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Quality assured assessment processes: evaluating staff response to change

by

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Medical education is not exempt from the increasing societal expectations of accountability and this is evidenced by an increasing number of litigation cases by students who are dissatisfied with their assessment. The time and monetary costs of student appeals makes it imperative that medical schools adopt robust quality assured assessment processes. The success of these processes depends on the ability of faculty to determine the necessary changes required and manage the change process. Openness to change is critical; therefore, identifying the processes that facilitate staff openness constitutes an important step in better understanding how higher education institutions can ensure that staff members are willing to support and engage in change initiatives. This paper examines the contribution of the three attributes of the change model (content, process and context) in relation to staff openness to the quality assurance processes of assessment changes that were implemented at the University of Tasmania's School of Medicine.

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Évaluation de la réponse des personnels au changement des processus d'assurance qualité : une étude de cas

par

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L'enseignement médical n'est pas épargné par l'augmentation des attentes sociétales en matière de responsabilité et ceci est mis en évidence par l'augmentation des cas de litiges avec des étudiants mécontents de leur évaluation. Le coût en temps et en argent de ces contestations nécessite que les écoles médicales adoptent de solides processus d'évaluation de la qualité. Le succès de ces processus dépend de la capacité du corps enseignant à définir les changements nécessaires et à gérer le processus de changement. L'ouverture au changement est cruciale ; c'est pourquoi l'identification des processus qui facilitent un état d'esprit ouvert de la part des personnels constitue une étape importante pour mieux comprendre comment les institutions d'enseignement supérieur peuvent faire en sorte que leur personnel soit disposé à soutenir les initiatives de changement. Cet article examine la contribution des trois attributs du modèle de changement (contenu, contexte et processus) en relation avec l'ouverture d'esprit du personnel vis-à-vis des changements des processus d'assurance qualité mis en place à l'Université de Tasmanie, École de Médecine (TSoM).

Introduction

Medical education is increasingly being subjected to evaluation and internal monitoring processes are vital to the ongoing improvement of the education provided by institutions. Over the past decade, the university sector has seen considerable change and increased accountability for its activities, simultaneously. Medical schools are having to acknowledge the implementation of new curricula, the consequences of new health service priorities and an increase in the number of medical students (Norcini *et al.*, 2008).

Many people have an interest in the quality of medical education. Students have the right to as good an education as possible, and the public has the right to well-educated and well-trained general physicians and specialists (Vroeijenstijn, 1995). Therefore, a medical school or faculty must ensure its quality and be accountable for the caliber of the training it provides. Quality depends not only on measurement instruments and tools but also on the spread of quality awareness among faculty, staff and students. Therefore, in order to safeguard excellence, institutions need a well-designed quality assessment tool (Vroeijenstijn, 1995). Furthermore, the best way to ensure quality is by paying continuous attention to the design and administration of assessment items, based on two pillars: a system of internal quality control and external assessment by peers (Hays, 2008). For an assessment process to be successful, it is critical that educators play an active role in both the development and administration of assessment programmes in order to gauge whether learning has occurred or not and to determine the necessary changes for improved learning (Ramsden, 2003). Improper management of the change process can cause resistance to innovative assessment practices. To minimise this occurrence, evaluation and monitoring of the change process is essential.

The successful management of change is accepted as a necessity in order to survive and succeed in today's highly competitive and continuously evolving environment (Self *et al.*, 2007). However, Balogun and Hailey (cited in Todnem, 2005) reported a failure rate of around 70% of initiated change programmes, because of the non-consideration of a key element of the change process: openness of employees towards the change. Beer and Nohria (2000) stated that the poor success rate of change programmes is due to a lack of a valid framework detailing how to implement and manage change. An effective framework for categorising organisational change variables consists of three factors, namely content, process and context (Armenakis and Bedeian, 1999).

Although organisational science researchers acknowledge the importance of all three variables, there is insufficient empirical evidence of these variables being assessed simultaneously in organisational change efforts (Self *et al.*, 2007). This dearth of empirical evidence is a crucial knowledge vacuum that needs addressing to support the understanding of organisational change.

In 2009, the University of Tasmania, School of Medicine (TSoM) undertook major reforms of the Bachelor of Medicine, Bachelor of Surgery (MBBS) programme in terms of content, delivery and duration. These reforms included extensive, comprehensive and procedural changes to assessment processes. These changes then needed to be evaluated to quantify how well the reforms had achieved, or failed to achieve, their intended outcomes. Due to the centrality of content, process and context to the success or failure of change, the study on which this paper is based investigated the implementation and management of change in the assessment processes at TSoM. Its objective was to examine the influence of the three major attributes of change (content, process and context) on staff openness towards the newly implemented quality assurance processes for assessment.

This paper starts by analysing the evaluation and improvement of quality in medical education. It goes on to look at change management models, contextual factors of change and methods for implementing change efforts. It concludes by discussing the global change environment and implications for practitioners.

Evaluation and improvement of quality in medical education

Medical education is a complex combination of systematic teaching and learning activities within a professional environment where unplanned learning is an important objective part of clinical learning (McCoubrie, 2007). Curriculum should be designed so that teaching and learning activities and assessment tasks are co-ordinated with the intended learning outcomes (ILOs) (Fraser and Bosanquet, 2006). Biggs (2003) refers to this process as "constructive alignment". "Constructive" refers to the type of learning and what the learner does, while "alignment" refers to what the teacher does. The connection between teaching, assessment and learning outcomes helps to make the overall learning experience more transparent (Adam, 2006). Medical schools should have in place an identified group of individuals with expertise and interest in medical education who are responsible for the overall curriculum implementation and student assessment (Smith and Dollase, 1999).

Quality in medical education results from a co-ordinated effort to ensure relevance and efficiency in the education of future doctors and to ensure that these doctors match society's needs optimally (Boelen, 1995). Implicit in the notion of quality is a special consideration for social accountability. Indicators

are therefore expected not only on educational content and process and availability and use of resources, but also on how medical schools implement their social and health mission. Central to both accountability and quality assurance is assessment. It offers a means of identifying those whose overall performance is well below standard and identifying areas of weakness, thereby helping to drive the continuous quality improvement process.

Assessment is an integral part of curriculum development, delivery and evaluation, needing both "backroom" science to develop the most appropriate assessment programmes and a group of subject specialists to make any necessary judgments (Hays, 2008, p. 24). What and how students learn depends largely on what and how they think they will be assessed. Assessment practices must send the right signals to students about what and how they should be learning. More often than not, wrong signals are sent to students; therefore, it is important to examine the purposes of assessment, the relation between assessment and the assumed nature of what is being assessed and who might usefully be involved in the process. The underlying principle is that assessment tasks should comprise an authentic representation of the course's intended learning outcomes. There has been increasing awareness that assessments in medical education should demonstrate a high degree of construct validity (Downing, 2003). To assist in this process, a set of best practice guidelines has been developed by an international group of experts in assessment outlining the principles and steps required to ensure that procedures are defensible to both internal and external scrutiny (Newble *et al.*, 1994). Major areas for consideration by an examination/assessment committee are: blueprinting to ensure content validity; selection of best test formats; applying strategies to achieve adequate levels of reliability; and instituting appropriate standard-setting and decision-making procedures.

These developments have helped to fuel the creation of several new methods of assessment and to increase the use of those already available. The increase in the number of methods and the enhanced sophistication of assessment overall has been motivated by public pressure for accountability and quality improvement. This has been accompanied by curricular changes in the form of outcomes-based education and supported by improvements in technology and psychometrics. All improvement requires change. However, change in medical education should be driven by improvement evidence and not by social or political fashion (McCoubrie, 2007). Quality assurance of assessment practices in medical education involves changes in processes and people's behaviour. Faculty development reinforces the importance of assessment and provides medical educators the opportunity to develop common standards for performance. The development of assessment that supports learning in medical education requires both qualified and skilled educators who understand assessment methodology, what needs to be

assessed and how to judge the performance of students. To achieve this goal, current assessment practices need to be reviewed, changed according to needs and the change process managed effectively.

Change management models

According to Burnes (2004), change is an ever-present feature of organisational life, both at the operational and strategic level. Therefore, in any organisation, there should be no doubt of its ability to identify where it needs to be in the future, and how to manage the changes required. Consequently, organisational change cannot be separated from organisational strategy, or *vice versa* (Burnes, 2004; Rieley and Clarkson, 2001). Due to the importance of change, its management is becoming a highly required managerial skill (Senior, 2002). Change management as defined by Moran and Brightman (2001, p. 111) is "the process of continually renewing an organisation's direction, structure, and capabilities to serve the ever-changing needs of external and internal customers".

The high failure rate of change projects has led some researchers to conclude that factors other than organisational- and system-level variables are equally important in establishing successful change. As an approach, some researchers have adopted a more micro-level perspective on change by examining individuals within organisations and the psychological factors influencing change efforts (Kavanagh and Ashkanasy, 2006; Vakola *et al.*, 2004; Wanberg and Banas, 2000). Kavanagh and Ashkanasy (2006) asserted that changes in structures, hierarchy, reward systems and technology are mediated through individual change. One plausible explanation for the poor results in organisational change efforts may be that change leaders/change agents and researchers are inattentive to some of the human variables that are important during organisational change efforts.

Armenakis and Bedeian (1999) provided an effective theoretical framework based on three factors (content, process and context) that can shape employees' reactions to change efforts. Although researchers have widely acknowledged the importance of all three factors, they have rarely considered them simultaneously as they relate to organisational change. Most researchers have examined the impact of only one of these factors on openness to change (Armenakis and Harris, 2002; Bommer *et al.*, 2005; Oreg, 2006; Wanberg and Banas, 2000). However, to gain a comprehensive understanding of organisational change, it is essential to know the conditions related to all three factors.

The content, process and contextual factors of change

Content factors relate to the "what" of a change initiative. Various content models have been applied to organisational change efforts (Cunningham, 2006) and they include changes in structure, human resource practices, technology,

total quality management, social issues and physical settings. The reaction of employees to change is influenced by how a specific change has affected their day-to-day lives. This notion is supported by Piderit's (2000) argument that individuals often exhibit resistance because of the anticipated impact that change will have on them personally, rather than resisting the change itself.

Process factors relate to the "how" of a change initiative, that is, the specific methods utilised to implement a change. The process model encompasses the unfreezing, moving and freezing phases through which successful organisational changes progress (Robbins *et al.*, 2004). It underlines that the way in which change agents introduce change will certainly affect the reaction of the employees to these changes. The strategies and tactics that are applicable for justifying an organisational change (before, during and after implementation) include, but are not limited to, persuasive communication (executive briefings and newsletters), active participation (activities capitalising on self-discovery) and various forms of symbolism (rites and ceremonies) (Quinn, 2004).

More substantive forms of participation in the change process tend to be associated with higher commitment (Armenakis and Harris, 2002) and employee involvement in decision making in particular tends to lead to employee acceptance or openness to change (Wanberg and Banas, 2000). Thus, if an organisational change is perceived by employees as justified, acceptance of the change is more probable.

The context variable relates to the "why", "when" and "where" of a change initiative and it is concerned with the areas of transformation. Substantive contextual factors may explain why a change initiative is not successful (Johns, 2001; 2006), independent of the content of the change. Several researchers have indicated that the culture and climate of organisations are decisive in sustaining organisational change (Jones *et al.*, 2005). The fundamental culture, or "feel", of the organisation directs and motivates employee efforts (Chonko *et al.*, 2002). Contextual factors are the circumstances, or the existing external and internal conditions, that have been shown to influence organisational effectiveness (Pettigrew, 2000). Outer context refers to conditions such as prevailing economic circumstances as well as social and political environments, whereas inner context refers to internal influences such as resources, capabilities, structure, culture and politics (Pettigrew, 2000). Self *et al.* (2007) defined internal context as a moderator of the relationship between *i)* change content and process and *ii)* employee beliefs, attitudes and intentions. That is, the interpretations of the changes made and the process used during the implementation will be influenced by existing organisational circumstances. Johns (2001) argued that internal context might be responsible for explaining why a change initiative did not produce favourable effects, even though the change agents employed appropriate tactics. He stated that assessing context by capitalising on the perceptions of those who experience the benefits and

limitations of organisational practices may be an effective methodology. Perceived organisational support (Eisenberger *et al.*, 2002) and strong feelings of affect (*i.e.* the body's way of preparing itself for action in a given circumstance by adding a quantitative dimension of intensity to the quality of an experience) are some of the internal contextual variables that can make employees more receptive towards change initiatives. These apply not only in the early stages of an organisation's efforts to introduce and implement the change initiative, but also during and following the change effort.

Method

Organisational context

In 2006, the Tasmanian School of Medicine (TSoM) implemented an innovative, five-year undergraduate medical programme. Compared to the previous six-year discipline-based curriculum, the new programme is explicitly outcome based, requiring students to demonstrate specified levels of performance in a range of medicine-specific capabilities (human health and disease, communication and collaboration, community health and disease, personal and professional development) and generic capabilities (critical evaluation, reflection, communication and teamwork) at defined levels as they progress through the programme. All courses are interdisciplinary and highly integrated both horizontally and vertically. Important features include early clinical experience, small-group teaching and student-centred facilitative teaching/assessment approaches that foster deep learning. The programme's assessment system is particularly important and incorporates many novel features, including criterion referencing of results, interdisciplinary examinations, a balance between continuous and barrier assessments, peer feedback and performance assessments of clinical competence.

Change context

Previous assessment processes for TSoM's medical programme in relation to Years 1-3 were discipline-based and content-specific with no formal or documented quality assurance processes in place for exam item writing and peer review. The major reforms of the MBBS course facilitated a change in assessment procedures to encourage disciplinary integration. Furthermore, the new assessment processes described herein had a significant element of centralisation in order to facilitate development, documentation, exam management and QA reporting of assessment activities. The Medical Education Unit (MEU) was central to the management of the assessment process for the MBBS programme and, prior to implementation, the "what", "how" and "why" of the change process was communicated to staff individually and at

workshops. A document was circulated in advance outlining a proposal for the introduction of quality assessment processes.

The change process included setting up QA processes around assessment practices (as shown in Appendix I) and these in turn included blueprinting the educational objectives, selecting appropriate test formats and applying assessment strategies to achieve adequate levels of reliability. It also meant implementing appropriate standard-setting and decision-making procedures and running workshops for the peer review of assessment items before they were administered to students to ensure that the items were constructed properly, without item writing flaws. To minimise the error of measurement and thus increase the overall validity and reliability of the exam, the review workshops focused on: *i)* what the question tested; *ii)* why the question was relevant or important; and *iii)* if it was core knowledge.

Participants and procedures

Questionnaires were administered to the 25 prospective participants. These were full or part-time academic staff members of TSoM who were involved in the development of assessment questions for medical students in Years 1-3, as well as the administrative staff who co-ordinated the programme. Participation was voluntary and anonymous.

Measures

The survey instrument measured staff members' openness to change based on the concept developed by Armenakis and Bedeian (1999) and on the scales developed by Bamford (2008) and McNish (2001). The questionnaire comprised 15 close-ended questions, was measured on a 5-point scale and structured along 3 variables: change content, change process and organisational context, as shown in Table 1. The questionnaire also included an open-ended component, which allowed respondents to provide general comments on the change process.

Change content focused on the impact of change (*e.g.* "There were reasons for change which are visible and the goals are transparent"). Change process focused on institutional communication (*e.g.* "Communications about the change are timely and relevant"). Change context evaluated staff perceptions of the degree of support they believed the School of Medicine and MEU provided to them in the implementation of the new assessment practices (*e.g.* adequate training was provided to those who required it). Scale options ranged from 1 (strongly disagree) to 5 (strongly agree).

Table 1. **Means and acceptance level of change factors**

Variable	Mean score (out of 5)	Disagree %	Neutral %	Agree %
Change content				
The change was necessary	4.44	0	0	100
Do you think this was the correct change to make?	4.33	0	0	100
This change initiative will succeed	4.06	0	11	89
There are logical reasons for change which are visible and the goals are transparent	4.28	0	0	100
Change process				
The basic goals for the change were clearly defined and communicated	4.00	0	6	94
The people affected by the change within the organisation (TSoM) agreed with the goals	3.56	0	41	59
Regular feedback on the change process was always given	3.94	0	24	76
The implementation team had specific lines of responsibility	3.71	0	25	75
Communications about the change are timely and relevant	4.18	0	13	88
The success of this change depends on individual contributions to the process	4.41	0	7	93
Organisational context				
Adequate training was provided to those who required it	3.71	6	31	63
Resources were made available to resolve practical difficulties as soon as they arose	3.83	0	35	65
Those concerned with the outcome of the change process take part in planning	3.78	6	24	71
The process of implementation for the change is flexible and reactive	3.89	0	18	82
You are able to take ownership and influence details of the change	4.11	6	0	94

Note: Number of respondents: 18.

Analysis

Mean scores for each Likert item were calculated with the SPSS computer programme using a 5-point scale, with a score of 1 for strongly disagree and 5 for strongly agree. Item responses relating to each change variable were summed to create scores for each variable and the mean scores of participants' responses were determined. The relationship between the three variables (change content, change process and organisational context) was also determined using correlation analysis and by comparing the percentage of openness to change for each variable.

Results

There was a 72% response rate as 18 out of the 25 prospective participants filled out and returned the questionnaires. The means and the acceptance level for the Likert items are presented in Table 1. It was clearly demonstrated that within the change content variable, all respondents (100%) agreed that the change was necessary. The change made was perceived to be correct and the reasons and goals for change were considered visible and transparent. Also, 89%

of respondents agreed that the change initiative would succeed. The remaining 11% were neutral.

Within the change process variable, 94% of the respondents agreed that the goals of the change were clearly defined and communicated, 93% agreed that the success of the change depended on individual contributions to the process and 88% agreed that communications about the change were timely and relevant. It was also evident that 76% of the respondents agreed that the implementation team had specific responsibilities and 75% agreed that regular feedback on the change process was always given. Only 59% of the respondents reckoned that the people affected by the change agreed with the goals; the remaining 41% were neutral. No one disagreed.

Within the organisational context, 94% of the respondents agreed that they were able to take ownership and influence elements of the change. However, 6% of the respondents disagreed. In addition, 6% of respondents indicated that adequate training was not provided to those who required it and that those concerned with the outcome of the change process did not take part in the planning process. It was clear that 82% of the respondents agreed that the implementation process for the change was flexible and reactive, while 65% agreed that resources were made available to resolve practical difficulties as soon as they arose. It was noted that there was a high level of openness to the change, and staff level of perception of support from the school and MEU influenced their openness to the change content and process.

Figure 1 shows mean score values of 4.28, 3.97 and 3.86 for change content, change process and organisational context, respectively. This indicates that respondents were most open and in agreement with the content, but less open to the context, of the change. Table 2 indicates the positive correlation between content and process ($r = 0.48$), content and context ($r = 0.58$) and process and context ($r = 0.46$). The positive relationship between the three variables indicates that respondents who felt more positive about the content of the change also felt more positive about the process and the context of the change, with a more positive relationship occurring between the content and context of the change. The test reliability was 0.87. Internal consistency for each measure of change was high with Cronbach's Alpha of 0.72, 0.68 and 0.76 for change content, process and context respectively.

Figure 2 presents the level of acceptance of the three change variables. While 97% of the respondents agreed with the change content, 3% were neutral and no one disagreed with it. Furthermore, 81% agreed with the change process, 19% were neutral and none opposed it. In terms of organisational context, 4% of the respondents disagreed, 21% were neutral and 75% agreed with it. The general comments from respondents are presented in Table 3.

Figure 1. **Mean scores for change variables**

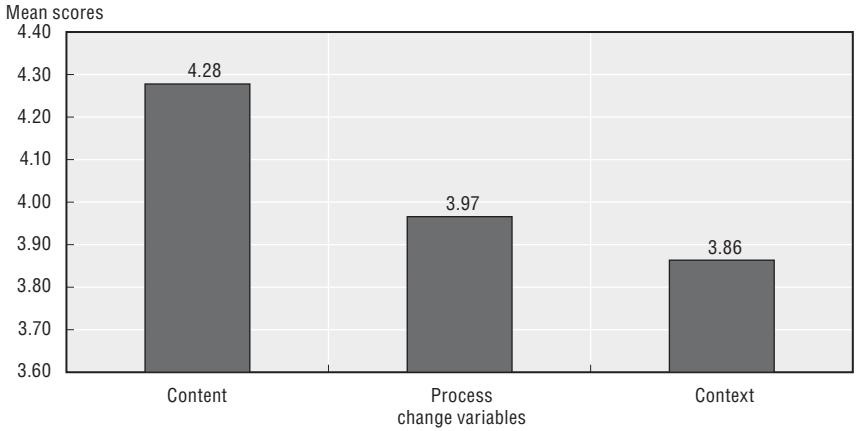

Table 2. **Correlations between change variables**

Variable	Content	Process	Context
Content	1		
Process	0.48	1.00	
Context	0.58	0.46	1.00

Note: All correlations were highly significant ($P < 0.001$).

Figure 2. **Staff response to change variables**

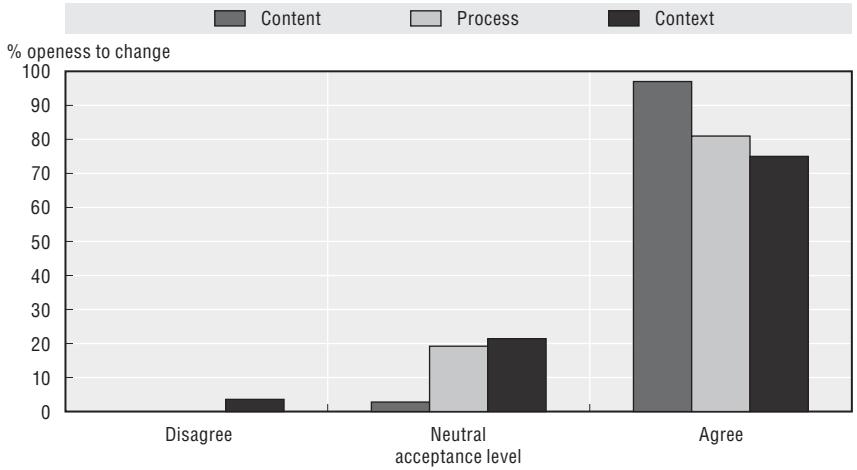

Table 3. **General comments from respondents**

"Very good initiative. Only thing is that sometimes exam requests were a bit late and information or outcomes from the assessment committee did not always filter through in a timely manner. Generally though it was good. QA program and MEU involvement in exam preparation has been excellent."
"I agree that the changes have been necessary – however I think that the expertise of the MEU has made the process more prescriptive than consultative."
"This process has also been useful for re-thinking assessment in other courses outside of the School of Medicine. It also helps to focus on teaching."
"I think that the changes will, with time, make assessment more effective. It needs everyone to be fully engaged for maximum success."
"The change was clearly necessary. The implementation has been fluid, *i.e.* responsive to needs/feedback, but also proactive in (re)setting directions when needed."
"I did not have central involvement with the changes, so my neutral comments tend to reflect a lack of knowledge or involvement in those areas."
"Assessment get togethers are a great opportunity to discuss various issues."
"Somewhat difficult to answer some of the questions as we are still very early into QA process. Succession planning seems to be built in but will only be apparent some time down the track."
"Further work needed on the workshop process. Mapping/blueprinting to be provided with the exams. We probably also need to allow more time for the meetings."

Discussion

This study was undertaken to assess staff members' level of openness to change using the content, process and context factors of change. The positive correlations between the three change variables indicate that openness to change is facilitated by the content (impact of change), process (organisational communication) and context of change (perceived organisational support). This means that content, process and context-related factors have significant inter-related influences on the success of organisational change, as stressed by Armenakis and Bedeian (1999). This result is in agreement with the findings of Self *et al.* (2007), who observed that the extent to which employees perceived an organisational change as justified (impact of change and organisational communication) was influenced by their perceived organisational support. The high correlation between the context and content of organisational change implies that employees who perceive organisational support as high are also more likely to perceive organisational change as more justified and be open to it. On the other hand, this finding contrasts that of Devos *et al.* (2007), who reported that content, process and context factors have a significant influence on change openness and are independent of each other. This may be because the organisational change presented in their study was simulated and the participants only had a limited amount of information about the change taking place. In this study, however, the change was real and all respondents believed that the change was necessary and was the right type of change required. The willingness of faculty to engage in the change process is an

indication of institutional values in the implementation of best practice assessment programmes. Specification of the intended learning outcomes and alignment of the learning outcomes with assessment tasks facilitate an assessment-to-a-standard approach. Here, what matters are the standards that students achieve and not the time they take to achieve them; it also emphasises accountability and quality assurance (Harden *et al.*, 1984).

Enhancing assessment practices and embedding new approaches to assessment within teaching and learning practices require more than professional development for staff; they also require a process of organisational change and development (McInnis and Devlin, 2002). Barriers to change in higher education have been widely explored and these barriers give rise to resistance and conflict among those involved with the change process (Donahoe, 1993; Hargreaves and Fink, 2006). Change at the institutional level requires a planned approach that is fully in tune with the core values of the institution. Getting consensus is not easy and the need for change is not necessarily recognised or widely supported by those engaged in teaching and learning (Borland, 2002). There were more neutral responses in the change process and context than in the change content factors. For example, 41% of the respondents were neutral when asked if "the people affected by the change within the school (TSoM) agreed with the goals". This could be indicative of subtle resistance to change which may be due to increased workload. Allen *et al.* (2007) observed that employees who perceived information about organisational change to be of high quality had a clearer understanding of the change process, suggesting a reduction in their uncertainty. This highlights the importance of providing employees with detailed and accurate information during change processes and indicates that the extent to which information about change is communicated determines the level of openness to the change process.

Although all respondents agreed that the change was necessary, it seems the extra workload and challenges associated with the change process were obvious sources of discomfort. Some of the respondents whose opinions were neutral indicated that because they were not involved in certain areas they felt they could not indicate otherwise. For instance, one respondent wrote: "I did not have central involvement with the changes, so my neutral comments tend to reflect a lack of knowledge or involvement in those areas".

Cunningham *et al.* (2002) reported that employees feel that they have control over organisational change; this seems to be one of the central factors facilitating openness to change and has been confirmed in this study. Indeed, 94% of the respondents agreed that they were able to take ownership and influence the details of the change. Devos *et al.* (2007) stated that people with an internal locus of control see themselves as active agents and believe they have control over their environment and personal successes. Opposition or

resistance to change from academics is most likely when it poses a potential threat to their autonomy and integrity, and when changes appear unnecessary (Borland, 2002). Gaining the political support of faculty leadership across all staff and from the outset will ensure their involvement and promote the credibility of the change project. This is evidenced in this study as faculty staff responded positively due to the communication of the "what, why and how" of the change initiatives to them prior to implementation.

Overall, the change in assessment practices at TSoM has been well accepted by staff members. However, regular feedback needs to be provided on the change process and timely and relevant communications made about the change. There needs to be adequate training for those who require it and resources should be available to resolve practical difficulties as soon as they arise. Lastly, it is important to ensure that those concerned with the outcome of the change process take part in planning.

Implications for practitioners

Introducing a change initiative into an organisation always engenders confusion and concern on the part of employees because the initiative may affect policies, procedures, resource allocation and future workplace exchanges, as well as the possibility of job losses (Real and Poole, 2005). Prior to, and after, the introduction of a change initiative, justifying a change can go far in mitigating possible negative reactions to – and increasing support for – an organisational change. This study demonstrates that if an organisation has purposefully substantiated the necessity of introducing change and its appropriateness, employees will perceive it as a demonstration of the organisation's supportiveness. Since employees' perceptions of a supportive (or non-supportive) organisation are constructed through the ongoing exchanges experienced with the organisation, any failure to justify the change and provide qualitative information about the change process may signal a lack of support from the organisation. This, in turn, affects their willingness to embrace a change initiative.

This study provides a representative picture of the attitudes, experiences and requirements of faculty members with respect to quality assurance of assessment practices. Most of the faculty members were generally positive towards the change process around the quality assurance of assessment practices; however they needed support in this process. In the implementation of quality assurance processes around assessment, well-designed improvement strategies which are continual rather than episodic should be employed to guarantee effectiveness. For any student-centred assessment practice to have an impact it must be workable and have the support and co-operation of all involved. Changing assessment practices and keeping it

going can only be effective if faculty members are supportive; such development needs to take place at all levels, from the institutional to the individual (Hays, 2008). The major challenges posed in effecting change initiatives include staff development, demands on staff time and availability of resources. Resources must be committed to the development and maintenance of effective quality-assured assessment practices and the cost-effectiveness of such intervention processes will need to be evaluated.

Limitations of the study

The size of the survey sample – 25 people – was small because only the staff members involved in the Years 1-3 programme were involved in the change process. Furthermore, some of the potential respondents could not participate in the survey because they were new to the system and felt that they were unable to make judgments about the change implementation process. Another limitation was that TSoM was undergoing major administrative restructuring and preparing for a movement of staff and students to a new location at the time of the study. These two issues constituted radical changes for staff and could have affected their responses in this survey, as evidenced by the high levels of uncertainties and, in some cases, negative responses to the organisational context factors.

Conclusion

Educational innovation can be complex and extensive, but considerations of assessment practices along the lines of continuous quality improvement and innovation are likely to further medical schools as learning organisations with the attendant benefits. Mapping the progress of each change strategy and the ability to retrieve this information through indicators that reflect the values of medical education deserve attention on a global scale.

It was evident from this study that when staff perceive that the institution is supportive of them, this realisation could positively influence their reception of the organisation's justification for introducing a change initiative. In addition, the extent to which the change initiative is successful could be influenced by the quality of communication between the employees and management and/or change agents. Finally, this study confirms the effectiveness of content, process and context framework of change in ensuring successful implementation and management of organisational change initiatives. This is a model that allows for continuous quality improvement, and it is proposed as a positive way forward for institutions, the higher education sector, and all the beneficiaries and stakeholders for whom a quality higher education system is important.

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APPENDIX I

Assessment QA Processes

General principles

- There is a clear relationship between intended learning outcomes, teaching activities designed to achieve those outcomes, and assessment methods to determine the quality of outcomes demonstrated by learners.
- Methods for assessing achievement of learning outcomes are the most appropriate for the learners, given other contextual constraints.
- All students are entitled to feedback on their performance, through formative and reporting on summative assessment performance.
- Validity and reliability of assessments are evaluated through blueprinting processes, analyses of assessment data and correlation with other performance measures.
- The writing of quality assessment items is facilitated by training, team-based processes, refinement by peer review and feedback on the performance of items to writers.
- All staff involved in assessment should have a basic understanding of principles and knowledge of processes involved in development and management.

Test development

- Each year assessment committee plans timelines for the timely development of formative and summative assessment tasks, in association with the university Examinations Office timelines.
- Assessment workload maps are generated annually to monitor frequency and timing of student assessment, as well as staff workloads with marking, reporting and analysis of data.
- Blueprinting processes that align assessment with unit learning outcomes and the Medical Graduate Profile (MGP) are developed to inform the development of tests.
- Blueprinting processes inform the development of new test items; the selection of existing items from the IDEAL database and validation with the final test.

- The items chosen for each assessment are those likely to achieve a stated reliability score (> 0.7).

Item development and review

- All new items are developed in training workshops or small group settings led by experienced academics.
- Items are developed and matched to learning objectives and unit blueprints.
- Each item has a template (MCQ, EMQ, OSCE).
- Each item has an author.
- Each item has a complete feedback section.
- Each item has a complete classification section.
- All new items are reviewed by generalists, discipline experts and clinicians by a defined process and clear audit trial; ideally OSCEs will be trialled before use.
- All new items are formatted according to pre-determined specifications (by the MEU).
- All UTAS items are reviewed for currency and performance every three years.
- Each item has a development history trail.

Exam management and marking

Access to examinations under development is computer-based and password protected.

- Any paper copies of examinations are strictly numbered, controlled and destroyed by shredding.
- Examination papers are reviewed for consistency in presentation and formatting and signed off by the appropriate Unit Co-ordinator.
- The final examination paper is sent by the PDA team leader to the Examinations Office.
- Pre-marking meetings are held to maximise consistency in marking; at least 5% of scripts should be double-marked and all borderline scripts double marked.
- Standard setting is evidence based.
- Assessors are trained to understand the criteria and expected standards of performance.
- Data entry occurs through double entry methods.

- Original papers are stored for six (6) months, then scanned for longer term storage.
- Students are provided feedback via individual standardised templates, whole of class discussion and individual consultation.

Psychometric analyses and review

- Feedback is sought from staff and students on examinations.
- The MEU conducts psychometric analyses to maximise reliability, validity and generalisability.
- Summary reports are provided to staff involved in teaching the unit; the relevant associate head and unit co-ordinators all receive detailed reports.
- Each item has an analysis and review indicating its acceptance, review or rejection using standard templates developed by the MEU.
- The MEU holds all reports in a secure environment.
- Feedback on items is reviewed by authors when review is required.