Sri Lanka Journal of Medicine **SLJM**

Perspective

Citation: Dassanayake TL, 2021.The 'Boardroom Dilemma': A Cognitive Dimensional Model for Decision-Making in Academic Circles. Sri Lanka Journal of Medicine, pp 18-21
DOI: http://doi.org/10.4038/sljm.v30i2.300

The 'Boardroom Dilemma': A Cognitive Dimensional Model for Decision-Making in Academic Circles

Dassanayake TL

Department of Physiology, Faculty of Medicine, University of Peradeniya, Sri Lanka.
School of Psychological Sciences, The University of Newcastle, Australia.

Correspondence: Dassanayake TL
Professor in Neurophysiology
Department of Physiology, Faculty of Medicine, University of Peradeniya, Sri Lanka.
School of Psychological Sciences, The University of Newcastle, Australia.
Email: tharakad@pdn.ac.lk
: https://orcid.org/0000-0002-7963-9012

INTRODUCTION

The 'boardroom dilemma'

Do you attend committee meetings of your academic institution where the matter at hand sways back and forth depending on the sentiments of the members, without a decision being made at the end?

Or worse, do you experience a 'decision' swaying back and forth from one meeting to the next, without a clear action point emerging?

It is tempting to point fingers at people in such 'boardroom dilemmas'. However, it could happen even when the academics attending a meeting are well-minded. Perhaps the members find it difficult to pin down whether a complex issue needs administrative guidance, an expert opinion and/or a student-feedback. Consequently, the attendees might highlight the importance of one aspect today, the next tomorrow and the third aspect the next day, contradicting one another, going in circles. I hypothesise that the dilemma is fundamentally *cognitive* in its disposition, and propose a cognitive dimensional model to explain the dynamics of academic meetings and improve their productivity.

A cognitive dimensional model

The *cognitive dimensional model* proposed in this paper theorizes that the decisions made at the board- or committee meetings in higher educational institutions, can be modelled from three dimensions: *administrative*, *academic* and *student* (Figure 1).

What laws govern these three dimensions?

1) The *administrative dimension* is governed by the law of the country; the act, rules and regulations of the university system; and the provisions (e.g., budgetary allocations, human resources) for the institution or the faculty etc.

2) The *academic dimension* is governed by the academic qualifications (e.g., PhD or MD in specific fields), expertise (e.g., publication record, inventions) and experience (e.g., teaching medical undergraduates for 20 years) of the membership.

3) The *student dimension* encompasses the skills/knowledge of the students (e.g., the problem-solving skillset of the first-year undergraduates is different from the skills of their final-year counterparts), their needs (e.g., basic needs such as accommodation, and more specific needs such as textbooks), limitations (e.g., opportunity to see a particular disease entity in the

Received: 2021-09-13 **Accepted: 2021-12-06** **Published: 2022-01-25**

ward owing to the high student-to-patient ratio in their clinical classes) and their generational traits[1]. The 'students' are viewed here as a construct rather than a group of people. This is because the student community is the essential client-end of the university: Even though the authorities can reprimand and expel a group of unruly students, they cannot get rid of the concept of having students in a university!

Metaphorically, the model views these three dimensions (or mathematically speaking, vectors) as three independent bodies or planets in a triangular constellation and the *matter-at-hand* as a *satellite* floating within a triangular *decision space* in the middle (Figure 1). During the deliberations of the meeting, the gravity of each body *pulls* the matter at hand in its direction. The pull depends on

1) the inherent nature of the matter (two examples discussed below: 'upgrading student facilities' and 'finalising the undergraduate curriculum of a subject'); and

2) contribution of each body into the discussion during the proceedings (i.e., its gravitational pull).

At the end of the deliberations, subjected to the pulls in the academic, administrative and student dimensions, the matter at hand stabilises somewhere within the space, now as the *decision (D)* (Figure 1)!

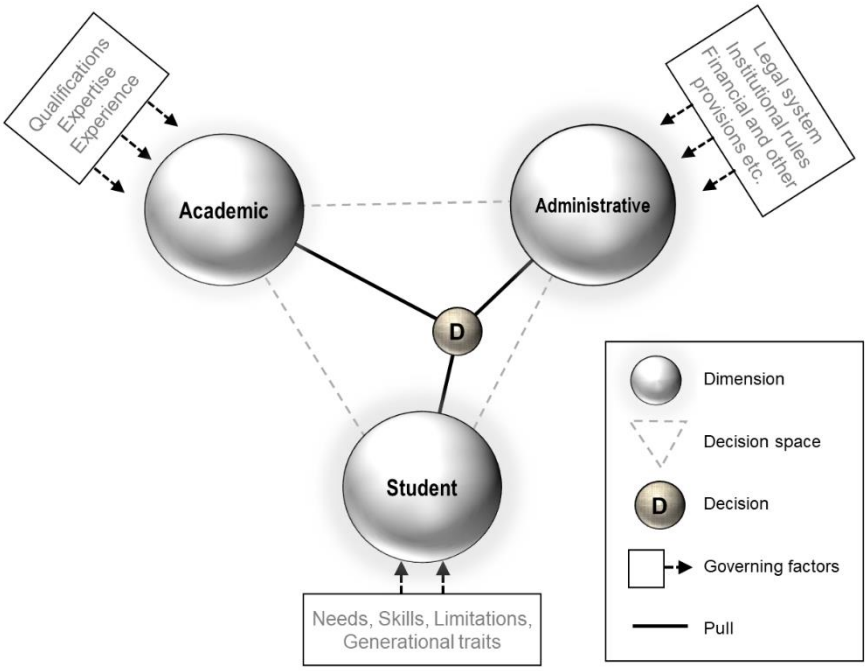

Figure 1. The cognitive dimensional model of decision-making in academic meetings.

Practical applications of the model and the role of the group members

For an example, a decision on upgrading student facilities largely contested between administrative (e.g., budget and the expected intake over next several) and student (e.g., the student feedback) dimensions, less on the dimension of academia (e.g., the department of public health may give some advice on health aspects of the new constructions); so that as in Figure 1, the final decision may lie closer to the administrative and student bodies and far away from the academic body.

What actually represent these three dimensions in a board- or a committee meeting? A *categorical model* might directly attribute the administrative domain entirely to the chair of the meeting (e.g., the dean of a faculty); the academic domain to the academic staff members; and the student domain to the student representatives at the meeting. Such attribution would be naïve and unproductive from a brain-based cognitive perspective because

each stakeholder (viz. administrators, academics, students) is cognisant of the role and functioning of the other two (i.e., theory of mind[2]). In fact, all three types of thinking can happen in a single brain. Hence the *dimensional model*!

Importantly, the university academic staff are not just skilled workers who do a task assigned top-down, but *executive grade* employees with a decision-making capacity (perhaps this is one way of defining academic freedom!). *Executive functions* (planning, goal-setting, decision-making, abstract thinking, cognitive flexibility, inhibitory control etc.) are largely subserved by the pre-frontal cortex of the brain, and humans possess a large prefrontal cortex[3]. As such, the model expects the participants of a meeting to embody more than one dimension in their minds; and weigh them before making a decision of their own. This point can be explained using a more complex scenario: revision of a clinical curriculum in a faculty of medicine. In this context, a professor, who is also the head of his academic department, might weigh the administrative (e.g., 'What is the tentative duration of the proposed curriculum?'), academic (e.g. 'What is the breath and the depth subject area required for a basic doctor?') and student (e.g. 'How likely a student-group would be able to take at least one case history of each illness during the appointment?') dimensions before expressing his opinion on what the revision should be. Eventually, revising the curriculum seems to be influenced by all three dimensions to a great extent, and his decision is likely to rest more comfortably somewhere in the middle of the three-vector plane (Figure 2).

Meetings convened in haste, busy work schedules, personal sentiments etc. might drive the brains of otherwise intelligent academics to take a unidimensional approach, but such conduct usually makes more work in the long run because either the committee remains indecisive over a long time or simply makes bad decisions that require frequent revisions.

The duty of each member then is to contemplate in earnest the matter at hand in all three dimensions, before committing to a decision in his own mind. Individuals who imagine complex things in pictures rather than logical balance sheets, might more intuitively 'pitch' their 'decision satellite' within the constellation (of Figure 1). With collective contribution and brainstorming of this nature, the decision of the board is likely to reach an increasingly stable position (D in Figures 1 and 2), eventually optimising the potential success of the actions taken thereupon.

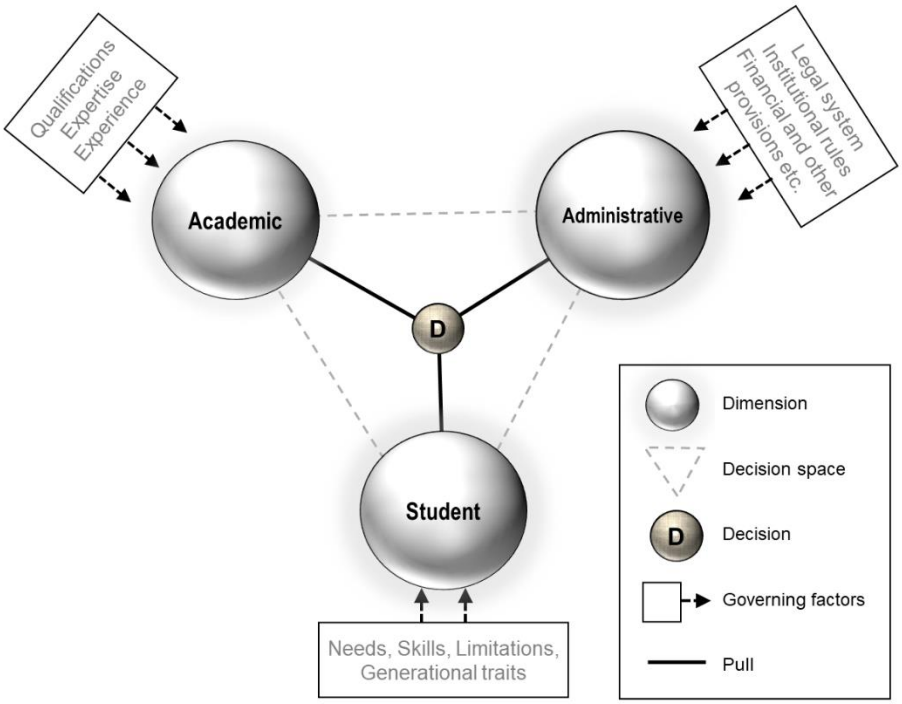

Figure 2. The stable location of a decision on an academic curriculum in the cognitive dimensional model

The nature of the decision of a group in fact can be empirically tested in a group meeting by distributing sheets with blank decision-space (i.e., only with the dimension-bodies marked in an equilateral triangle) and getting the members to mark their decision (D) within the triangular decision-space. Overlapping the data from all test sheets would then create a scatterplot – a *group decision plot* (Figure 3). A tightly clustered decision-plot would indicate a homogeneous decision (Figure 3A, e.g., on upgrading the student-facilities); multiple clusters indicate divided opinions on the matter-at-hand (Figure 3B), whereas wider distribution of dots across the decision space may signify heterogenous opinions or indecisiveness of the group (Figure 3C). In complex decision-making tasks, for instance, this approach would be more informative than a vote.

Having said that, to station the metaphorical satellite in the optimal position in space, 'without letting it gravitate into the field of an unwarranted planet', the meeting atmosphere must be conducive to administrative, academic and student perspectives alike. The chair or the convener of the meeting plays the main role in creating such ambience.

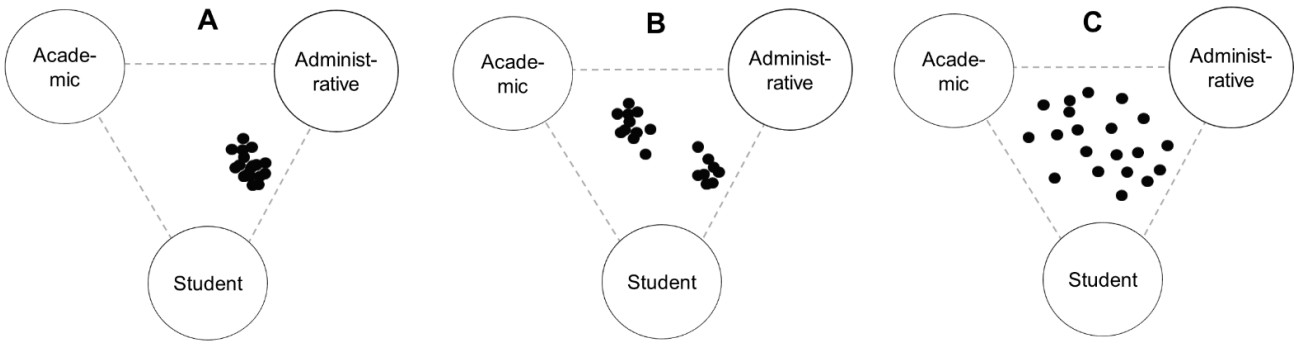

Figure 3. Group decision plots in 3 hypothetical situations: A: homogenous decision; B: divided opinion; C: heterogenous opinions / indecisiveness.

CONCLUSIONS

In conclusion, the cognitive dimensional model proposes a collective *thinking process* for decision-making in academic circles, rather than a foolproof *algorithm* to arrive at decisions. In this model, the dimensions are independent (i.e., have an orthogonal relationship to one another) and interact *only through the matter-at-hand*, on an *issue-by-issue* basis. As such, the *process* assumes priority over *person*. To paraphrase, two board members thinking along the same dimension on a given issue have a closer kinship than two perspectives (e.g., academic vs. administrative) contesting inside the brain of one member. Perhaps, that is the essence of collective intelligence–operating at the level of neural networks!

REFERENCES

1. Buskirk-Cohen AA, Duncan TA, Levicoff M. Using generational theory to rethink teaching in higher education. Teaching in Higher Education. 2016;21:25-36. https://doi.org/10.1080/13562517.2015.1110787

2. Frith C, Frith U. Theory of mind. Current biology. 2005;15:R644-R5. doi: 10.1016/j.cub.2005.08.041

3. Miller EK, Cohen JD. An integrative theory of prefrontal cortex function. Annual Reviews of Neuroscience. 2001;24:167-202. https://dx.doi.org/10.1123/jsep.2015-0021