The role of post-simulation activities

Adapted from Designing and Evaluating Games and Simulations: A Process Approach by Margaret Gredler, Gulf Publishing, 1992, Ch 11.

A simulation is an experiential exercise in that participants step into assigned roles, accept the responsibilities and constraints and won through the problems and difficulties that arise in the execution of the roles.

A well-designed simulation captures the attention, thoughts and efforts of the participants and often involves their feelings as well. As a result, participants have no opportunity during the simulation to reflect on either their own actions, assumptions or beliefs or those of others in the exercise. To be maximally effective, the participant’s experience should lead to both reflection on the experience and to new patterns of thinking. However, such learning cannot be left to chance or to a brief post-exercise discussion. Instead, post-simulation activities should be planned as carefully and thoughtfully as the simulation itself.

MODELS OF EXPERIENTIAL LEARNING

Two models of learning are relevant to a discussion of learning through simulations. They are the group-dynamics model developed by Kuri Lewin, a Gestalt Theorist, and the cognitive-development model developed by Jean Piaget, a Swiss psychologist.

The Lewinian model

In the 1930s many psychologists took the position that psychological characteristics of individuals were major influences on the person’s behavior. In contrast, Lewin’s position was that the group to which an individual belongs is the ground for the individual’s perceptions, feelings and actions (Allport, 1948). Thus, the focus of Lewin’s work was to construct a scientific system for understanding both the individual and society. He founded the Research Center for Group Dynamics, conducted action research in the social setting and is best known today for his work on group dynamics and motivation.

The major premise of Lewin’s work is that behavior (B) is a function (F) of the person (P) and his or her environment (E). In other words, \( B = F(P,E) \) (Lewin, 1936). Of importance in this equation is that the person (P) and the environment (E) are viewed as mutually dependent upon each other. Understanding the behavior of an individual in group setting depends upon understanding both the person’s group membership and the person’s perceptions.

Research conducted by Lewin and his colleagues on leadership, staff training and conflict resolution led to the identification of concepts that have since been incorporated into experiential learning. For example, individuals who participated in a group discussion were more likely to change their behavior than those instructed in a lecture. Behavioral changes reported by Lewin (1951) following a group decision-making session (as compared to lecture groups) include greater consumption of fresh milk and mothers giving orange juice to their young babies -lecture session informed participants of the correct nutritional course of action essential for maintaining good health. In the discussion session about caring for one’s family, the participants were
viewed as individuals with decision-making ability and the responsibility for guarding their families' health. Information about the benefits of fresh milk and orange juice were not dispensed as doctrine but evolved during the discussions.

Lewin and his colleagues also developed a training program for leadership and group dynamics that made use of group discussion in joint decision-making. At the end of the day, after the trainees had left, members of the research and training staff shared their observations of the training with each other. One evening, three trainees asked to stay, and their perceptions of the daily events, which differed on occasion from those of the staff, were part of the discussion. The next evening at least half of the trainees attended. The evening session, in which participants shared their perceptions of events, became a significant learning event in the training.

Resolution of an industrial conflict situation also indicated the importance of a three-stage process of resolution. Participants first described their experience from their own perspective followed by addressing the problem in a larger perspective, with assistance. Then group decision-making as to needed changes in policy based on the restated problem concluded the incident (Lewin, 1948).

The situation was a conflict between the supervisor of the sewing machine operators in a factory and the mechanic. The problem involved lost work resulting from machines awaiting repair, an overworked mechanic and the workers' sense of

![Figure 1. Experiential learning described by Jaques (1985)](image-url)
insecurity as to who was the decision-maker on repair problems. The psychologist interviewed the supervisor and the mechanic and, with their permission, assisted the workers in determining a set of priorities for machine repair. These priorities reduced the conflict about which machines were to be repaired first. Requests for the mechanic’s assistance (many of which were expressions of the workers’ insecurity about repair priorities) also decreased, thus reducing the loss of worker productivity.

From these and other experiences emerged the concepts related to changing behavior in the social setting. They are concrete experience, observations about the experience, forming new generalizations and concepts about the experience and developing hypotheses and/or policies to address the situation. The hypotheses or policies are then tested through concrete experience and, if necessary, the cycle repeats itself.

Jaques (1985, p 59) describes an adaptation of these concepts in a five-part experiential learning cycle. The five parts are 1) experience; 2) description; 3) interpretation; 4) generalizing; and 5) application. Part 5, application, feeds into experience and the cycle is repeated again. Figure 1 describes this cycle.

In summary, the Lewinian model addresses behavior in interpersonal situations. The model emphasizes the examination and interpretation of concrete experience by the learner. The interpretation, assisted by feedback to the learners, generates new concepts and hypotheses that feed into further concrete experience.

The Piagetian model

During the 1930s a young Swiss psychologist, Jean Piaget, began his studies into the ways that children think. Employed at the Binet Institute, Piaget’s task was to develop French versions of questions on English intelligence tests. However, he became intrigued with the reasons children gave for their wrong answers, particularly on the questions that required logical thinking.

From that beginning emerged Piaget’s developmental analysis of the growth of intelligence from birth to adulthood (Piaget, 1926; 1972). Intelligence, in his view, is a living system that must adapt to the environment in the same way as a biological organism. That is, it invents or constructs the structures it needs in order to function.

According to Piaget (1972), the learner constructs cognitive structures through two basic processes. One is assimilation in which new information is integrated into existing structures (which also enriches the structures). The other is accommodation, a process that occurs in two different ways. First, accommodation occurs when the learner’s existing cognitive structure is adjusted or modified in order to integrate new information into it. For example, in the industrial situation described earlier, the mechanic and the supervisor adjusted their ways of viewing their roles to accommodate the priority listing of repairs developed by the workers.

Accommodation also occurs at another level. Briefly summarized, it is the reconstruction of a cognitive structure on a higher level of thinking. This process involves the forsaking of intuitive knowledge for logical and more systematic ways of thinking. For example, students are given a problem in which any of several combinations of colorless liquids can change a clear liquid in another beaker to yellow. Individuals who rely on intuitive knowledge will test the possibilities unsystematically, resulting in errors and omissions (Inhelder and Piaget, 1958). In contrast, individuals who address the problem logically first consider all the possible combinations of
liquids and make notes about them. They then begin to test the combinations they had devised one by one.

6. Thinking is reorganized on a higher level

1. Interactions with the environment that challenge established perceptions

5. Continued interactions with similar situations to facilitate new ways of thinking

4. Learner begins to recognize original ways of thinking

2 or 3. Social interaction with peers that reveals the inaccuracy of one’s ideas

2 or 3. Cognitive conflict (disequilibrium) when individual realizes both perspectives cannot be true

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**Figure 2. Reorganization of intuitive ways of thinking in the Piagetian model**

However, reorganizing one’s intuitive approaches to problems on a higher level of thinking is not accomplished easily. Three requirements are essential. One is the learner’s continued interactions with events in the environment that challenge established perceptions. Another requirement is social interaction with others in which one’s beliefs are also challenged. Piaget (1926, p 144) observed that ‘never without the shock of contact with the thought of others and the effort of reflection which this shock entails would thought as such come to human consciousness.

A third requirement is the cognitive conflict (disequilibrium) that is produced by challenges to established perceptions. That is, the person realizes that his or her views and the facts or new perceptions that he has just confronted cannot both be true. As a result of this cognitive conflict, the learner begins to reorganize his or her ways of thinking about a particular set of events.

This reorganization, however, does not take place instantly. Investigations conducted
by several researchers indicate that several confrontations with one’s prior beliefs may be needed for changes to occur [Champagne et al., 1985; Osborne and Gilbert, 1980]. Also, adults as well as children experience difficulty in reorganizing their intuitive beliefs [Kuhn and Phelps, 1979].

Figure 2 illustrates the phases in the Piagetian model. As indicated, cognitive conflict, which is essential to a reorganization of one’s beliefs, may occur as a result of either interactions with the environment or social interactions with peers. Also, note the dashed lines between phases 5, 1 and 2 indicate any needed recycling prior to reorganization of thinking at a more inclusive level.

The sequence of interactions that challenge one’s perceptions, social interaction with peers and experiencing cognitive conflict apply to a variety of situations. That is, individuals often develop beliefs about other cultures and ethnic groups based on incomplete or intuitive information. Thus, the Piagetian model is appropriate for reorganizing beliefs or methods of thinking about both physical situations found in nature and social situations embedded in the cultural setting.

Applications

According to the Lewinian model, individuals in a social setting should be led to process their concrete experience in such a way as to arrive at new generalizations and concepts. An important facet of this processing is relating their perceptions of events to larger issues that may require action for a solution. Then the group may develop hypotheses or policies that can be tested by experience. If necessary, the cycle is repeated.

One implication of the Lewinian model is that it is appropriate for situations in which participants experience minor conflict with each other or a team or group is unable to achieve its goals in some way. A post-simulation processing session in which participants share their perceptions of events and their feelings and then work at placing their experiences in a larger framework is essential for learning. Also important, however, are subsequent planned activities in which participants can apply the generalizations and concepts that were developed in the group processing session.

The Piagetian model, in contrast, addresses the situation in which the individual holds inaccurate beliefs and/or implements illogical methods of arriving at conclusions. To begin to change such beliefs and modes of thinking, the individual must be confronted with situations that challenge his or her intuitive knowledge. In other words, the individual must experience cognitive conflict in order to be able to begin to change intuitive conclusions.

An example of a simulation in which the participants experience cognitive conflict is Me The Slow Learner. Participants’ views of themselves as competent individuals who can overcome obstacle ~ through hard work does not hold true in the simulation. Moreover, they undergo criticism and negative comments from the project staff. Thatcher and Robinson (1990) note that participants often recall earlier school experiences that also were traumatic. In other words, ‘many people regress to earlier states when they are confronted with situations similar to those which they lived through and which they thought had been rationalized’ (p 267).
PLANNING POST-SIMULATION ACTIVITIES

Typically, the post-simulation activity on which the burden of learning has been placed is the ‘debriefing’. The term derives from the use in military exercises and war games when participants, as a group, reviewed and examined the exercise. The participants described events that occurred, accounted for the actions and discussed necessary changes in strategy as indicated by problems encountered during the exercise.

Since the development of war games, simulations have been designed for use at all levels of education in a variety of subject areas; and for any of several different purposes. Given such diversity in the nature of the rethinking that is expected to occur, the group processing session can be considered as only one of several post-simulation activities essential to facilitating learning.

Several types of post-simulation activities may be combined to build on the processes set in motion by the simulation. They are the small group or team processing activity, total group sessions, the instructor-student conference, and other specific homework, pair or small-group activities related to the topic.

Small group or team processing

Some simulations, such as In the Hot Seat, involve a single team facing a particular problem or issue. Participants take roles in the simulation with particular responsibilities; however, individual efforts must also be coordinated to produce the final outcome. Alternative strategies may be explored in the post-simulation group session. However, discussion should not drift into recriminations of individual team members.

Other simulations are designed in which participants take roles in different teams. In some data-management simulations, teams are managing different banks, businesses or other ventures during the exercise. In these exercises, the facilitator may make use of a small group debriefing prior to a total group session. Two advantages of the small group activity are given by Pearson and Smith (1986, p 167). First, it provides the team members an opportunity to consider the goals they established and their strategies prior to interacting in the large group. Second, issues arising from interpersonal actions that may precipitate conflict or anger in members of other teams can be addressed beforehand in the small group. Simulations in which two groups are competing for the same goal are one example. Others are exercises in which one group’s task is to deliver services to others, such as social workers and their clients.

The disadvantage of the small group interaction is that the perceptions of the group members may solidify toward other teams or their participants (Pearson and Smith, 1986). This potential problem may be countered in at least three ways. First, the team debriefing should be short, for example, limited to 15 minutes. Second, the team debriefing should be conducted for specific goals. For example, team members may be directed to review briefly the objectives they established in the exercise and their strategies. Or they may be asked to consider briefly alternative ways to achieve their goals for any of their strategies that may have generated conflict or anger in others during the simulation. A third suggestion offered by Pearson and Smith (1986) is to arrange the seating in the whole group activity so that members from different teams
are interspersed with each other.

**The whole group processing session**

The total group activity, often referred to as ‘debriefing’, is appropriate for initiating learning following any multiple-participant simulation. Depending on the nature of the simulation, the group processing session may address either of two general purposes. One is the development of generalizations from the interpretation of learner perceptions (the Lewinian model). The other is that of beginning to address the cognitive conflict that has arisen from challenges to the learners’ intuitive beliefs or methods of thinking (the Piagetian model).

When implemented with tactical-decision simulations, the group processing session addresses the learners’ interpretation of their perspectives that led them to select particular goals and/or strategies. That is, teams in tactical-decision simulations are attempting to solve complex problems as a group in their assigned roles. Therefore, one purpose of the group session is the analysis of the data selection, interpretation and/or the management strategies of the participants. The participants first describe their perceptions of events and then address the perspectives that led to a particular course of action. They also may examine alternative organizational strategies or decisions that might have been implemented. For instance, company officials reconsider ways they may have improved profitability, customer service and other goals established during the simulation.

The group session following a language skills/communication simulation also focuses on the participants’ efforts to accomplish their goals. This learning is initiated in the group session in which participants explore alternative ways to communicate a particular idea, the points at which they missed important information conveyed by others and related issues.

Minor conflicts may also arise in tactical-decision and language skills simulations that require processing. In such situations, the group session should address their perceptions and relate those perceptions to a larger issue, such as incomplete data, need for improved communication and so on. Pearson and Smith (1986, p 159) note that even an innocuous group activity may trigger expressions of anger and conflict. They describe a student teacher’s violent outburst at hearing other students’ accounts of their practice teaching experiences. She viewed their experiences as far more positive than her own and reacted negatively to their reports.

Social-process simulations, however, because they focus on interpersonal activities, are the exercises most likely to generate emotional reactions.

*Following The Numbers Game,* for instance, participants must face their inadequate attempts to address a cooperative learning situation. In *Talking Rocks,* some groups may become hostile toward other groups who left uninterpretable messages which resulted in the ‘death’ of the receivers during the simulation. An initial generalization that may evolve from the group session is that while some of the Eagle people died, the good messages left by some groups helped others in the tribe to improve their skills (Jones, 1982, p 68).

When a simulation produces high levels of cognitive conflict, however, the group session is only a first step in the students’ reorganization of their beliefs on a higher level. Because participants often continue to process the events for days and weeks
after the exercise [Thatcher and Robinson, 1990], a series of activities following the simulation is essential.

**Leading the whole group session**

Three major phases, derived from the Lewinian model, are typically included in the group session for social-process simulations. They are a) to determine the events that occurred; b) to identify participants' thoughts and feelings about the events; and c) to develop initial generalizations based on the experience.

Given the multiple concerns to be addressed in the group, it is particularly important that the leader allows adequate time for the session. The time should be sufficient for as much exploration as individuals are able to undertake. At a minimum, the activity should be scheduled for the same amount of time as that allocated to the simulation itself (Pearson and Smith, 1986).

The instructor who is leading the group activity is not serving as the holder of expert knowledge. Instead, the role is that of facilitator in assisting the participants to process the events of the simulation, their feelings and to begin to move toward relating of their experience to larger issues. Thus, the leader is not functioning in the role of judge or jury. Instead, he or she must be sensitive to the messages conveyed by participants' comments in order to raise thoughtful questions for their consideration at the appropriate time.

**Determining the simulation events**

The purpose for beginning with participants' descriptions of events is twofold. First, it is a non-threatening issue and second, it provides a common starting point for all participants [Pearson and Smith, 1986, p 159]. Moreover, since individuals perceive events in different ways, they are likely to report events differently. The reporting, therefore, permits all participants to acquire a basic knowledge of the experiences of the others [Pearson and Smith, 1986].

Sessions following simulations that generate high levels of cognitive conflict should take a somewhat different approach. Participant completion of a questionnaire that addresses both events and emotions followed by immediate comments are suggested by Thatcher and Robinson (1990). Given the intensity of participants' experiences during the exercise, this strategy assists them to 'let off steam' and to begin the transition toward discussing the exercise in more detail.

For simulations that are less intense experiences for the group, participants can begin to share events as they perceive them with the others. Some suggestions for group leaders by van Ments (1983) are helpful. First, the purpose of this phase of processing is descriptive, not evaluative. In addition, the leader should use open-ended questions [how? and what?] to initiate comments. Actions that were taken rather than actions that might have been taken should be the focus. Also, quality of performance is not evaluated, motives or judgments about underlying attitudes are not made and any feedback should be in the form of the individual's own experience rather than that of another participant [van Ments, 1983].

The leader should also be alert to identifying the individuals who have little to say or who volunteer only perfunctory remarks. They may hold quite different views of the experience from those expressed by the others. Depending on the level of trust that has been established, they may share their feelings and views in one or more
Identifying participants’ feelings
This phase of processing is crucial to any redirection and reorganization of thinking that may occur and it should not be conducted in a superficial manner. Essential to the success of this phase is an atmosphere of trust, an acceptance of others and a feeling of safety that promotes participants’ willingness to take risks [Pearson and Smith, 1986, p 159].

For example, some groups in Talking Rocks may be upset by one or more of the other groups because they left vague or incomprehensible messages. Therefore, the climate in the group session must be such that the participants are comfortable in expressing their frustration and anger about that development.

Important skills for the group leader are sensitivity to the underlying emotions of the participants and skills in handling interpersonal anger and conflict [Pearson and Smith, 1986, p 159). The leader must not be judgmental and he or she must refrain from reinterpreting participants’ statements by paraphrasing or summarizing. Instead, the leader must be sensitive to participants’ concerns and direct the discussion toward addressing those concerns [Pearson and Smith, 1986).

Developing initial generalizations
This phase of the processing, like the identification of participant emotions and concerns, is critical to the learning. For simulations that do not generate high levels of cognitive conflict, a few generalizations may be formed during this phase of the group session. Once participants’ feelings and concerns are addressed, the processing can begin to deal with events or actions in the simulation that were not consistent with prior viewpoints, popular beliefs or theories. Thus, the processing begins to address events or actions in the simulation that resulted from different views of a situation. At this point, the leader’s role is to encourage discussions in this direction and to raise questions that bring discrepancies to the attention of the participants. Once discrepancies are identified, students may begin to extend their thinking to a broader context.

The instructor-student conference
The instructor—student conference plays an important role in facilitating learning after the simulation. However, it is implemented in somewhat different ways for single-participant and group simulations.

The single participant simulation
The purpose of single participant simulations is to develop students’ problem-solving skills. Students may be diagnosing a particular problem, managing a data set, or interviewing a client, witness or patient. The instructor—student conference is the primary mechanism for analyzing the student’s experience.

The instructor in this situation is fulfilling a dual role. First, he or she is functioning in part as the holder of expert knowledge (Pearson and Smith, 1986). Second, the instructor is a facilitator for the participant in analyzing his or her own performance and particular strengths and weaknesses.

The conference should include at least three major stages. The first is to determine the student’s perception of his or her performance during the exercise and some general assessment of strengths and weaknesses. The second is to discuss the student’s decisions at each point in the exercise as a way of reconciling the student’s
perceptions with the performance data. That is, errors in deducing outcomes from the
data indicators and errors in relating diagnoses of the problem or data report on the
participant’s manipulation of variables to appropriate management steps are also
discussed. Minor misconceptions that can be addressed in the conference are also
corrected. The third and concluding phase is the selection of follow-up activities for
the student.

For diagnostic simulations, the process standard for the conference is the optimal
route through the simulation that was identified when the map of the exercise was
developed. The computer program of the simulation maintains a record of the
student’s chosen options [essential, facilitative, neutral, impeding, harmful]. Thus, the
instructor has a profile of the student’s strategy throughout the exercise. This
information is important because some students may make the right diagnosis and
select an appropriate course of action in an efficient and effective way. Others,
however, may stumble into it by using the ‘scattergun approach’. That is, the student
may choose several options at each decision point, thus compensating for a lack of
knowledge. The computer record of the student’s decisions assists the instructor in
clearly differentiating the performance of the student who has made only a few
miscalculations from the one who has floundered through the decision-making.

Depending on the nature of the errors, the student may be assigned specific reading
materials and/or to work through problem-solving exercises specifically designed to
improve the student’s cognitive strategies. Such exercises, unlike diagnostic
simulations, alert the student when he or she has made a major tactical error. The
program then routes the student through the decision point again and notes the
nature of the error. Profiles developed from these exercises indicate the number of
times the program redirected the student at each decision point. If needed, further
remediation can be planned following these exercises.

Capabilities that are important in interviewing simulations include both cognitive and
affective skills. That is, in addition to astutely eliciting information, the interviewer
must gain the confidence of the interviewee in order to be successful.

The interview is videotaped. The conference should begin with student concerns,
since the student may express some anxiety about the exercise. Then the conference
can move to more general issues, addressing the specifics in the instructor’s notes.
Following the conference with the instructor, the ‘client’ or ‘patient’ also often provides
feedback to the student on his or her particular feelings, degree of confidence in the
interviewer and other observations.

When used as a part of professional training, diagnostic and interviewing simulations
are often implemented on a continuing basis. Thus, students have many opportunities
over a term or a year to improve their skills. Also, as the student gains proficiency, the
simulations may become more difficult. For example, the interviewing simulations
may begin with simple cases and fairly cooperative ‘patients’ or ‘clients’. Later
exercises, however, may address difficult cases and recalcitrant and/or forgetful
‘witnesses’ or ‘clients’. When single participant simulations are implemented in a
progressively more difficult series, later instructor—student conferences address
cumulative progress as well as the level of cognitive and affective skills demonstrated
by the student.

The group simulation
Of primary importance in planning post-simulation activities is that it is the individual
who experiences the simulation, not the group. A common danger in the use of
simulations is to see only the group and to fail to determine the nature of the individual’s experience (Vernon, 1990, p 241). Yet, each student develops a separate understanding and interpretation of the simulation. Moreover, even well developed and reliable materials may generate covert and unanticipated messages (Vernon, 1990, p 240). Therefore, instructor—student conferences are essential in addition to the group session for at least two reasons. One is that the one-to-one conference is an important mechanism in the detection of spurious leanings.

Another major purpose of the conference is to allow participants to express thoughts and feelings that may not have been processed during the group session. The role of the instructor in this situation is that of facilitator. That is, the instructor assists the student in clarifying his or her views and emotions and in arriving at some resolution of conflicting ideas or feelings. However, the instructor is not a professional counselor. If the student seems unable to let go of the experience or continues to be disturbed by it in some way, the school psychologist or school counselor should be informed.

Other post-simulation activities

A key component of the Lewinian experiential model is the opportunity to test in practice the new generalizations that evolved from the concrete experience. Also, according to the Piagetian model, as individuals begin to reorganize their thinking on a higher level, continued interactions with similar situations and opportunities to continue rethinking the experience are needed.

Therefore, group and individual activities are essential following the initial processing session. As already indicated, the goals of single participant simulations and group tactical-decision simulations are, for the most, the development of students’ cognitive strategies. Therefore, these simulations are typically followed by specific homework and in-class activities that address thinking and organizational strategies in similar situations.

Follow-up activities to the social-process simulation should include some combination of large-group and small-group discussions, two-person collaborative assignments and individual homework assignments that build on the concepts developed in the simulation. The purpose is to allow continued verbalizations about the simulation with feedback from peers. Vernon (1990, p 241) notes that when participants leave a simulation experience with one follow-up session, they are never again a part of the same group that shared the experience. In such situations, opportunities to continue processing the experience are lost.

Developing or selecting specific follow-up activities to the group session for social-system simulations, such as The Numbers Game, Talking Rocks and St Philip, implies that the simulation itself was selected for some purpose that would precipitate critical thinking. That is, the simulation is implemented for a more specific purpose than that of simply developing general vague realizations, e.g., issues are more complex than they appear on the surface.

For example, the group session may lead to the generalization that the particular simulation is an analogy for some other experience. One such exercise is the simulation Talking Rocks which challenges the idea that primitive societies are unsophisticated and composed of ‘ignorant’ people. The exercise confronts the participants with the ingenuity required to overcome adverse situations when tools that others take for granted are missing. Subsequent class activities may address
other social situations in which individuals have great difficulty in succeeding because they lack the appropriate tools or skills.

Similarly, in *The Numbers Game*, participants expect an instructor-managed, non-collaborative situation. Typically, several minutes pass before participants address the task as it is presented. Subsequent activities, therefore, may explore other group situations in which mistaken assumptions thwart positive action. Participants in St Philip, on the other hand, may read news stories in which communities are debating the advantages and disadvantages of an intrusive industry or are organizing to fight a development viewed as harmful.

Empathy/insight simulations may generate high levels of cognitive conflict. As indicated by the Piagetian model, resolution of such conflict through new ways of thinking is an extended process. Such simulations should be followed by two group sessions, one of which takes place after a short break at the end of the simulation. The other should be scheduled a week or so later to allow participants on their own and informally with each other to further process the events.

Also, at least one instructor-student conference is a must for the empathy/insight exercise. The intensity of the emotions that are generated and the *loss of* esteem that may occur, however temporary, can affect the learner for an extended period of time. In addition, traumatic events often lead to the recall of memories for similar events in one’s life that the student may not be ready to share with his or her peers. Thus, an instructor—student conference in which the student has the opportunity to discuss the experience further is essential.

In addition to the activities suggested in Chapter 10, other activities may address the general climate important for empathetic decision-making. For example, participants in *Me The Slow Learner* may visit different schools and informally observe the climate established by the administration for the degree of emphasis placed on meeting different student needs.

Another useful activity is that of students each maintaining a journal in which they jot down thoughts and impressions about their experiences. Students may share some of these thoughts with others in small group discussions if they wish.

An important characteristic of simulations is that different administrations will generate different actions, thoughts and feelings because individuals react in different ways to the same open-ended situation. Administrators, therefore, must guard against expecting the same reactions in subsequent implementations of the same simulation. As Lewin indicated, behavior is a function of the person and the environment: \( B = F(P, E) \).

In summary, simulations can be powerful learning experiences. However, they must be carefully selected and implementation should include all the components in the related experiential model.

**EVALUATING POST-SIMULATION ACTIVITIES**

**Single-participant simulations**

Step 1: Review the instructor—student conference.

- Did the conference focus on the participant’s task in the simulation (data-
management, diagnosis, language/communication)?

- Were the student’s strategy and content errors addressed?
- Were the student’s strengths also emphasized in the simulation?
- Were three phases included in the conference (establishing student perceptions, reviewing student strategies, identifying appropriate follow-up activities for the student)?

Step 2: Review follow-up assignments.
- Is independent research on major concepts appropriate, given the tasks in the simulation?
- Are practice exercises similar to difficult components of the simulation available?
- Are related readings and sample case studies available that are keyed to concepts and skills expected in the simulation?
- Are activities available that provide further opportunities for students to implement new skills demonstrated in the simulation?

Team simulations

Step 1: Analyze the group post-simulation discussion.
- Did the discussion move from participant perceptions of events to the examination of alternative courses of action?
- Was the facilitator prepared for minor conflicts among team members that may occur?
- What sources of evidence or verbal cues critical to implementing effective strategies in the simulation were identified in the post-simulation discussion?
- Did the discussion address the ways that the team members may coordinate their efforts more effectively in the future?
- Was sufficient time allowed for team members to contribute to the discussion and to process the information?

Step 2: Review follow-up activities.
- See single-participant simulations.
- Are cooperative activities for 2-3 participants available?

Large-group simulations

Step 1: Determine the appropriate experiential model for the simulation and the post-simulation activities.
- Is the expected process that of beginning to develop new generalizations (Lewinian model)?
- Is the simulation designed to challenge participants’ accepted beliefs, i.e., create cognitive conflict or disequilibrium (the Piagetian model)?

The Lewinian Model

Step 2: Analyze the post-simulation discussion.
- Was the allocated time at least equal to the time spent in the simulation?
- Were three broad stages included (participant perceptions of events, identification of participants’ thoughts and Feelings, initial efforts to
develop generalizations)?
- Were open-ended questions (How? What?) used to elicit student perceptions?
- What new generalizations evolved from the discussion?
- Did all participants have ample opportunity to express their thoughts and feelings?

Step 3: Review follow-up activities.
- See step 1 of team simulations.
- What subsequent small-group or large-group activities are available that permit participants to test their new generalizations?

The Piagetian Model

Step 2: Analyze the initial large-group discussion.
- Was a brief coffee break included between the end of the simulation and the large-group discussion?
- Was a brief questionnaire that addresses both events and emotions used at the beginning of the large-group session?
- Was the time allocated to the large-group session at least as long as the simulation?
- Did the initial discussion primarily focus on the emotions generated by the cognitive conflict in the simulation (participant confusion, frustration and other negative emotions)?
- Did the initial discussion also explore the significance of different kinds of behaviors in the simulation, such as giggling and mild aggression?
- Did all participants have ample opportunity to express their thoughts and feelings?

Step 3: Review the sequence of follow-up activities.
- Is at least one instructor—student conference scheduled in days?
- Was a second large-group discussion scheduled in approximately 14-21 days?
- Are activities scheduled for pairs or teams of students to explore similar or related situations?
- Are related topics and analogous situations provided in related readings?
- Are small-group activities planned in which students have an opportunity to discuss and/or execute different strategies that may develop as a result of the simulation experience?
- Is maintaining a journal appropriate for the next few weeks for students?
- Is the second large-group session planned to assist students in reorganizing their thinking on a higher level?
- What subsequent thoughts and observations are expressed by participants?
- In what ways can students’ reorganization of thinking interact with subsequent topics in the course or workshop?

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