Teaching Scenario Analysis – An action learning pedagogy

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Abstract

In this paper we provide an introduction to our teaching of scenario analysis. Scenario analysis offers an excellent instructional vehicle for investigating 'wicked problems'; issues that are complex and ambiguous and require trans-disciplinary inquiry. We outline the pedagogical underpinning based on action learning and provide a critical approach from the intuitive logics school of scenario analysis. We use this in our programme in which student groups engage in semi-structured, but divergent and inclusive analysis of a selected focal issue. They then develop a set of scenario storylines that outline the limits of possibility and plausibility for a selected time-horizon year. The scenarios are portrayed not as narratives, but as vehicles for exploration of the causes and outcomes of the interplay between forces in the contextual environment that drive the unfolding future in the context of the focal issue. In this way, we provide internally-generated challenges to both individual pre-conceptions and group-level thinking.

Keywords: action learning, scenario analysis, critical pedagogy, intuitive logics, stakeholder analysis.

1. Introduction

In this paper, we discuss a course that was designed to introduce post-experience MBA students to the principles of scenario analysis through an action learning approach. We acknowledge that the students may have previously been exposed to the principles of scenario analysis through the works of Porter et al (1), Martino (2), Coates et al (3), Bright (4) and several others. While these all suggest the basic value of scenarios for forecasting, in particular technological forecasting, in our course we take a different approach.

The first principle underpinning the course design is that students work with a 'wicked problem' or issue (5). This is one to which there is no single 'right' answer that renders all others 'wrong'. Rather, it is an issue that is complex and

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ambiguous and that requires trans-disciplinary engagement and understanding. In line with the concept of 'strategic design' (6), our approach introduces the concept of 'reframing' narrowly defined issues in order to place them in a broader societal, economic and ecological context. An exemplar 'focal issue' is: how - and to what extent - will current levels of poverty, infant mortality and educational provision change within a particular country over the next fifteen years? Thus the focus of problem is shifted from forecasting particular levels of, say, income disparities, to understanding the causes of particular future outcomes.

The course named 'Exploring the International Business Environment', has been running for in excess of 20 years, during which time it is has been critically examined, modified and enhanced around the founding principles. The academic team members who design and deliver the course both understand and have contributed to the extant scenario literature, and are additionally, experienced practitioners across a broad range of scenario projects for governments, industries and social organizations in many countries. The course is delivered both in the UK and in international centres in Europe (Switzerland, Greece), Asia (Hong Kong, Malaysia, Singapore, China (PRC)), and the Middle East (United Arab Emirates, Bahrain and Oman). It is made available to students in a variety of modes, including: two week intensive to full-time students; over a ten week term to UK-based part-time students; and three day weekend intensive workshops for the part-time students in the international centre cohorts. The students on the course are post-experience graduates who come from a wide range of backgrounds and cultures, the average age of the cohorts being 34 years of age.

In order to develop the deepest understanding of the chosen focal issue from a trans-disciplinary perspective, students are first directed into a semi-structured investigation of all the political, economic, social, technological, ecological and legal (PESTEL) factors that will drive the future direction of the issues under consideration. Exploration of the expansive wicked problem setting by such diverse cohorts requires that students appreciate and understand the 'broad' stakeholder constituency (7) along with the individual and diverse needs and values of these stakeholders. The principles of PESTEL and stakeholder analyses are introduced at a conceptual level through mini-lectures and directed reading. However, it is the students who undertake self-directed investigation of the driving factors and the range of stakeholders that are at play for the specific problem set.

The information and ideas generated from initial context investigations then inform the students' generation of scenarios using the intuitive logics (IL) approach (8, 9). The specific scenario method employed in the course (8) provides a framework for exploring complexity and ambiguity in an inclusive and semi-structured way. However, it leaves the students as the active learners in determining the substantive content that will enable them to generate futures

narratives that are informed by, and that will enable further consideration of elements of the focal problem.

The overall approach that is promoted and enabled in the course is grounded in action learning. Students are prompted to adopt a critical approach (10), whereby they are required to present the developed scenarios and the supporting research, along with a critical reflection on their own learning experience during the course. From these submissions and from our observations during the course delivery over many years, we have witnessed not only consistent critical reflection on the problem under investigation, but also numerous instances of critical refection on the self and others within diverse student groups.

The structure of our paper is as follows. First, we outline the conceptual framework of our pedagogy for the course. We consider this in relation to a student population with diverse cultural and experiential backgrounds. Second, we present a broad overview of the scenario approach used. Third, we recount and reflect on our own experiences of engagement with a wide range of students taking the course. We then consider the possibilities for incorporating, in part or whole, other scenario approaches. Finally, we provide some general guidance on what we see as the key strengths and limitations of our approach, based on both personal reflection and student feedback.

2. Conceptualising scenarios – an action learning reflective pedagogy

Having been developed and delivered for over 20 years around the same general principles, this course predated Pfeffer and Fong's (11, p. 8) criticism of MBAs, in which they called for action learning as an alternative to traditional didactic approaches in which students 'lack any sense of responsibility for their learning'. From its early foundations, action learning has developed to embrace a variety of 'schools' and underpinnings (12) that range from the tacit to the experiential and the critical reflective, and that include both theory- and practice-oriented foci. We consider the approach that we adopt as aligning with the school of 'critical action learning' (CAL) (10, 13, 14), where we bring the social and political context of the selected problem into play, along with the dominant economic context of business.

During the course, students work in problem solving teams, the members of which will have met only briefly at the start of the MBA programme. Across most of the delivery modes, groups will also be ethnically diverse and with varying levels of academic qualification and workplace experience beyond the minimum entry requirement. Students are required to work on a 'real problem' which is complex and to which there is no immediate single right answer, only an array of options to be elicited and considered through wide-ranging research and exploration that crosses many disciplinary boundaries.

The course design challenges students to critically reflect upon the role of management and organization, structures of power and control and, as we will illustrate, to question their own position and individuality (15). In doing this, we do not, however, set management and organization practices in opposition to broader societal or environmental concerns. Rather, we seek to inspire students to bring the former to bear in addressing the latter.

During delivery, the role of the academic team is limited to providing a framework for inquiry and outlining in general the problem for consideration. The academic team provides no substantive content for the analysis and no subjective judgment on any sources being valid, invalid or more valid than any others. As such, we adopt a pedagogy that is primarily problem- and action-learning based. Thrown into the context of the course and the wicked problem at the outset of their MBA studies, students are required to get to know themselves and others, the nature of the micro-level politics of the classroom, and the influences of cultural norms and biases in decision-making – and non-decision-making – within the groups (16).

As they explore the problem, students are required to examine and develop an understanding of an amalgam of contextual driving forces and their substantive and causal and relatedness. They do so in order to gain insight into the long-term dynamics and systemic structure of situations facing organizations. This requires them to make sense of a full range of data, information, ideas and opinions from all sources. This analysis cannot be conducted in a detached and objective way, but requires reflection on how various sources might be accessed, assessed, valued or rejected, and brought to bear on deliberations, decisions and actions by the 'broad' range of stakeholders (7). Students are thereby encouraged to consider the different paths by which situations may unfold. They must identify observable patterns and trends in the world at present. They must then develop the logics of multiple, plausible alternative future states that might arise from these.

As diverse student cohorts undertake such exploration in line with the pedagogy of CAL, we must recognize that issues of politics and power will emerge in the learning space. This will happen not only in consideration of stakeholders in the focal problem, but also in the interactions between students as stakeholders in the learning process (10). The critical action learning approach aims to "present and command an alternative to the seeming neutrality and authority of orthodox management theory" (17, p.169). However, it is also intended to instill in students a critical response to their own identity construction, through reflection on issues such as power, gender and ethnicity (18). This is a process that is not itself without risk (10), as we will illustrate in the following sections. The selected wicked problem may be one that elicits emotional responses in individuals. Where their responses are mediated by ethnicity, gender and other factors, the interpersonal engagement between

students requires continual monitoring, and the academics must be prepared to intervene if necessary.

The course is designed around the basic IL method, which has been developed and widely used for over 40 years. However, as students set out to develop a set of scenarios for the first time, it can be confusing when the lecturers openly admit that there that there are numerous ways of undertaking scenario work and that there are no universally accepted definitions of some of the terminology used in scenario work, such as 'driving forces'. Here, we must consider, for each cohort of students, the balance between our intent of an emancipatory pedagogy of exploration and action learning, and the potential for student perceptions of a confusing and chaotic classroom experience.

3. Laying the ground for reflective learning

Prior to embarking on the scenario course, the students attend a 3-day workshop entitled 'The Learning Manager'. The aims of this are to introduce them to the notion of being reflective learners. This will enable them to analyse their learning processes and ensure that they appreciate core aspects of self-awareness and can effectively interact with others. The workshop provides tools for self-assessment in terms of personal strengths and weaknesses, as facilitator or inhibitor of effective group interaction. It also outlines the difficulties associated with the transfer of ideas into practice and the concept of reflective practice. Although not specifically aimed at the scenario course, it serves to raise awareness of power relations and inter-personal politics, and of the individual and group emotional dynamics that influence people to behave in the way that they do, particularly in a group situation.

Students are also introduced to the scenario development process as an iterative one with two iterations required in the course. It is pointed out that, in the first iteration which aims to provide an understanding of the scenario development process, they will consider that process errors have been made and/or that the thinking was superficial. However, they are advised that this is to be expected, that they should not go back and correct these, rather they should reflect on and learn from the experience and apply the learning in undertaking the second Iteration.

Throughout the scenario course the students groups are required to maintain a 'Diary/Record of Investigation' in which they record points of critical reflection on both the scenario and group processes. Additionally, on completion of the scenario group assignment, the students are required to submit a 'personal reflection' assignment. This requires that they outline both their substantive learning from the exercise and, also, their observations about the process in terms of what part(s) did or did not work well and why, along with a discussion of the group behaviour and dynamics throughout the process.

4. Working with scenario method through two iterations

The structure of this scenario course is built around a detailed eight-stage process advanced by van der Heijden et al. (8). The 'basic' process approximates the three broader developmental stages of scenario generation described by Cole and Chichilnisky (19). These are: a 'diagnostic stage' in which data on environmental variables is collected and analysed; a 'transition stage' in which scenarios are developed and trade-offs between variables and solutions are considered; and a final 'prognosis stage' in which the likely success of various strategies is examined in light of the scenarios.

At the start of the course delivery, in whatever mode, students are presented with a series of 'mini-lectures'. These introduce the principles of scenario work and an overview of the process. Students are also provided with a 'Scenario Process Workbook'. This outlines a step-by-step guide through the process, with illustrative examples of each stage. Stage 1 is termed 'project orientation' or 'agenda setting'. Here, the objective is to set the context for the scenario work by introducing the students to the client for the scenario exercise, the strategic issues of concern to be explored, and the horizon year for the subsequent scenarios.

As an example of context setting in the course, we have recently used the Asian Development Bank (ADB) as the 'nominal' client. For this, we provided a brief along the lines that ADB has noted that the developing Asia and Pacific region economies have witnessed an increase in their Gini coefficient. In light of this, they are undertaking a review of their 15-year strategic plan for the Central & West Asian Developing Member Countries (DMC). As part of this review, they have asked the student teams to develop an in-depth set of scenarios covering a period of 15 years for one of the DMC countries. They seek to elicit new ideas, challenge and push the thinking of those involved in business and policy in the region, and to raise crucial questions about the strategic decisions that will shape the future of the country.

The 'organising' question that the scenarios must address is: *'How will the particular country selected develop over the next 15 years?'*. There is particular emphasis on, but not limited to, issues around health and education, social protection and gender equality, infrastructure development, and environmentally sustainable and inclusive growth to benefit as many as possible. In earlier versions of the course, similar issues of sustainable health and education, poverty and gender equality for Sub-Sahara Africa, nominally for Save the Children, were addressed.

Having established the remit for the scenario project, the scenario development exercise comprises two iterations. The first iteration takes place during a seven-hour intensive workshop in which the students undertake the eight stages in a timed sequence. This iteration is 'process' rather than 'content' driven. The aim here is to enable the students to get hands-on experience of the

IL methodology process whilst gathering some initial research material on the substantive topic. The second iteration, which runs over from 7 days full-time to several weeks depending on the mode of delivery, is very much content-focused. This time, students engage both in deeper environmental exploration within relevant fields, and in broader contextualisation across social, economic and ecological domains.

4.1 The structured process

Having engaged with stage 1, agenda setting, in the first iteration and refining and reinforcing the agenda in the second, in stage 2 teams engage in 'blue sky' brainstorming activities. They seek to identify the broadest range of driving forces in the contextual and transaction environments that will impact the focal question. The acronym STIRDEEPER (Society, Technology, Industry, Resources, Demographics, Economics, Environment, Politics, Energy, Religion), an expansion of the conventional STEEP/PESTLED acronyms, is offered as an initial template to prime the brainstorming.

In stages 3 and 4, the resulting driving forces are first 'clustered'. Here, students must ensure that the driving forces comprising each cluster are linked through cause and effect/dependence. Clusters are then labelled with an encapsulating name, and two extreme but plausible outcomes for each cluster over the scenario timetable are developed. Moving to stage 5, the clusters are then prioritized relative to each other using an impact/uncertainty matrix. This is done, first, to establish those clusters which are deemed to have the greatest impact on the focal issue of concern and, second, the greatest uncertainty as to what that impact may be, in that there is no clear indication of the way in which they will unfold in terms of their future play-out.

Stage 6, 'framing the scenarios' involves, first, selecting two critical uncertainties; clusters that combine high uncertainty in terms of their future play-out with high impact on the issue, but which are independent of each other. These are used to create an initial 2x2 scenario matrix through combining the two extreme outcomes of each uncertainty. In simplistic terms, these may be classified as best/best, best/worst, worst/best and worst/worst (noting that extremes may both be 'good' or 'bad', but to different extents, for some factors). From this framework of four scenarios, stage 7 moves to 'scoping the scenarios'. Students develop broad descriptors for the end states of each of the scenarios at the selected horizon year. The final stage 8 of the scenario development process involves fleshing out the descriptors, developing first-pass narratives. These should include the temporal sequences of events and outline the 'who', 'what' and 'why' of what happens.

4.2 Digging deeper and stretching broader in the second iteration

The first iteration, as outlined above, is short and is focused on process and gaining comfort with scenario development. The second iteration is then focused on substantive investigation of the problem issue over a longer period. Here, stage 1 (agenda setting) may remain unchanged, or it may be subject to some refinement of the problem definition. Beyond that, further enhancements to the process are introduced in the second iteration, as follows:

4.2.1 Focused research

As part of the environmental exploration, groups are required to review the driving forces and clusters developed in the first iteration. Given that these were developed largely intuitively without the benefit of underpinning research, the objective of the review is to determine the 'knowledge gaps' and establish a more extensive research agenda. The outcome of the first iteration for most groups is the realization that they are dealing with an 'even more wicked problem' than they had first contemplated. In addition, some groups will undertake substantial amounts of research during this first iteration, taking advantage of the vast amount of material available through online searches. In such cases, it is not unusual for the outcome to include a substantial number of new and additional questions. All groups however, take the second iteration of research to far greater degrees of focused and informed inquiry.

4.2.2 'Remarkable people' interviews

While much scenario research is traditionally desk-based, a fundamental element of research required in our scenario process is to identify and interview two or three so-called 'remarkable people'. Van der Heijden (20) defines 'remarkable people' as individuals who are not part of normal ongoing strategic conversation within the client organization. He further defines them as acute, curious observers who pay attention to the way the world works and, in the process, have their finger on the pulse of change. As such, they understand the driving forces and key uncertainties, ask new and unexpected questions, and provide new insights and understandings. Experience has also shown that engaging with such individuals often brings new insights not found in more conventional or accessible published sources, and moves thinking 'outside the box'. Finding such people is not an easy task, however our experience is that the students often prove adept at identifying such individuals through networks of friends and colleagues, and social media sites.

4.3 Beyond the scenarios – addressing the 'So what?' question

Having completed the scenario development process, the final step in the course process is to interrogate each scenario. This is done in order to establish

the implications from operating in the environment depicted in relation to the client's issues of concern underlying the focal question. From these, a range of strategic options may be developed in response. The major aim is to develop strategies that are directed at success in responding to each and every future. However, where there are insurmountable difficulties within any scenario, the aim should be to design for resilience and survival in the face of identified risk.

In this stage, students address the 'So what?' question for the client organization in relation to the selected problem issue. Here, we now consider this question in relation to the outcomes of the course for the student cohorts who have passed through it.

5. Key issues for critical action learning from the learning space

Drawing on selected illustrative examples from the MBA classroom across multiple modes of delivery, we now consider the role of the course in opening up students' thinking on problems, on reframing these, and reflecting on the nature and impact of their engagement with others in the process. We accomplish this by drawing on selected illustrative examples, including more extreme emotional responses by students, and their impact on us and other students, from the MBA classroom across multiple modes of delivery.

5.1 Reframing problems – moving thinking outside the box

A key purpose of this course is to enable students, current and future organisation leaders, to consider problems at a deeper level, beyond immediate functional/operational responses. The approach prompts students to do this by taking them outside their normal comfort zone. In the first iteration of scenario development, they have to think in new ways about what constitutes 'the problem', since they start with little or no information and generally no acquaintance with the context we set:

> "A concept that I initially found to be strange…[] is the concept of generating ideas without any, or very little, prior knowledge of the subject…[] allowed us as a team to think more out of the box" (Male K).

Also, for most the idea of using scenario stories as a means of communicating ideas is at first discomforting, but encourages new ways of rethinking the problem. As one student recorded, "a story populated with 'humans'…[] can also transform dry information into fresh perceptions" (Male A).

Many of the reflections from students show similar characteristics of early scepticism and doubt, followed by later realisation of fundamental change

in how they perceive issues, not just in this course but also when reflecting upon their own previous experience:

> "I was a bit sceptical about the applicability of scenario planning. I thought that the efforts developing hypothetical scenarios were not worthwhile…[] I was a member of the team that prepared market analysis and business plans supporting such decisions. I can say that very little we had forecasted in these reports regarding the external environment has happened ... and we missed important events that are really affecting us today" (Male B).

We posit that such attitudinal changes would not be generated by any detached and didactic lecture format, but can only emerge from a process of immersion in complex problem research and analysis through active engagement in critical action learning.

5.2 Changing perspectives on 'self' and 'other'

It is gratifying to see evidence of how problems are reconceived and reframed during the course. However, we must then look for examples of critical reflection on the self that might be indicative of deeper impact in change to fundamental beliefs and values, and of likely longer-term embedded change.

Over the years, we have seen a few examples where an individual has undergone a radical change of expectation of both the MBA and the self. In this critical reflection from one student in the offshore programme, he states:

> "I remember thinking at the time – what a load of bullshit, thinking about a country which I know nothing about…[] I joined this MBA to learn about finance and strategy, things that are really important to business…[] By then end of the MBA I had come to realise that actually the scenario course was the one course which made me think differently…[] and we need to think in terms of scenarios" (Male L).

One more common indication of change to the self is an appreciation of difference, and weakness, in self and others, such as:

> "There are other worlds with other rules and other norms and that there is no right or wrong way to look at it or to judge it…[] All people are so busy with their little life, so much into themselves and so easy to manipulate" (Female A).

Some of the reflections on the other are perceptive but somewhat dismissive, as in the comment, "People can think very strangely…[] depends on the culture, economic backdrop, their beliefs and their value system" (Male D). However, for many this recognition of difference is viewed as a very positive and important learning outcome from the course:

> "I learned more efficiently that not one person thinks alike…[] something that I always knew, but never properly understood…[] The way each person challenged a teammates opinions and thoughts truly aided in the way I began communicating..[] I took most importantly away from this project, that not everyone views the world as I do" (Male H).

For some students, this recognition of difference between self and others is highlighted as a key factor in bringing forward the best ideas to respond to the problem. For one male, overcoming issues of gender and power within the group dynamics enabled recognition that better ideas might be brought into play:

> "I sometimes saw that a difference either in culture and gender plays a role when having a discussion…[] the two females in the group tended to shy away earlier in the discussion, despite I think one of them had excellent and sometimes even better ideas" (Male C).

For one female, reflection on her own impatience with others and resultant ineffective communication initially causes great stress. However, this is countered later when, "Team-members raised the point that my proposal of proceeding would have been better" (Female D).

We would not expect that the design of the course would appeal to all participants and we certainly find reflections that are illustrative of dissatisfaction, as where, "It was very frustrating for me to go through this approach" (Male F). In addition and as one would also expect, issues of inequity in participation in the group are sometimes brought forward. However, rather than being matters of overt conflict and attack on the individual during the course, they generally emerge later as constructive reflections on failings by both the non-performer and the rest of the group, as in:

> "One individual in the group however failed to perform…[] This situation was not dealt with effectively by the group…[] the group is unwilling to call out poor performance…[] the individual did not reach out for help" (Male E).

We never intervene in any group issues unless there are concerns over individual safety and well-being – which has never happened – but we accept that such issues will arise. However, the overall evidence from the reflections gathered over many cohorts is that recognition of difference and respect for others are key positive elements of the course:

> "I was impressed at the range of views and knowledge the team brought to the exercise. We all have different backgrounds and consequently we all think differently" (Male G).

5.3 Coping with emotion, discomfort and risk

The design and delivery of the course are such that there will inevitably be situations that are more than just minor discomforts. As we have outlined, the student cohorts have been very diverse and the problems that we set are ones that are likely to generate emotional responses in many. So, we would expect to find that emotion is a factor that is brought out in the reflections by some.

Demonstrating an emotional response to business problems might broadly be considered a weakness. However, some students came to view emotional engagement through the use of scenarios as being a positive factor in gaining attention and engagement, as evidenced by:

> "My first opinion about this was that creating an emotional story layer on top would only confuse the audience…[] But the story allowed me to comprehend the main value of storytelling for the communication of information because information is associated with events that trigger an emotional response in addition to the intellectual response" (Male A).

For some students, an early negative personal emotional response to engagement with others was later found to be something that is not recognized by others. On the contrary, it remains unnoticed, whereby, "Fear of looking like a jerk or just seeming disrespectful or maybe even lack of confidence. Whatever the case may have been…[] it was proven time and again that respect was there" (Female B).

For some students, differences in personality types generate not-unexpected negative emotions and conflict. Again, however, this most often comes to our notice, not through in-class behaviours but in the critical reflective pieces where it is recognized as a learning experience to inform future actions:

> *"Alberto* and *Brenda* are very easy-going and easy to work with people. *Chas* and I are a little more stubborn, strong-headed and just rubbed each other the wrong way. We butted heads a few times…[] I should have picked my fights, saved my energy for the arguments that count, instead of arguing too much about insignificant details" (Female C) (*Names changed*).

Over the years, there have been several occasions in which an individual's emotional response to the situation has led to an outburst in the classroom. We would highlight two from only a handful of such examples, both arising in an iteration of the course in which the problem issue was to consider futures for sustainable healthcare and education in Sub-Sahara Africa.

On the first occasion, on the second day of the full-time course, in one of the plenary mini-lectures, an Anglo-Saxon male student seated near the back suddenly interjected along the lines:

> "I don't know why I'm doing this f+++ing MBA. I didn't give up my job as a (PROFESSION) in the city and a hundred grand a year to learn about f+++ing

Sub-Sahara Africa. I came learn how to make more f+++ing money!" (Male J).

We were totally unprepared for such an event and had no programmed response to it. However, we let it pass as 'just another contribution' to the discussion. The individual said no more at the time and continued to attend and participate. At the end of the two weeks, he came to find the lead tutor for the iteration. He apologized for the earlier outburst, saying, "Not only have I've learned so much about Africa, I've learned so much about myself".

During another delivery to full-time students and during a discussion in the second week, when students would be expected to have undertaken considerable research, a Nigerian female student broke into an exchange between two European males. Responding to their views on health issues in Africa, she shouted along the lines, "This is why we Africans get fed up with white men's interventions. Do you know that there's a saying in Africa, 'We don't know which is worse sometimes, aid or AIDS!'"(Female E).

On this occasion, the interjection stimulated the European males to invite the woman and other non-Anglo-Saxon participants to speak out more, stating that they were always silent and didn't engage. In response, issues of cultural difference, dispositions to speak out or remain silent, and gender dominance were voiced by several non-European students, both female and male. An extended debate then ensued on issues of gender, culture, power and politics.

These last two examples of how seemingly negative and destructive comments from the student body can elicit positive follow-up, both at the individual and the group level, are indicative of the power of critical action learning. However, we must admit that we are perhaps fortunate that neither situation outlined – nor any other such incident – led to a different and more dangerous outcome.

6. Discussion – reflections on emancipatory critical action learning

In this section, we reflect specifically upon the process of scenario development in this course and potential pathways to improve the process. Further we reflect on the nature of student learning within it, the relationships between tutor/student, student/student and, in some instances, tutor/tutor. Finally we consider issues of power, hierarchy, and authority throughout the entire process.

6.1 Action learning and student emancipation

We have provided illustrative examples of both students' reflective journal entries at the end of the course and of the rare emotional outbursts during delivery. We acknowledge that these are selective. However, we have sought to provide balance in rough relation to overall feedback – both positive

and negative. By and large, we see that the feedback after the event is positive in nature, frequently qualified by reference to initial scepticism and misgivings.

In the reflective pieces, students regularly refer to emotional aspects of the process. These can be both in terms of engagement with other students and in dealing with the substantive problem. As we have shown in two illustrations above, emotional outbursts can also on occasion be exhibited in the classroom. Rather than seeing these as problematic and something to be criticized or suppressed, we have allowed them to appear 'natural' in the class. Students appear comfortable to disclose them in their reflections. As such, the course enables explicit consideration of power and emotion in learning that Vince (21) sees as a key characteristic of critical action learning.

The impact of power and emotion in the group work environment is also touched on by students in relation to the occasions of student 'inaction' (14) in the action learning space. Raised by some students in the reflective journals after the event, the issue of the non-participating and non-performing team member is one that we should perhaps pay more heed to. This has never been raised formally with the tutors as an issue of complaint during or after the course. However, we have incorporated a degree of peer assessment within teams in the last two years. This offers the potential to bring a small adjustment to an individual's final assessment. However, students may gloss over such issues. They may feel that we see these as a reality of organizational life within our regime of 'power over' the students (18) and, as such, they should 'just get over it'.

The scenario process presented, with guidance on purpose but no direction on use in the given problem context, aligns with Boje's (22, p.3) 'antenarrative' approach. Here, contemplation "gives attention to the speculative, the ambiguity of sensemaking and guessing as to what is happening in the flow of experience". While we present speculative and ambiguous thinking as a positive characteristic of the course and most students appear to come round to seeing it in the same light, we acknowledge that some remain discomforted. However, more importantly, we must also recognize the reality of much organizational life. We must accept that our emancipated, inquiring graduates may return to a world in which uncertainty, ambiguity and questioning are unwelcome, and where the desire is for clarity, direction and conformance (10).

Notwithstanding the above important considerations, we would argue that the critical action learning approach is of specific value. It offers the type of complex, ambiguous, trans-disciplinary problem exploration and analysis that typifies strategic analysis in the modern organization, of whatever size and nature. Students might consider that taking an MBA is about gathering more knowledge and being better prepared for specific issues. However, we would posit that such knowledge is often context-specific, time-bound and ultimately irrelevant (23). We would then argue that this course correctly aims to provide students skills they will need in future, not knowledge they want at present.

6.2 Critical reflections on our academic process

In our course design, we argue that we offer an emancipatory learning process for students. However, we must critically address our own teaching processes. Introducing the concept of action learning, we inform students that the information that we provide on the selected problem is fairly basic. We make students aware that we are process experts and not experts on the substantive topic. In addition, even as the process experts, we do not offer a prescriptive scenario approach. Rather, we are explicit in our acceptance that the structured and staged process can, and should be molded and adapted to suit the research context.

As outlined above, we select and present the nominal client and substantive problem for the students' investigation. This might be considered indicative of an immediate exercise of 'power over' rather than 'power with' the student cohort (18). We would argue that it is essential in a limited timeframe to set the context of inquiry from the outset; students however might quite rightly challenge our right and our motivations for doing this. They may question whether we go beyond being the 'process radicals' that we openly profess to be, to become 'content radicals' (24), presenting political and social agendas outside of the expected management education curriculum.

For many students in the course, action learning is an unfamiliar practice, since the experience of undergraduate classrooms has largely been of a 'traditional', teacher-centric didactic pedagogy approach. This is of specific relevance in relation to the student cohorts in the Asia-Pacific region, in the homogenous Hong Kong groups in particular. Here our early expectations, informed by 'generally accepted wisdom' within our own culture, were that students would find it difficult if not impossible to engage in the type action learning required. Most Hong Kong and Shanghai Chinese students acknowledged that their earlier learning had been largely didactic, with questioning of the academic's views largely proscribed. However, our experience was that they were very happy and eager to engage in this form of active and exploratory learning. Here, we became the active learners though engagement, reflecting critically on our own cultural perspectives and assumptions (10).

7. Recent enhancements of the Intuitive Logics scenario method

The course currently delivers around a specific, structured and staged IL scenario method. However, there have been recent augmentations to the IL method proposed in the theoretical and practice-based literature (9, for a discussion and elaboration of recent methodological innovations). We next outline three of these augmentations and consider whether their inclusion within the 20-year-old, continuously developing, teaching-focused, scenario

approach that we have documented would enhance, or degrade, our critical action learning pedagogy. Specifically, we discuss two 'augmented' scenario approaches offered by Wright and Cairns (25) and, in addition, the use of role-playing of stakeholders by participants in the scenario development process.

7.1 Backwards logic and 'extreme scenarios'

In our current structured and staged scenario process, the scenarios are developed deductively, using forward inferences and causality based upon the participants' own research. In contrast, a recent augmentation of the intuitive logics scenario development method, named 'backwards logic' (25, 26) requires participants to initially focus on the creation of extreme, but still plausible, future end-states. Next, participants are asked to develop causal storylines to establish how a particular extreme scenario unfolded – by working back from the end state to the present using backwards logic (26) and diagnostic reasoning to answer the question: 'What must have happened to get us to this future from where we are today?'

Thus, the standard IL method of scenario construction (the focus of the earlier part of this article) is in sharp contrast to backwards logic (BL) method – in the former, the set of (usually) four eventual scenarios consists of permutations of the highest impact/highest uncertainty clusters of driving forces (see stage 4 on page 7 of this paper), in the latter, the prior choice of a particular extreme end-state channels thinking about both the choice and combination of constituent driving forces.

Wright and Goodwin (26) have shown that scenarios developed using the BL methodology are more focused on the anticipation of high-impact low probability events than scenario developed using the standard IL approach. For this reason, the BL method can be seen as an innovation in scenario practice. But, would incorporation of BL – or replacement of the IL scenario method by the BL method – have an impact on the critical action learning pedagogy that we have described and evaluated? In our view, it would, since the generation of an extreme end-state that is an initial step in application of the BL method assumes strong substantive familiarity with relevant driving forces. Recall from our description of our teaching-based application of the IL method, that only at the second iteration of the scenario development process will this level of substantive knowledge be available to participants. As such, the BL method's basic requirement cannot be met without a major change in our current teaching design.

7.2 'Critical scenario method' for moral/ethical decision analysis

Although the traditional focus in scenario development with IL is on exogenous changes in the contextual environment, change can equally be

brought about endogenously by the actions of stakeholders with power to affect the contextual environment. Different stakeholders will exhibit significant behavioral differences with respect to unfolding events and it is essential to understand the ways in which these behaviors may ultimately 'co-influence' developments in the contextual environment. For example, powerful stakeholders will act to preserve or enhance their own interest against unfolding events. Identification of the 'broad' range of stakeholders (7), highlighting those with both power over and interest in the focal issue and considering their likely actions in response to events depicted in each scenario has been proposed as a new emphasis within the IL scenario development method (26). Such stakeholder analysis provides a counter to any over emphasis of the macro-environmental context with disregard for the actions of stakeholders at the micro-level which Wilkinson and Kupers (27) suggest can reduce the usefulness of the scenarios, and which they contend, reportedly resulted in their loss of credibility as a strategic tool in the Shell Corporation in the 1980s.

If we wish to further enhance students' engagement with issues of power and politics in their consideration of problems, we might employ the principles of 'critical scenario method' (CSM) (28) within a teaching context. CSM embeds stakeholder analysis as a key element of the scenario development process. In addition, it broadens consideration from the powerful to include those who are geographically remote and excluded from the power and politics of decision-making. Such stakeholders may be deeply affected both by the outcomes of unfolding events and by the actions of powerful others.

The theoretical foundations for consideration of such moral-ethical deliberation in CSM lie in Aristotelian philosophy and the intellectual virtue of *phronēsis* (29); thinking to inform action on what is good 'for man' (sic). The application of phronetic inquiry in CSM is through the use of Flyvbjerg's (30, 31) set of four value-rational questions, namely:

- Where are we going?
- Is this development desirable?
- What, if anything, should we do about it?
- Who gains and who loses, and by which mechanisms of power?

The first question is answered by the nature of a particular scenario narrative. Thereafter, the issue of 'desirability' of the end-state outcome should, where the method is applied as intended, be debated in relation to each and every stakeholder. However, if undertaken within a single 'client' firm, the issue may be focused solely on issues of corporate social responsibility (CSR) from the firm perspective. In our focal teaching context, and in line with the method's intent, students can be facilitated to realize that what may be desirable for the shareholders and executives of a Western multinational corporation (MNC) may

not be so for those living in remote regions from which resources are stripped to enable the MNC's operations.

7.2.3 Thinking 'in the shoes of others' – role-playing stakeholders

We might further assist students in undertaking the most creative speculative thinking through the application of an IL scenario development process that is augmented by a broad stakeholder consideration and analysis. To do so, we might encourage students to engage in role-playing stakeholder reactions and actions throughout the scenario development and appraisal processes. In the face of likely scepticism and reluctance by some to engage in 'mere acting', we would provide evidence of the theoretical and empirical foundations of role-play. Evidence shows that this exercise may aid valid anticipation of stakeholder actions and behavior – even when the role-playing is undertaken by student participants. The reason for this is that basic motivations underpin all human behavior and understanding of such basic motivations is, in principle, available to all (32).

In short, we propose that enhanced stakeholder analysis within the standard IL scenario development process will, likely, encourage new thinking. It will lead to refinement of the initial scenarios developed by students who participate in our teaching. It will also bring new insights and understandings that impact views on the nature of 'reality' in the mind of both students and the client.

8. Implications and reflections

In this article, we have outlined both the pedagogy and methods of our approach. We have shown how we acculturate new MBA students to a mode of critical action learning through the use of scenario methods and intuitive logics to explore a wicked problem. We have noted that, for some, the process challenges their preconceptions of MBA learning and their experience of working within a bounded rationality and, in some cases, as recipients of didactic teaching. We have also outlined the 'scaffolding' provided before entering the course, by initial mini-lectures and by the provision of a structured and staged approach to support students' own learning journey.

We propose that our approach is one of student emancipation and active participation in designing the learning experience. However, we have considered the limitations of the approach. We have discussed examples of negative responses within the student body, and the potential for more destructive intra-group conflict. However, we posit that the benefits of this approach have been shown to far outweigh any potential and actual problems.

Taking the possibilities of our approach further, we suggest that adding the further augmentation of stakeholder analysis via critical scenario method

(CSM), and wider use of role-play throughout the process. We argue that this is likely to further enhance the critical action learning pedagogy and will underpin the emancipation of the students as self-directed and self-reflective learners. There is however the issue of time – the course is already an intense and time-consuming one, and the addition of stakeholder analysis will inevitably require some adjustments to the current process to accommodate this augmentation.

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