20. Congruent Facilitation of Simulations and Games

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Introduction

In a review of material published in the journal *Simulations and Gaming* over several years, we found only about 10% of the articles addressed the issue of facilitation skills. While most authors provided information concerning specific briefing and debriefing processes, only a few provided details about the capabilities required of a person directing a simulation or game as a learning activity. Because simulations and games are complex and somewhat unconventional learning modes, it seems likely that those writing in the field are, at least partly, unaware or unconcerned about the capabilities and knowledge they themselves develop as they acquire the capacity to create the kind of learning experiences about which they write.

Until events necessitated critical reanalysis of our practice, we were similarly unconcerned about our own facilitation skills. Once we began examining facilitation processes, new insights into the facilitation role emerged. These insights especially concern the way in which personal preferences appear to have a major influence on choices and behaviors when facilitating experiential learning activities. Two sets of choices emerge as particularly relevant. The first concerns choices about the type of simulation or game; the second concerns the preferred facilitation style and observable behaviors. These preferences seem to be more significant in shaping individual choices than do the goals and purposes of the learning that is the focus of the experiential activity. We first wrote about these in 1998 (Leigh and Spindler 1998) and have continued to report our explorations in subsequent papers (Leigh 2003a, 2003b; Leigh and Spindler 2004).

In this chapter we briefly describe our earlier work, and extend the proposition that personal attributes and teaching and learning philosophies often have greater influence on choices and actions than requirements of specific educational outcomes. For example, given similar learning outcomes, someone who sees learning as a highly structured process requiring tight control is likely to choose a quite different approach and facilitation style to someone who regards learning as an emergent process dependent on interactions among learner, processes, and content.

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At ISAGA 2003 we used a collaborative research strategy to pilot an exploration of these propositions. We developed instruments to assist in identifying philosophical stances, preferences for simulations and games formats, and facilitation practices. During the workshop, participants were able to use these instruments to identify personal patterns among these frameworks. Within the collaborative workshop there was sufficient support for our propositions to encourage further research.

Defining Simulations and Games

When discussing definitions and types of simulations in use around the world it is easy to see that the choices are immensely varied. What "are" and "are not" simulations, and how to manage, design, learn from, and behave in simulations are all subjects of debate. While preparing this chapter one of us was invited to complete two electronic surveys about the field. One was for a technology-based Australian simulation association and the other for an international teaching and research center. Neither provided a definition of "simulation" apparently assuming that anyone completing the survey shared their (unstated) assumptions about what the term means. This assumption, that there is no problem about the "meaning" of the term, emphasizes the need to provide our own definition which is:

Simulations and games include all interactive representations of perceived reality past, present, future—used for learning purposes (Leigh 2003b)

Such a broad definition allows consideration of the widest possible spectrum of activities and we encourage readers to think about their own definitions, and to regularly review their personal schemas for the field. To pursue our exploration of the facilitator's role and choices we use three arrangements from a broad range of possible models for categorizing simulations. We are aware that other equally useful arrangements exist and intend to include consideration of them in future work.

A Spectrum Approach

Taylor (1977) used a "spectrum" approach to explain to educators of town planners the potential of simulations and games as teaching media. He arranged them from "most" to "least" *real* as models of human activity. He considered case studies to be "most real" and electronic simulators to be "least real" based on how materials mediate learning. Case studies are almost "real" with little distance between player and "reality" while mechanical simulators interpose extensive technology-based mediating elements between players and reality. Taylor's spectrum is nearly 30 years old and computer-based simulators now provide near-perfect representations, e.g., flying a plane. His spectrum still emphasizes the importance of taking into account the mediating role and impact of technology and materials.

A Relational Approach

Ellington (1999) used a Venn diagram (Fig. 1) to define seven formats including:

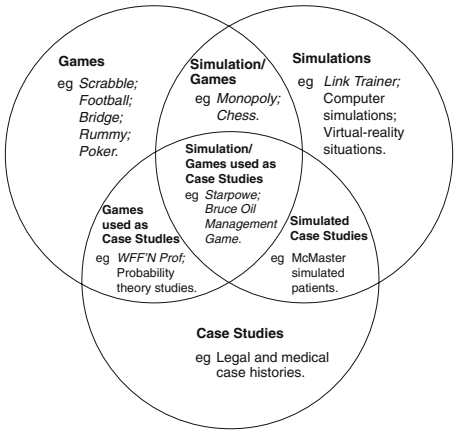

FIG. 1. A relational approach based on the work of Ellington (1999)

1. *Pure games*
2. Games used as simulations
3. *Pure simulations*
4. *Pure case studies*
5. Simulations used as case studies
6. Case studies used as games
7. Simulation games used as case studies

The arrangement of the formats is especially useful for choosing activities for particular learning contexts. For example, a game has rules and time constraints but need not be *like reality*, while a simulation must *specifically represent* an aspect of reality (or potential reality), and a case study must enable *in-depth analysis* of content.

Although useful in understanding *materials and rules* etc., neither of these approaches explains how to manage the learning process.

A Drama Perspective

To do this requires something different, so we have chosen Christopher and Smith's (1987) categorizing of activities as "open" or "closed," drawing on concepts from theatrical drama to distinguish between two quite different types of games (see Table 1).

Closed games rely on the facilitator for control and authority to arrive at predetermined learning points. While the route to solutions may vary, the overall action and debriefing processes do not. In contrast, open games inhibit the facilitator from being someone who "knows the desired answer." They structure the role to minimize a facilitator's capacity to help participants arrive at "the right place," because there is no one right place. Rather, the experience is that of a journey during which participants encounter moments of insight, while initiating events and experiencing emotions that may direct their attention in any number of likely, or unanticipated, directions. Facilitators support and guide, reassure and encourage; they do not direct, and certainly do not teach the meaning of events.

Assumptions About Facilitation

Both closed and open forms of simulations or games can contribute to rich learning experiences. However, each makes quite different assumptions about how

TABLE 1. Features of closed and open simulations, based on Christopher and Smith (1987)

Focus	Closed games	Open games
Framing question	Here is a **problem**. Your task is . . . "How to solve it?"	Here is a **situation**. Your task is . . . "What to do?"
Focus of the briefing phase	Togetherness	Diversity of players and views
Role of facilitator	Benevolent authority figure	Not the leader (this may be resented)
Rules for the action	Players all have same rules	Few rules, little detail. Chance events occur on players' whims.
Scenario/setting/ participant roles	Play begins at a moment of crisis. Each step proceeds logically from the one before. Action is goal oriented/forward looking. Stimulus is toward cooperative problem solving: emphasis on outcome.	A journey: multiple plots diffuse action. Stages not clearly marked. Changes occur because of players' actions. No clear order and balance. Minor actions spin off in apparently illogical manner. Emphasis on reactions. Diverse happenings. Emphasis on behavior, not outcomes.
Outcomes: focus of debriefing	Players derive pleasure from shared experience. There are problems and answers. Conflict can be reconciled.	Players find themselves more thoughtful than pleased. There is a lack of certainty and an awareness of new possibilities.

learning occurs and how participants and facilitators are to behave. A closed game assumes that participants need guidance and the facilitator is there to provide it. An open game assumes that participants create the experience *they* need to have, in order to learn. It further assumes that disorder and confusion are likely to emerge as part of this process, and that this provides a "container" within which "deep learning" is likely to occur. The facilitator must not disturb the emergence of such disorderly chaos, but can offer support as participants travel forward to the destination being created by their actions. The intended outcomes of such activities are of course often quite different. Where open simulations will usually concern themselves with themes such as managing in times of uncertainty and learning about emotionally charged contexts, closed simulations tend to be designed for acquisition of facts and information.[3]

We propose that facilitators who regard knowledge as an "object" to be possessed, acquired as "facts," and "contained" in words will prefer the more structured form of closed games, whatever the purpose. Conversely, facilitators who regard knowledge as *emerging from the process*, acquired through both emotional responses and examination of facts and "things," will prefer the sense of "journey" allowed in open simulations and the way that the unexpected and unanticipated become vital forces for understanding, and go beyond acquisition of data and facts.[4] As we explored these perspectives, we developed the concept of the "vigilant observer" (see Fig. 2) and identified two factors linked to developing the capability for using open games.

[3] Please note we consider these to be a description of tendencies and not assertions about the precise nature of either form of activity.

[4] As noted above, such different approaches will almost always produce quite different learning outcomes.

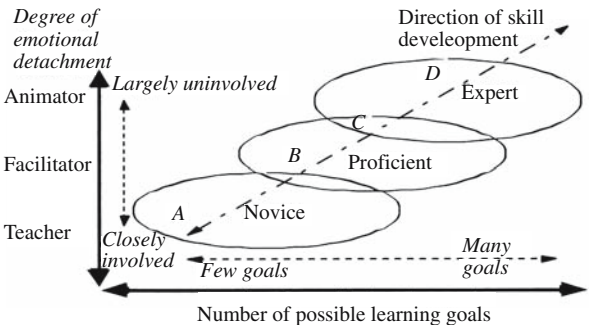

FIG. 2. Emotional detachment and learning goals, linking *novice*, *proficient*, and *expert* presenters of simulations

We used this concept to develop a spectrum with endpoints of "moderator" and "improviser" signaling the respective attitudes to the task of managing the learning. The improviser is more comfortable with open simulations and has similar characteristics to the animator described by Boud and Miller (1996) with an emphasis on emotional detachment and acceptance of ambiguity. A moderator prefers closed simulations and regards their task as being to ensure achievement of concrete intentions. The improviser works with what emerges from the action, being able to improvise from moment to moment, seeing the goal as assisting individuals to attend to their own experiences rather than directing attention to designated topics. Figure 3 illustrates differences between moderators and improvisers emerging as the outcome of personal decisions made (often tacitly) about such things as: the relative importance of content knowledge; the need to control the action; the power relationships between learner and teacher roles; and beliefs about what constitutes appropriate methodologies.

Our concern is that novice facilitators, unable to differentiate between closed and open forms may make errors in their management of the learning including:

- *Stretching closed simulations beyond their design parameters, by treating them as open and therefore*
  - encourage participants to "unpack" ideas that are not fully within the scope or goals of the game but appear interesting
  - claim an activity provides more variety than it can sustain
  - expect a game to operate as open and telling players how to make it so
- *Limiting the potential of open simulations by treating them as closed and therefore*
  - require specific outcomes to be achieved
  - ignore emergent learning, in favor of preset expectations
  - contain action in narrower constraints than the designer's intentions
  - rescue learners that are temporarily lost in a "morass" of potentials
  - fail to encourage exploration of new potentials being created

We are more interested in errors related to treating open games as if they are closed for two main reasons. The first is that such errors can generate a lot of emotional turmoil for both participants and facilitator if anyone begins to develop unrealistic or unattainable expectations about the others' roles and

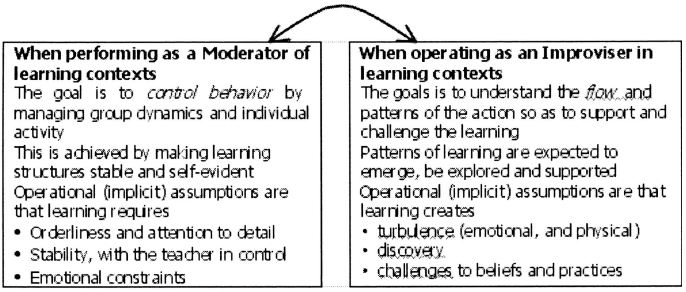

FIG. 3.
A continuum of approaches to managing learning, adapted from Leigh and Spindler (1998)

behaviors. The second is that any potential for learning may be lost if participants and facilitator become seduced by the emotional turmoil and are unable to identify what learning is actually available (and indeed occurring).

To better understand problems in managing open simulations, and to develop a means of improving the learning from our own experiences, we began to consider how teaching and learning preferences are shaped by educational philosophies and influence facilitation choices. Consideration of "learning styles" and "personality types" provides a brief introduction to thinking about how novice and experienced facilitators may better appreciate the implications of their choices in regard to games formats through better understanding their own profiles.

Learning Preferences

David Kolb developed the concept of learning as occurring in a cycle, suggesting that adults prefer one or two of four steps in the cycle, but must use all four for new learning to be fully integrated (Kolb et al. 1979). He suggested it is possible to map individual preferences in a way that enables anyone to understand more about their own "beginning point" and become alert to the way this may shape their approach to learning activities. Honey and Mumford (1986) modified this approach by mapping the learning preferences in the form of a kite. Their model, as shown in Fig. 4, suggests the following key characteristics of each of the four points of the kite:

Activist—fully engages without bias in new experiences
Reflector—stands back to observe experiences from different perspectives
Theorist—adapts and integrates observations into complex logical theories
Pragmatist—tries out ideas, theories, and techniques to see how they work in practice

The assessments developed by Honey and Mumford indicate the degree to which individuals hold particular preferences. Plotting these along the axes provides a visual image of individual learning style. Figure 4 shows this approach, with the kite of one of the authors superimposed on the grid as an example of what it can produce. This kite suggests that its owner prefers action to "kick start" new learning and has a pragmatic need for learning to be relevant to current

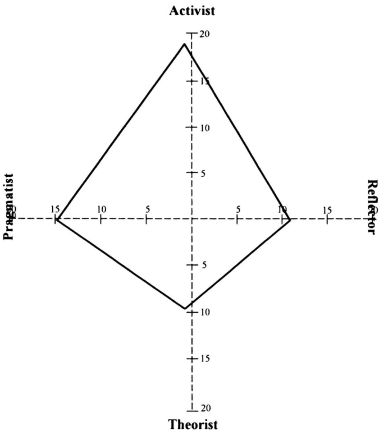

FIG. 4. Learning styles as a set of preferences, adapted from Honey and Mumford (1986)

practice. Observation and analysis remain subservient to action. The kite's owner prefers to teach and learn via simulations and games, with a strong affinity for open simulations as a challenging and rewarding way to help adult learners integrate present knowledge and new information.

A person with a preference for extensive reflection and careful analysis prior to action will be less likely to enjoy the "free form" nature of open simulations that require quick responses and allow little time for in-depth analysis of options. The comparative strength of each one's preferences is likely to dictate responses to specific activities. Thus, knowledge of one's own learning preferences and its impact on the design and delivery of learning processes can assist facilitators to both extend their own repertoire of teaching strategies and be better prepared for the widest possible array of learners' responses.

Personality Types

It is logical to assume that understanding and beliefs around teaching and learning practice are likely to have an impact on choices of learning activity. The same could be said of individual personality characteristics. In general terms, personality theories aim to explain psychological aspects of human beings, particularly commonalities and differences. A well-known model influencing development of personality theory is that of Jung (1974). He described four mental "functions" and noted that:

1. Everyone can perform all of them
2. Each function has an opposite function; each pair of functions has an opposite pair
3. Each individual prefers using some functions, and pairs, more than others
4. These habits can be generalized to describe types of people

Figure 5 illustrates the format known as the Myers Briggs Type Indicator (MBTI) (Briggs Myers 1999). This is based on the work of Jung, and is an instru-

S and N
We take information in via our senses. When this **Sensation Function** (**S**) dominates perception, we prefer sensate things: certainty, precision, simplicity, practicality, concreteness. The **Intuition** (**N**) function perceives patterns and possibilities. An **N** sees objects as parts of patterns, implications, possibilities or theories. The **N** dreams, nothing is the same way twice; there must be change.
Until they understand these differences the two functions will not value each other. **S** calls **N** a lazy dreamer, and **N** considers **S** a plodder.

T and F
As we take in information we use it via thinking and feeling. **Thinking (T)** analyses elements to reach an objective *truth*. Information is dealt with objectively, impersonally, logically. Thinkers make good planners because they lay events out in order. **Feeling (F)** types do not just *have* feelings; they use them to make **value judgments** to build relationships, compare things, act compassionately. **T** is irritated by **F**'s personalizing, who sees **T** as a cold fish.

P and J
A Perceiving (**P**) person takes in a lot of information before deciding and taking action. A Judging (**J**) person takes in less information and decides more quickly. **P** may be slow; **J** may "shoot from the hip". (Putzel 2001)

FIG. 5. Brief summary of Myers Briggs type indicator typology (Briggs Myers 1999)

ment used regularly as part of our adult education programs to provide students with an understanding of the variety of individual preferences. Just as learning style preferences may influence preferences for teaching methods, so it is likely that different personality types will respond differently to particular methods and strategies.

We suggest that people with S, T, and J preferences (as per the information in Fig. 5) are likely to prefer closed simulations because of the opportunities they provide for clear, detailed analysis and the development of logical, well-structured arguments about specific learning outcomes. Conversely, we propose that those with N, F, and P preferences are more likely to choose open simulations because of the prospects for exploring patterns, creating original action, building relationships, and working with lots of information. We are cautious in our predictions, as we have as yet only worked with limited data; however, we received encouraging support at ISAGA 2003 and briefly report on that aspect of the research, in what follows.

Collaborative Exploration—ISAGA 2003

In developing our approach for the workshop at ISAGA 2003, we opted to work with a number of theoretical frameworks that can be arranged in orthogonal (right-angled) relationships, thus identifying four distinct stances in regard to each concept being examined. The three models we chose to work with concern (1) adult learning principles, (2) project management types, and (3) a personality profile called "Tetramap" (Brett and Brett 2004) which draws on a combination of western and eastern philosophies to identify four distinct types of approach to learning and being. Each of the models can be arranged such that the factors can be seen as aligned in terms of "more than" and "less than," balancing aspects of each measure rather than possessing or not possessing each of

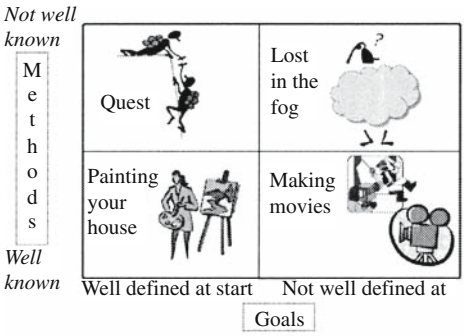

FIG. 6. A representation of Turner's project types

the factors being considered in each model. For example, Turner identified four types of project based on two related factors of knowledge of methods to be applied and tools to be used. Figure 6 shows how these factors help to define four project types. Different individuals will feel more comfortable with some project types (e.g., projects with well-defined goals and methods) than with others (e.g., projects with methods that are not well known or tools not well defined).

These models are all ones we use elsewhere in our adult education programs and each provides an insight into a different aspect of the teaching and learning processes in which we are engaged.

During the ISAGA 2003 workshop, participants reviewed the models choosing stances that seemed most like their own, and then self-selected into groups reflecting their choice patterns. The groups then examined its members' preferences for open or closed simulations based on a discussion of the work of Christopher and Smith (1987). We had posited that the more structure participants chose, the more they would be likely to chose closed simulations and vice versa. In addition we proposed that there would be fewer differences within groups than across groups. These propositions were well supported by the choices made by individuals within the workshop groups.

We want to emphasize that our concern is not to label what is good or what is not good facilitation practice, but we are hoping to establish what attitudes and practices might underlie good facilitation practice for different forms of simulation and games. We are concerned that it is possible to "strangle" learning by using a facilitation approach that does not suit the form of the activity.

Concluding Comments

Open simulations do not, at the beginning, provide time for careful analysis. Participants are thrust into action in a nondefined state by the momentum of the action and only slowly come to a realization that their learning is being formed by the activity, as well as their observation and analysis of it. Closed simulations, in contrast, generally provide more time for analysis giving a facilitator scope to guide learning in a defined and logical manner.

Moving between forms appears to become easier as facilitators acquire understanding of their own and others' learning preferences. It remains difficult for

those who judge learning designs from within parameters of formal logic and consider uncertainty as a needlessly difficult approach to imparting knowledge.

Of course, when knowledge itself is uncertain in its content and overall relevance, then adherence to logic is difficult, and facilitators may be more able to perceive how open simulations offer a way forward beyond the logic of the ancient Greeks. In developing his thesis of "Gaming: the Futures Language" Duke (1974) captured the essence of the dilemma quite well. Although he did not allocate a place for emotions in simulations, he was acutely aware of the nature of the "gestalt" they offer for humans needing to explore multiple meanings simultaneously. Duke's concern was with the design and use of the process, more than with the skill of the user.

We believe the paucity of information about managing simulations of all types creates an urgent need to develop ways to help facilitators learn about matching their skills and preferences to the use of particular simulations and games, and then developing skills for using all forms of simulations and games. Self-knowledge may be a key factor. From this preliminary exploration, indications are that individual differences and preferences may influence much about choices and actions in facilitation. As difficulties in facilitation may occur as a result of incongruent facilitation strategies (Leigh and Spindler 1998) it may be important for facilitators to develop an awareness of their preferences for particular modes of learning and personal styles. This will assist in making effective choices about the styles of simulations and games initially and ways they will need to challenge their beliefs in order to develop more flexible facilitation styles.

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