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RESEARCH ARTICLE

Underpinning excellence in higher education – an investigation into the leadership, governance and management (LGM) behaviours of high-performing academic departments.

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Abstract

The changes in government funding alongside external pressures of increased international and national competition has meant that higher education institutions need to excel in a turbulent environment. The leadership, governance and management of academic departments are key concerns. This study investigates the correlation between behaviours, attitudes and competencies at a department level and overall departmental performance in terms of hard data measures. The research question this paper seeks to address is: what are the leadership, governance and management behaviours that are associated with high-performance in academic departments?

More than 600 people across 50 academic departments in five UK universities were surveyed through the use of three research phases consisting of open-ended questionnaires, critical-case sampled semi-structured interviews and a fixed-response survey. Synthesising the data and findings of the study revealed a thematic framework of eight broad themes that contribute to excellence in academic departments. These were in the areas of change management, research and teaching, communication, strategy and shared values, leadership, departmental culture, rewards and staffing. The behaviours associated with each of these themes were used to construct the Underpinning Excellence model.

Keywords: Leadership, Governance, Management, Departmental Excellence, Higher Education.

Introduction

The question of what makes for effective leadership of Higher Education (HE) at department level is very relevant in the current economic climate. The pressure on universities to act more as businesses and to gain competitive advantage is increasing as the sector expands, both in terms of globalisation and with the growth of new providers of HE. In this expanding marketplace it is imperative to understand how universities can operate more effectively. This necessarily includes improving departmental leadership and management, as institutional success depends ultimately on the ability of individual academic departments to perform well.

The proliferation of university league tables and consequent emphasis on organisational performance monitoring through key performance indicators is juxtaposed against an increase in individual performance management and the development of competency models and behavioural frameworks for HE staff. A large study by the Leadership Foundation project found that 90% of universities surveyed were involved in some form of organisational development activity aimed at improving leadership and management (HEFCE, 2007). There is clearly a demand within HEIs for improving performance by creating better leadership and management but it is unclear exactly which behaviours, traits and cultures are required for high performance. This poses a question therefore about where effort should be focussed in order to make performance improvements. It would provide powerful insight for leaders and managers in HE to make the connection between corporate performance and individual and team behaviour more explicit.

Bryman pointed out in his review of effective leadership in HE (2007) that there is surprisingly little empirical research addressing the question of what styles of or approaches to leadership are associated with departmental effectiveness. Harris *et al.* (2004: p4) state “*while a few studies have focused on leadership practices in higher education, little research has focused on effectiveness, particularly at the department level.*”

Some previous studies have sought to determine factors influencing effectiveness by examining the extent to which stated goals are achieved; others have looked at the attitudes and behaviours of staff and some simply consider perceived effectiveness (Bryman, 2007). A number of studies have produced lists of desired leadership behaviours, characteristics or duties (e.g. Cresswell and Brown, 1992; Moses and Roe, 1990). In some studies, (e.g. Ambrose *et al.*, 2005), leadership and management behaviours were assessed according to job satisfaction as reported by participants. In others, (e.g. Lindholm, 2003), leadership traits have been considered in relation to an individual's perceived organisational fit. Bolden *et al.* (2012) highlight that as demand for effective leadership within higher education grows, attention is shifting from a focus solely on formal managerial roles to academic leadership more widely which can include informal leader relationships.

What has been missing to date has been an investigation of the correlation between effective departmental behaviours and the overall performance of the department in terms of hard data

measures. The research question this paper seeks to address is therefore: what are the leadership, governance and management behaviours that are associated with high-performance in academic departments? The study aims to highlight the behaviours, attitudes and competencies that are associated with measurable departmental success. This would enable a deeper knowledge of traits which are likely to have a bearing on the success of the department, not simply traits which are somewhat arbitrarily defined as 'good' leadership traits.

Studies of leadership, governance and management in higher education.

There has been increasing interest in the leadership, governance and management of HE for several decades, in part leading to the establishment of the Leadership Foundation for HE in 2004, whose remit is to develop and improve the leadership and management skills of existing and future leaders in HE. Many studies have added to the body of knowledge on HE leadership and management, with some looking at departmental performance and effectiveness, albeit in an indirect way. In 2007 Bryman investigated what approaches to leadership were effective in HE by interviewing academics who were researching leadership. The views of these leadership experts were that there were a number of facets to effective leadership in HE some of which were to do with the personal characteristics of the leader (such as being able to provide direction and having personal credibility and trustworthiness) and others were to do with fostering the right culture and environment. Likewise Kennie (2009) proposes that the academic leader has to build a strong foundation of credibility if they are to be effective. This credibility includes personal, peer, positional and political elements. He also emphasises the importance of collegiality, which he defines as contributing selflessly to the wider academic context and sharing ideas with colleagues. Deem (2010) notes that academics are now expected to fulfil a large number and range of leadership and management positions and that subject specific achievements underpin academic credibility.

Distributed leadership is a concept which has been considered in relation to HE for some time, though Gosling *et al.* (2009) point out that it is not a replacement for individual leadership but instead complements it. While it may be the case that a greater range of staff groups are now involved in providing some elements of leadership and certainly in influencing the direction of HE, there is still a major role for individual leadership figures. They conclude that the term distributed leadership has more of a rhetorical than analytical function, by highlighting the large number of actors involved in leadership in the complex university context.

Hillhouse *et al.* (2009) explored academic performance management across the HE/NHS interface. The study consisted of a qualitative approach, with interviews of senior leaders working across this interface. In this specific context they found that high performance cultures were characterised by routine and on-going performance conversations. Mentoring and coaching was found to play a significant role and rewarding and recognising achievement was important.

Attempts have been made by some to link characteristics with department performance. Bland *et al.* (2005) investigated characteristics in a large medical school in the US. They found that certain individual, institutional and leadership characteristics are related to research productivity. Amongst those revealed as particularly important were the use of clear coordinating goals, communication, and an assertive–participative style of governance. McCormack *et al.* (2013) found that management scores for a set of operations- oriented management practices were correlated with performance as measured by externally assessed measures of performance including research assessment exercise (RAE) scores and national student survey (NSS) scores.

Defining success and the research approach

The key objective of the study was to identify prevalent behavioural and cultural traits that lead to and promote excellence in university departments. To achieve this, the study used a mixed methodological approach in the data collection process, which was progressed in three phases as shown in figure 1. Using both qualitative and quantitative methodologies enabled greater accuracy and depth of data collection (*see* Bryman and Bell, 2011; Johnson and Onwuegbuzie, 2004; Tashakkori and Teddlie, 1998). The use of qualitative methods allowed an extremely rich dataset to be gathered, capturing the more fluid and intangible aspects of departmental culture, which would not have been possible with a purely quantitative approach. The quantitative tool used allowed for the collection of data from a wide range and large volume of respondents.

In order to be able to correlate behaviours with success, the notion of ‘success’ or high performance first needed to be defined. Success in HE is not easily defined and depends very much on perception. Different audiences, observers and stakeholders have differing views of what constitutes a successful academic department, in part depending on the stated vision and mission of the institution. Some departments would consider themselves to be successful if they achieved a certain level of research income. Others would value staff satisfaction and motivation as a key success measure. Yet others would measure success in terms of added value, regional outreach or innovation and entrepreneurship. It is clear that success can be defined in many ways but in order to carry out a quantitative study, some measures of high performance needed to be established. Performance measures in HE are the subject of much debate (Hicks, 2012; Lorenz, 2012). Should they be based on inputs such as staff, income and equipment or outputs such as graduates and research publications? For the purposes of this study, it was decided to use four indicators of performance for which data was publicly available, readily accessible and well established. The following four indicators of performance were chosen: Research Assessment Exercise (RAE) scores, entry standards (the average UCAS tariff score of new students), graduate prospects (a measure of employability of graduates) and student satisfaction (a measure of how students view teaching quality). These indicators reflect the fundamental elements of a university’s purpose, i.e. research and teaching. The RAE (now replaced by the Research Excellence Framework) is a rigorous, peer-reviewed methodology for assessing

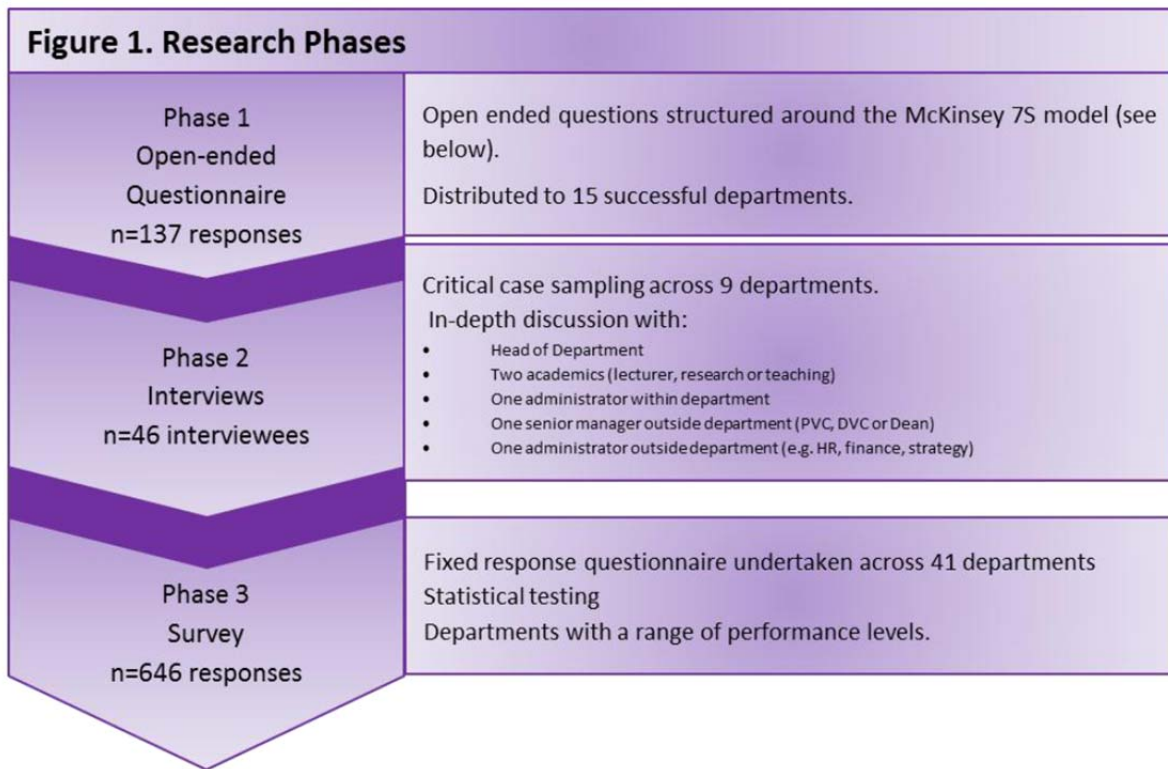
research performance in the UK and is used to determine funding allocations. It reflects the quality and quantity of research produced. The UCAS tariff score indicates the quality of the intake that a department attracts and therefore reflects at least to some degree the standing of a department.

The employability of graduates is a further measure of the quality of the education provided, although it is acknowledged that there are contextual, geographical and economic factors which influence this indicator. The fourth measure relates to student satisfaction and in particular the results of the NSS which indicate overall levels of satisfaction with the student experience. Taken together, these measures provide a picture of how a department is performing. Whilst they do not capture every aspect of performance, they do provide a mechanism for measurement which is consistent and objective. McCormack et al. (2014) add that as these measures further account for teaching and research at departmental level, usage of league tables provides, in principle, a reasonable consistent gauge of performance.

In phase 1 of the study, data on the four measures were used to ensure that high-performing departments were selected to participate. Respondents for phase 2 interviews were also drawn from the sampled group of departments. In phase 3, which involved both high and low performing departments, the data on these four measures were again used to understand and categorise departmental performance levels. In selecting departments, consideration was also given to the age of the department, the length of time the head had been and would be in office and staff numbers within the department.

The five universities chosen to participate in the study were selected for a number of reasons. The most important factor was that the sample would enable the gathering of data from departments with a range of performance levels and disciplines, including some which perform well on all of the four indicators selected. The sample includes two collegiate universities (one ancient and one pre-Victorian) and three civic institutions founded between 1900 and 1955. All five universities, whilst differing in size between 17,000 students and 30,000 students, are committed to the highest standards of teaching and research. The universities are located in the north, midlands, and south of the UK and are representative of the sector in terms of size, mission and subject mix. Due to the focus on improving performance at the department level, the study focused upon the selection of departments rather than universities during the sampling process.

Views were gathered from all academic staff groups (lecturers, researchers, teaching staff) alongside administrative departments of finance, HR and research support offices. Pro-Vice Chancellors and Deans were also included.



The data collection stages

In total, fifteen departments were selected for Phase 1. The full range of disciplines including social science, physical and biological sciences, arts and humanities were represented, to ensure a holistic and robust investigation of the factors contributing to excellence.

The phase 1 research instrument was an open-ended questionnaire designed around the McKinsey 7S framework. The 7S framework considers seven interdependent factors of an organisation. These are three ‘hard’ elements of strategy, structure and systems, followed by the four ‘soft’ elements of shared values, skills, staff and style (Peters and Waterman, 2004). While the framework is primarily utilised in the private sector, it provides a useful generic starting point. Here it was simply used to provide structure and scope to the initial exploratory questionnaire, to ensure that a broad span of areas of departmental leadership and management was covered. Zairi and Jarrar (2001) constructed a hybrid model for measuring organisational effectiveness in the NHS which was based on the European Foundation for Quality Management (EFQM) business excellence model and McKinsey 7S. They recognised that using the McKinsey structure would enable a micro view to be obtained that would include consideration of specific behaviours, whereas EFQM alone would provide only a macro view. McKinsey 7S was therefore an appropriate framework around which to base the initial exploratory questionnaire.

The open-ended questionnaire was distributed to 15 departments across the five collaborating institutions with a total of 202 questionnaires sent and a final response rate of 67% (n=137). These include both teaching and research intensive universities.

The responses were examined using the Nvivo software package v10. The data were analysed by identifying the prevalent issues and ideas highlighted by respondents. Through the use of content analysis (see Gibbs, 2002), recurrent issues indicated by respondents were identified and clustered into thematic areas or nodes. The thematic areas highlighted the key concerns as well as traits that contributed to success.

The findings from phase 1 were used to identify the main question areas for a series of semi-structured interviews. The nodes ideas resulting from phase 1 were broadly categorised though some more specific and detailed issues were incorporated into the interview protocol and question checklist. In total, sixteen themed question areas were devised based on the results of phase 1, which were loosely structured to enable interviewees the freedom to discuss the topic, whilst providing an aide memoir for interviewers.

In total, 46 interviews with an average duration of 50 minutes were undertaken for Phase 2. Interviewees were chosen using a critical-case method. The interviews were recorded and subsequently transcribed. Responses were analysed using the Nvivo software package v10. Utilising content analysis and applying similar techniques as those used in phase 1, a number of prevalent themes were identified from the interview data. In addition to triangulation and to ensure further robustness, the thematic areas were validated through external review. This took the form of focus group meetings with academic colleagues, alongside a review of findings with a range of participants. This process helped to make sense of the findings and to verify the validity of the thematic areas identified.

Phase 3 employed a fixed-response questionnaire developed using a combination of 5-point scale questions and ranking questions. The questionnaires were distributed to a similar range of staff members as those in phases 1 and 2, enabling a holistic review of different perceptions and opinions within each department. Questionnaires were distributed electronically online, with an option for hardcopy versions, to staff members within these departments. It took about twenty minutes to complete. The total number of responses from Phase 3 was 646 fully completed questionnaires.

Findings

Phase 1 research results revealed a number of recurrent themes and areas of focus as highlighted by respondents. Within the dominant themes a number of sub-issues or elements further emerged. These can be seen in Figure 2 below. It is important to note that Phase 1 themes were triangulated and robust, emanating from at least 3 different staff groups. Strategy for example was a theme that emanated from 73 different members of staff. Elements such as the dynamics of the department, communication and staffing were further emergent from the survey results. Phase 1

findings provided a wide but loosely structured range of issues that were incorporated and further examined in Phase 2.

Figure 2 - Phase 1 results

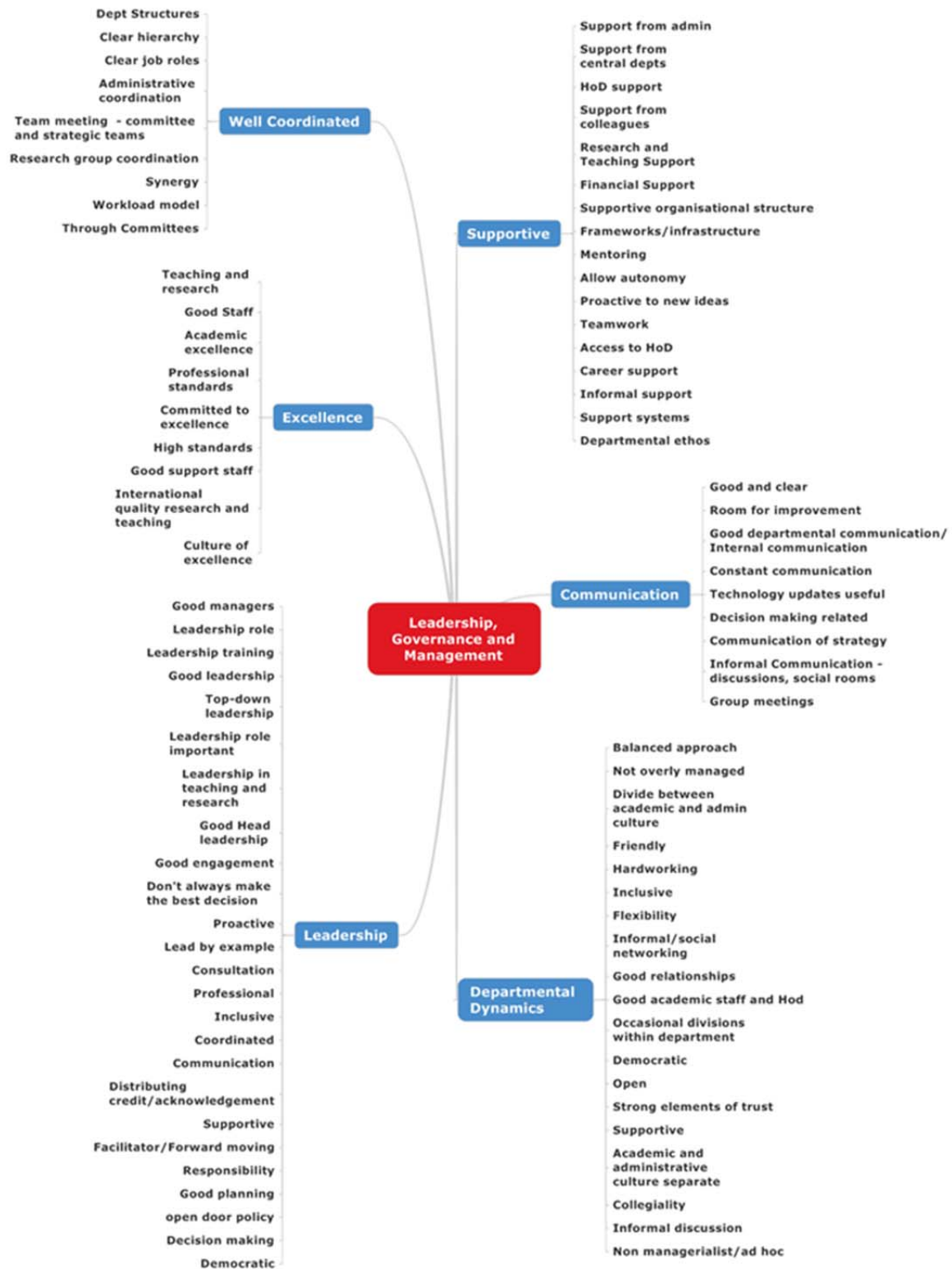
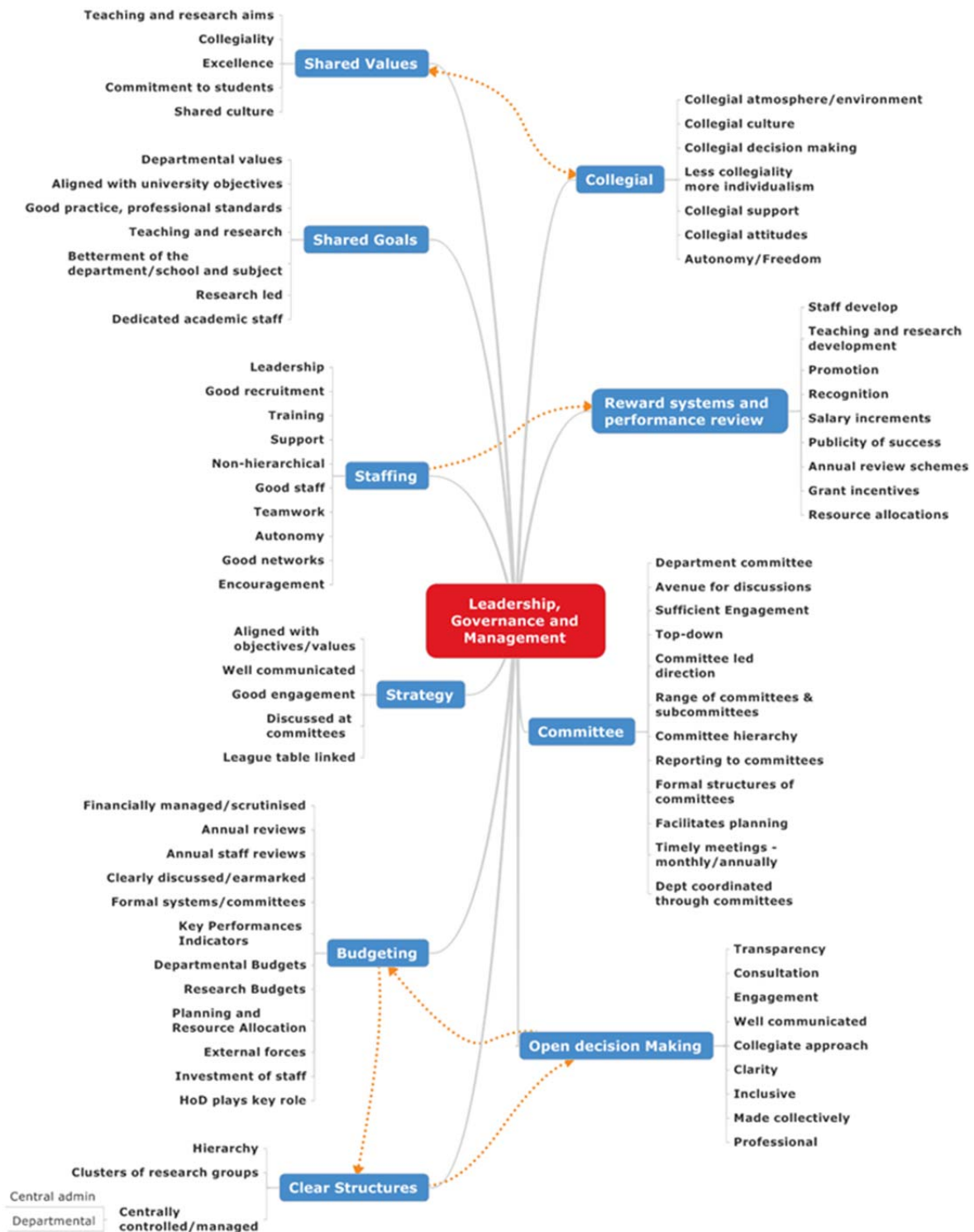


Figure 2 - Phase 1 results continued



During Phase 2, a purposive or critical case sampling methodology was used in the selection of potential interviewees. The job groups to be interviewed were specified, rather than taking a random sample from the phase 1 respondents. This allowed the targeting of key individuals to ensure a holistic

view of the departments, thereby allowing a diverse range of respondents to provide their perceptions and opinions.

Interviewees were drawn from the following job groups:

- Head of Department (both rotating terms and fixed appointments have been considered)
- Two academics (lecturer, research or teaching)
- One administrator within department
- One senior manager outside department (PVC, DVC or Dean)
- One administrator outside department (e.g. HR, finance, strategy)

The findings of Phase 2 reveal a more structured and concise thematic framework than that of Phase 1. There is strong refinement and condensing of the key issues that potentially restrict or enhance departmental performance. Results of content analysis reveal 17 major themes. Table 1 below provides a breakdown of thematic areas and further indicates the number of respondents that have highlighted these issues.

Table 1. Phase 2 Thematic Findings		
Name	Sources (out of 46)	References
Budgeting and Funding	31	62
Central services (Positive and Negative)	29	78
Collegiality	28	43
HOD Traits	26	79
Room for improvement	24	78
Teaching	23	39
Department size	20	38
Reward systems (Formal and Informal)	22	48
Supportive	19	32
➤ Informal networks – importance	12	16
➤ Training and Support	10	13
Department structure	18	33
➤ Coordination-positive aspects	11	19
Definition of excellence	17	24
Performance review	17	23
Shared values	13	20
Informal networks-importance	12	16
Mentoring Scheme	11	15
Shared goals	11	15
Good support services	10	16

These thematic areas were fed into the development and design of the Phase 3 questionnaire. Questionnaire structure and segments were developed and tested, with a range of questions and issues drawn from Phase 2 incorporated in the final survey.

To allow examination of the similarities and differences between high and low performing departments, the participating group of departments was split into three performance bands or tiers for phase 3. The data on the four performance measures were drawn from league tables scores from 2008-2010 with a mean score for the 3 years calculated. Departments in the top 10% of their subject were classified as the top tier of excellence. The lower tier comprised departments scoring in the bottom 60% of their subject area, with the middle tier being those in between. The performance tiers were based at the subject level rather than at university level, to provide a more accurate representation of performance. Table 2 below highlights the responses split across the performance tiers. Please note the terms ‘top’ and ‘lower’ tiers are used throughout the paper for ease of discussion. The terms are based only on the four measures selected and don’t include other measures of performance which may be perceived as important in varied types of institutions and departments.

Table 2. Responses across the tiers

Tier	Top (Top 10%)	Lower (Bottom 60%)
No. of Responses	157	249
Percentage of responses (total n= 646)	19%	30%

Survey results were analysed using SPSS v21. In order to uncover differences across the performance tiers, a range of tests were undertaken on the data. These were used to identify mean scores and differences in perceptions and opinions from top and lower tier departments. Tests of correlations and closeness of variables were also conducted on the data to examine if certain issues were closely linked to specific tiers. Thus for the purposes of this study, analysis of variances (ANOVA), t-tests and multiple correspondence analysis tests were undertaken to identify correlations and consistencies in the data collected (*see* Field, 2013; Malhotra and Birks, 2006). Multiple correspondence analysis or HOMALS (homogeneity analysis by means of alternating least squares) were run on a number of nominal variables to identify relatedness or associations in the data.

A reliability test was undertaken on the responses broken down by these 3 tiers to examine their level of reliability against a Cronbach Alpha score. These were shown to have reliable scores across all 3 tiers, indicating that internal consistency was reliable. Sweet and Grace-Martin (2008) indicate that a score of above 0.7 on an index of four or more indicators highlight good reliability,

while Bryman and Cramer (1994) extend this further but advocating a score of above 0.8. The results of this study fall within the assumptions of Sweet and Grace-Martin and as an overall questionnaire construct, within Bryman and Cramer's (1994). The lowest score of 0.653 was recorded for the lower tiered departments. While this score is lower than that of the other tiers, it is still considered reliable as Easterby-Smith *et al.* (2002) expand that a score of above 0.6 is still functional. Reliability results can be seen in Table 2 below.

Table 3. Reliability statistics		
Tier of the Department	Cronbach Alpha	No. of Items/ Questions Assessed
Top	.785	172
Lower	.653	172
Overall questionnaire	.811	173

HOMALS tests looks at the closeness of answers in relation to other variables plotting these on a graphical map where 'correspondence' can be viewed. The technique provides a useful visualisation of variables and is often utilised in identifying associations in variables in market research (Malhotra and Birks, 2006).

The HOMALS tests was used to plot the relationship between the tier of department and the leadership behaviours respondents perceived and valued in their own departments. This allowed clusters of variables and linkages to departmental excellence to be identified.

For the purposes of this study, HOMALS tests were examined against the lower and top tiers of departments with Table 4 below displaying the key consistencies and prevalent behaviours within each group.

Figure 3 below provides an example of the HOMALS testing undertaken on a range of different variables drawn from the questionnaire responses. The joint category mapping indicates that in top departments staff communicate with their HoD once a week (Cluster A), with middle tiered departments reporting meeting every few weeks and having a HoD that is proactive (Cluster B). Lower tiered departments unfortunately revealed no clusters (Cluster C).

Figure 3

It is important to note that HOMALS findings have been drawn from analysis utilising a range of nominal variables with a keen focus upon departmental tiers. Table 4 is the development of findings through examining consistencies and recurrences in joint plot of category points from

HOMALS analysis. Other variables tested include length of service at the department, age group departmental size and a range of management approaches.

Table 4. Patterns of consistency	
Lower Tier (Bottom 60%)	Top Tier (Top 10%)
<p>There were three ideas consistently related to the lower tier group:</p> <ul style="list-style-type: none"> • The best way to engage with the decision making process was through working groups • Communication with the HoD was monthly • The most desirable HoD trait was to be supportive. 	<p>The top tier showed a good degree of consistency and the following ideas were closely linked to these departments on two or more plots:</p> <ul style="list-style-type: none"> • Communication with the HoD was weekly • Participating in committees was the best way to engage in decision making • The most important HoD behaviours were: providing clear direction, being hands on and explaining difficult or unpopular decisions.
Overall Context	
<p>The limited number of ideas associated with the lower tier departments is quite striking, and in one particular theme, there were no relationships apparent for these departments at all. It seems that the strength of the top departments lies not only in the range of relationships uncovered, but also in their consistency.</p>	

**Note – Testing against other variables revealed similar consistent results.*

In reviewing bivariate correlations a number of departmental priorities were highlighted. Table 5 below displays the results on the levels of importance placed upon the qualities of the head of department. The correlations reveal positive directionality, meaning importance placed upon one trait had similar importance placed on another.

Table 5. Bivariate correlations on HoD qualities

	Approachable	Trustworthy	Informal	Strong	Democratic
Approachable	1.000				
Trustworthy	.401**	1.000			
Informal	.382**	.161**	1.000		
Strong	.254**	.410**	.177**	1.000	
Democratic	.149**	.282**	.459**	.272**	1.000

**Correlation is significant at the 0.01 level (2-tailed).

The stronger correlations reveal that when respondents want a head that is approachable, they place similar importance on he/she being trustworthy and informal and vice versa. When a head is trustworthy they would want strong leadership qualities in the individual. Moreover if the head is democratic, respondents highlighted a strong importance on being informal.

In addition to this, a number of mean scores were reviewed alongside statistical testing in order to identify the LGM behaviours which showed the strongest differences in opinions, perceptions and approaches. The differences between top and lower tier departments were quite distinct, reflecting varying management approaches being applied.

Table 6 below indicates significant ANOVA findings when Likert questions were split by departmental tiers, where higher scores indicate more agreement (5 – strongly agree, 1 - strong disagree). A Tukey post-hoc test was undertaken to identify where differences in mean scores lie. Tukey results revealed that all statements had statistical differences between top and lower tier departments. The results posit that there were contrasting approaches undertaken by these two department tiers. For instance, top tier departments agreed more strongly that contingency plans are in place, where lower tier departments were more static and conservative to change. Similar ANOVA and post-hoc tests were undertaken on other variables such as length of time the respondent has been in post, management approaches, department size, subject discipline and position in the university.

Table 6. ANOVA results against departmental tiers				Mean Scores	
	df	F	Sig.	Top Tier	Lower Tier
The department develops contingency plans for unforeseen changes such as cuts to funding	2 638	10.231	.000	3.49	3.18
People in the department are always looking to improve and are therefore open to change	2 641	5.049	.007	3.43	3.10
The department is conservative and static in responding to change	2 638	3.169	.043	2.36	2.64
Social events and away days help to promote department integration	2 642	3.907	.021	3.37	3.70
Access to the minutes/outcomes of meetings is/would be useful to me	2 641	3.820	.022	3.99	3.75
We are proactive in developing our department strategy to react to external forces	2 639	4.340	.013	3.63	3.38
My department head operates an open door policy	2 640	4.365	.013	2.98	3.36
Mentoring schemes do little to help new members of staff	2 427	4.567	.011	1.95	2.37
The condition of the building influences performance	2 634	5.013	.007	3.62	3.91
There are structures and targets in place to ensure strong performance in the REF	2 631	3.146	.044	3.76	3.50

Differences in mean scores were reviewed alongside statistical findings from ANOVAs and bivariate correlations. To ensure validity and reliability of findings, investigator triangulation methods were applied to prevent bias or inaccuracies in the development of thematic findings. Results from this phase of the study were also disseminated for review and comments by participants. Reviewing the different statistical results from ANOVAs alongside bivariate correlations and through identifying relationships and consistencies a consistent framework emerged from the data. Table 7 is an amalgam of the different statistical tests from phase 3 and coalesces key findings into summative results. It further highlights differences across recurrent thematic areas.

Table 7 – Prevalent issues highlighted across the tiers

Tier Theme	Top	Lower	Both Tiers
Change Management	<ul style="list-style-type: none"> - People in the department are always looking to improve and are open to change - Contingency planning is used - The department is not static and conservative - Top departments cope better with change - A change in the department head has no effect - Strategy reacts to external forces 	<ul style="list-style-type: none"> - Use of working groups - Change in head of department detrimental 	<ul style="list-style-type: none"> - Certain key people help to facilitate change
Leadership	<ul style="list-style-type: none"> - Head of department -hands on, provides clear direction, explains difficult decisions, leads by example - Trustworthy and democratic - Head of department provides clear leadership direction - High level of trust - Staff feel empowered 	<ul style="list-style-type: none"> - Head of department has a supportive approach - Informal and democratic - Open door policy 	
Communication	<ul style="list-style-type: none"> - Communication with the head of department tends to be weekly - There is a structured ability to discuss concerns with the head of department - Access to minutes - Lines of communication are transparent - Formal structures - Head of department ensures knowledge of university initiatives 	<ul style="list-style-type: none"> - Communication with the head of department tends to be monthly - Informal, lack of transparency in lines of communications - Staff engage in decision making through working groups, social events and away days - More of an open door policy - Culture is described as informal 	
Departmental Dynamics & Culture	<ul style="list-style-type: none"> - Autonomy and clarity of role - Collegiality - Staff are asked to participate in committees - Staff engage with the head of department 	<ul style="list-style-type: none"> - Staff engage in decision-making through working groups 	

Table 7 – Prevalent issues highlighted across the tiers continued

Theme \ Tier	Top	Lower	Both Tiers
Direction, Strategy & Shared Values	<ul style="list-style-type: none"> - Equal importance placed on student satisfaction and teaching - Head of department provides clear direction - Clear direction and goals help the department to achieve its objectives - Head of department ensures staff have knowledge of university initiatives - Strategy developed to react to external forces - Flexibility around strategy 	<ul style="list-style-type: none"> - Equal importance placed on research and teaching - Research and value for research in enterprise - Department strategy aligned with the university's. - University strategy can restrict department excellence. 	
Staffing & Mentoring	<ul style="list-style-type: none"> - Induction courses - Loyalty to the department rather than research group - Autonomy & working with world-class colleagues is important - Mentoring is provided for new staff 	<ul style="list-style-type: none"> - More loyal to department than university - More loyal to colleagues and research area - Staff need to be managed and directed - Working with world class colleagues and rewards by department aids staff retention 	<ul style="list-style-type: none"> - Good administrative staff are important for departmental excellence
Rewards	<ul style="list-style-type: none"> - Structure and targets are in place for the Research Excellence Framework - Driven by Principal Investigators - More satisfied with working environment 	<ul style="list-style-type: none"> - More recognition of teaching excellence was desired - Rewards overly linked to research, priority for teaching and research should be equal - Central control of department budgets detrimental 	<ul style="list-style-type: none"> - Support staff should be recognised - Formal rewards more important - It is vital to be acknowledged by Head of Department
Research and Teaching	<ul style="list-style-type: none"> - Research led teaching is emphasised - Equal importance placed on student satisfaction and teaching - Quality of education 	<ul style="list-style-type: none"> - Networking and collaborating inter and intra departments is important - Equal importance placed on teaching and research - Good interaction between research clusters - Driven to publish for REF 	<ul style="list-style-type: none"> - Research clustering not beneficial to department structure - Research support staff not helpful in grant applications - Allocation of teaching duties are not fairly allocated across the department - Teaching students well is important - Strong emphasis on research outputs
Organisation and Structure			<ul style="list-style-type: none"> - Clear line management - Condition of building influences performance

Discussion

Synthesising the results from all three research phases has revealed the key areas of leadership, governance and management and their associated behaviours for both high and low performing departments, as measured on the four chosen indicators. There are certain traits that are associated with different departmental performance levels. The differences though are in some instances relatively slight and are not as far apart as league table positions would suggest. In some areas, the behaviours and attitudes observed in both top and lower tier departments were similar, such as views about some aspects of research and teaching.

In top departments, respondents reported striving to improve and were open to change. This leads to a dynamic department that is not static or conservative. Top departments reported coping slightly better with change than lower ranked departments, though respondents in both tiers identified that certain key people help to facilitate change. This gives credence to the use of change agents as a valuable tool in change management. The results indicate that a proactive approach with good contingency planning and a willingness to change and adapt is a feature of top departments.

In high performing departments there appears to be more clarity in direction and more collectively expressed objectives in terms of what the department seeks to achieve. This could be through strategic initiatives or simply through good line management and communication. To some degree, top tiered departments exhibit more consistency in their direction of travel across the different staff groups, suggesting that there is a collective and conscious choice by the department to try and achieve its goals. A collegial departmental culture could be the catalyst for this, or perhaps even the reason why consistency and clarity of direction exists. A degree of flexibility around strategy was reported, in particular to be able to react to external forces. Lower tier departments on the other hand, display some capacity and the desire to achieve similar forms of excellence but the collective force seems to be more dissipated and perhaps less focussed in terms of clarity of direction. The corporate strategy was in some cases reported to be restricting departmental excellence in the lower tier.

In terms of leader behaviours related to the head of department role, there were some differences across the performance tiers. In high performing departments, the head was reported as being hands-on, providing a clear steer and direction. The head engendered a high level of trust and perhaps because of this, staff seemed to accept that he or she would need to make difficult decisions but appreciated the fact that the rationale behind them would be explained. Staff in top departments reported feeling empowered and autonomous. This may be linked to the enabling feature of having clarity about their role which was also reported. Another enabling factor for this is likely to be related to the manner and focus of communications from the head, for example, ensuring that staff are informed about university initiatives. The high level of trust in the head of department may be a factor in fostering an environment where staff are empowered to be autonomous. This finding echoes ideas presented by Bryman (2007), Kennie (2009) and Deem (2010). Drawing conclusions about this must

be done with caution - can a high performing department provide for empowerment and autonomy through the leadership behaviour of the head, or is it empowerment and autonomy that creates a successful department? The inferences of causality need to be carefully applied. Another factor at work here may be the personal choices made by staff; perhaps staff who are more autonomous in their approach are more likely to be attracted to work in these sorts of departments. Nonetheless it is clear that empowerment and autonomy are vital characteristics within HE.

In the lower tier departments, there was much less clarity about the required head of department behaviours. It was reported the head was supportive and informal. Moreover there were fewer significant correlations recorded within the lower tiered departments suggesting a lack of clarity of what are desirable traits for a head of department as compared to the top tier departments. This lack of clarity may hinder high performance and perhaps leadership and direction or vice versa. In thinking about head of department behaviours it is worth noting that this study did not examine the effect of different management structures in different types of institutions, although both rotating and permanent positions were included in the study.

In terms of communication mechanisms and styles, some distinctions can be drawn between departments ranked at different levels. Top departments reported more frequent communication with the head, with formalised and structured channels of communication. In lower tier departments communication was more likely to be less frequent and more informal, with less transparency in communication channels. Interestingly social events and away days that help integration were viewed more positively by lower departments as opposed to top departments.

In thinking about staffing and mentoring, results for the lower tiers indicate that if staff members were able to work with world-class colleagues it would aid staff retention. Likewise having sufficient reward systems in place would have a similar effect, in agreement with the work of Hillhouse (2009). Interestingly the findings indicate fewer significantly correlated values in lower tiers, perhaps highlighting the less defined understanding of their own needs and requirements to improve staff retention. To a certain degree, the findings indicate that there is more clarity about what is needed in top as compared to lower tier departments.

Conclusion

The findings of this study relate strongly to current literature and understanding in the field. In particular, Davies et al. (2007), Henkel (2002), Middlehurst (2004) and Ramsden (1998) in their earlier research discuss the extent to which leadership and clear application of change management approaches will enable academic excellence amidst a decisive sense of purpose of both the university and the academic department. Tierney (1988) reviews the ability for strong shared values and culture to reinforce department strength further. Likewise Chitty (2004), Clarke et al. (2000) and Marshall and Pennington (2009) posit that true academic values and academic reward is retained through

focusing upon teaching and research. McCormack et al. (2014) find that the relationship between management scores and research and teaching performance is consistent across both research-intensive and newer, teaching-focused universities. Similarly reward structures and clear channels of communication are beneficial in enhancing excellence at both a departmental and university level. While it is hard to accurately predict which of these enable excellence more than the other, it is clear from this study that departments need to more holistically embed a sense of purpose and direction. Perhaps it is through some of these approaches that a clearly recognised departmental goal is proliferated within a department.

The findings of the research have been synthesised to develop a thematic framework of eight elements that contribute to excellence in academic departments. The eight broad themes and associated behaviours that were consistently reported in high performing departments have been used to develop the Underpinning Excellence Model (see Figure 4).

Figure 4. Underpinning Excellence Model



The research also suggests some key traits and behaviours that are needed to ensure that departments have the right foundations and capacities for growth. The importance that administrative and support staff are afforded, the desire to maintain levels of quality teaching and the value of clear line management and facilities are elements that perhaps create the groundwork for departments to become excellent and grow. This posits some key areas for consideration. Notwithstanding additional resource allocations, critical mass or organisational structures may further play a role in enhancing departmental effectiveness. While the study has incorporated the opinions and perceptions of a range of individuals within universities, there are other considerations that would affect departmental performance. For instance, it is important to note that the research did not consider the effect that centralised or devolved administrative structures may have on administrative functions. Nonetheless, the study has incorporated their views through including administrative staff from both centralised and devolved administration structures. Local circumstances and structure are also important in effecting change and in determining how effective certain behaviours and leadership styles might be.

The current economic and public sector environment of accountability and austerity means that academic integrity and appropriate usage of public funds must lead to improvements in university quality and excellence. Given these changes within the HE sector, the results provide timely and relevant consideration of the potential remedy as well as a means to continuously improve. The results of this study encompass academics and administrative members of staff alongside senior management and therein highlight a number of thematic elements persistent within university management.

The results from the research phases indicate consistency in the behaviours associated with the eight different themes. For example leadership needs to be credible, to provide direction and to exemplify required behaviours to promote high performance. Rewarding members of staff helps to promote endeavour, as well as remuneration for hard work. Appropriate mind-sets and structures are required to enable the management of change, both reactive and proactive, which also aided in enabling departmental excellence. Sporadic or dispersed views and opinions seem to be reflected in departments which are struggling to realise their full potential.

It is important to note the inter-relatedness of the eight thematic areas. Based on the findings of this study, it would be difficult for a department to excel if only singular elements of the model existed. It is not the individual themes but its holistic effect on a department that promotes good performance. Leadership is linked to direction, strategy and values; staffing is related to departmental dynamics and culture; communication to leadership. It is an amalgamation of these behaviours and attitudes that provides a useful signpost towards enhancing department excellence.

There are similarities between the Underpinning Excellence Model and other organisational development frameworks such as the EFQM Excellence Model (*see www.efqm.org*). Both models have the aim of providing guidance on how to promote success and improve performance in organisations. The key enabling elements of leadership, people and strategy form parts of both models. Elements of the EFQM framework have been applied in HE although its origins are from

industry (Doherty, 1993; Osseo-Asare, 2005). In contrast, the Underpinning Excellence Model has been developed specifically for HE, using evidence gathered from the sector. It is therefore ‘grounded’ in data drawn from key stakeholders and research into issues specific to the sector. Thus, while there are similarities between the models at the thematic level, the Underpinning Excellence Model and the supplemental toolkit consider the demands within the world of academia and would not wholly apply to other organisations. Whilst some of the concepts are similar, the practicalities of what they mean in terms of leadership and management in HE are specifically addressed in the Underpinning Excellence Model. For example, one of the fundamental concepts in the EFQM framework is “leading with vision, inspiration and integrity”. This concept is also important in the Underpinning Excellence Model and the detail of the various facets of what this means in an HE setting is additionally drawn out in the model.

The Underpinning Excellence Model brings together behavioural and attitudinal factors which contribute to high performance, based on the findings of this research, and indicates areas for consideration. It does not indicate every specific variable that can contribute to an academic department’s performance, nor is it applicable to every department. It does not claim causality but does posit key areas of consideration for departments. The study does, however validate some of the assumptions and findings in current discourse. Ultimately the model provides an overview of some of the key traits and factors affecting and potentially enabling university departments to excel.

The Underpinning Excellence in HE Toolkit

The findings of the research described above were used to develop a practical web-based toolkit, available at: <http://www.underpinningexcellenceinhe.ac.uk>. Using the Underpinning Excellence model, the toolkit enables users to explore the strengths and weaknesses of the leadership, governance and management in their departments, and to identify areas for improvement. The tool includes a self-diagnostic questionnaire, with a number of questions aimed at benchmarking a department’s current position in terms of leadership, governance and management. The answers provided to these questions are then compared with the behaviours of top-performing departments and a personalised report is produced which indicates areas of strength and weakness.

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