODs overload with Accountant in revision/exams stage (0.580)

The overall stage-member based results indicate that in processing of results, declaration of results and post declaration of results stages, information overload is high, followed by revision/exams and lecture stages. As far as HODs are concerned, interactions with Students and Lecturers are the most overloaded. The lowest information load occurs with Deans and Accountants and Chancellor.

The vast majority of circumstances which fall into area 2 are interactions with all the principal academic stakeholders in the processing of results stage. All interactions with non academic staff are in the information overload free zone. This indicates that information is mainly generated within the exams, declaration and post declaration of results stages. It also illustrates that at different stages of a semester, the principal causes of information overload vary, as do the changing roles of HODs.

DISCUSSION

Since time links information load with information processing capacity, certain actions in departmental organisations in terms of their effects on information processing can be analysed. This allows the identification of two general strategies, and various actions within each strategy, that departmental organisations can use to manage information overload. The first strategy takes the total supply of time as fixed, and decreases the actual time HODs spend processing information. This can be achieved by using time more efficiently or reducing the number of tasks to be performed involving students. The second expands the total supply of time or capacity, holding information load as fixed, therefore increasing the actual time available for information processing. The groups of actions to achieve this either attempt to increase the time available or expand the size of the work force by providing HODs with enough assistants to deal with students.

The model links the concept of time management and the management of information load. Time management allows HODs to organise and set priorities. This helps them to focus on information needed to accomplish a task and helps in providing the time for accomplishment of further goals. The ability to manage time is directly related to the ability of managing the constant flow of incoming information. Through time management HODs are able to sift through the information based on priorities, eliminating unimportant pieces of information and locating those that are key to accomplishing their goals.

The way in which HODs determine how much time should be spent on processing information is directly related to knowing the criticality of the function, task or decision on which information is required. Therefore, the amount of information HODs must react to during the day is limited. Principles of time management can improve HODs' ability to manage information overload [20]. Some of these principles are briefly explained in the context of managing information overload found in other texts.

Establishing goals and setting priorities can help HODs focus on important issues and will enhance productivity. Organising effective meetings will not only reduce time spent in meetings, it will also limit the amount of information that is unnecessary in obtaining goals. Learning to handle difficult issues will help in reducing the stress they are exposed to during the semester. Stress is a factor that makes managing information overload more difficult. Setting up an effective filing system is an important step in organising the information flow that is constantly occurring and will allow time to locate the information when needed.

CONCLUSION

In today's information age, information overload is becoming a serious problem which affects HODs' performance. The lack of research into the topic in the educational literature and the disinterested attitudes of educational practitioners, due to other more immediate and urgent information related problems, only accentuate the need to investigate information overload as a serious research problem. The paper defined the term information overload as occurring when the demands on a management task for information processing time (IPR) exceed its supply of time (IPC), and the concept of time is used as a measurement unit.

The results indicate that by measuring information overload it is possible to have a numeric and better understanding of the extent of information overload during the course of running an educational institution. The method shows the situations where information overload is high, moderate, low or non-existent. It is then possible to concentrate on those overloaded areas by using the appropriate means or strategies. The method used in this paper sets a numeric norm on identifying the degree of information overload, but for more reliable results, more applications of the method are needed in other jurisdictions. It also offers potential for comparative studies on the degree of information overload between HODs working for different institutions, staff and stages in the semester. Only then will it be possible to go

forwards towards achieving a better management of information overload in educational institutions.

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