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Context is key: an interactive experiential and content frame game

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SUMMARY *Most games used for teaching focus on either content transfer or an experiential learning experience. 'Context is Key' is a combination of both as the learners actively interact experientially with the content being taught, with fellow learners and with the facilitator(s). Using this interactive game after a didactic portion of teaching can reinforce the knowledge in ways that require synthesis of the knowledge for application and encourage group discussion and the sharing of knowledge that participants possess. This game was originally created to highlight the complexities of the differential diagnosis of bipolar disorder in adolescents. By playing the game, students can understand why psychiatric symptoms on their own are not as valuable as placing them within the context of symptom clusters, how it takes time to make an accurate diagnosis for complex presentations of symptoms, how to sort symptoms that have similar presentations and why 'Context is Key!'*

Background

A Frame Game is a structured set of rules of a game in which different content can be loaded into it, i.e. the frame is the rules and procedures of the activity in which the desired information/knowledge to be transferred is placed. These types of games have been used in numerous ways for training in the business/corporate world (El-Shamy, 2001). These games can also be used in medical education to teach clinical information. Guidelines for utilizing innovative teaching techniques including games have been suggested in the medical education literature (Handfield-Jones *et al.*, 1993). Changing teaching modalities (e.g. didactic, interactive, media) within a lecture is an important aspect of engaging learners (Brown & Manogue, 2001).

Most frame games focus either on content transfer or an experiential learning experience. This particular frame-game, 'Context is Key', is a combination of both, as the learners actively interact experientially with the content being taught. This game also helps to motivate learners by allowing some physical movement and communication amongst all the participants with the group. It is an effective teaching strategy when used after didactic teaching to help underscore the key points in a fun and interactive manner. The game also facilitates the synthesis of new knowledge, encourages the sharing of knowledge in a group and allows those who do not learn best by didactic methods to have an alternative/complementary means of learning.

The roots of the game are based on the triad of factors that interact to create active learning, which are: the learners, the teacher(s)/facilitators and the material/content (Steinert & Snell 1999). 'Context is Key' involves all of the triad in the process of the game.

This game was originally created to illustrate the complexities of understanding the differential diagnosis of bipolar disorder (BD) in adolescents. It is especially helpful for teaching the differential diagnosis of any medical syndrome or when sorting medical knowledge into categories is required.

This teaching game was designed to demonstrate the similarities, differences, core essential symptoms, and what other information is needed to be able to determine a clear diagnosis. Essentially, it is a card-sorting game expanded into learners taking responsibility for individual cards. Each card contains a symptom from one of the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (APA, 1994) descriptions of a psychiatric condition or symptom cluster. The five conditions used were: manic episode (ME); conduct disorder/antisocial personality disorder (CD); attention deficit hyperactivity disorder (ADHD); borderline personality disorder (BPD) and manic episode induced by cocaine use (CME). Although these disorders will be used to illustrate the game, examples of how to adapt the game to cover other situations will be included.

This game has been successfully used in several workshops that have focused on reviewing adolescent and adult forms of borderline personality disorder, attention deficit hyperactivity disorder, and concurrent disorders of substance use and psychiatric conditions. The participants of these workshops were a mix of health disciplines, including social workers, registered nurses, child and youth workers, addiction therapists, family doctors, and psychiatrists. The game has received excellent evaluations from workshop participants; learners have enthusiastically endorsed the game as a useful and enjoyable learning tool.

There were six workshops averaging 30 participants each (total 173). Each workshop was evaluated using a satisfaction questionnaire. In the section for general comments, most respondents wrote narrative comments. These comments were analyzed for pertinent themes:

- It was fun and innovative (73 comments).
- It expanded the information from the didactic lecture and helped to put it into a simulated practice (51 comments).
- The learners felt energized (20 comments).
- Learners wished to try this game again in their own settings with colleagues (13).

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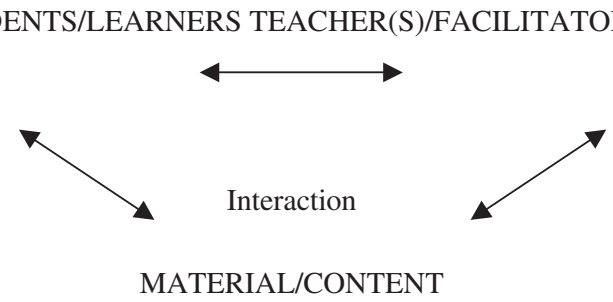

Figure 1. The triad of factors that interact to create active learning (Steinert & Snell 1999).

- Learners felt better about their own clinical abilities and were more comfortable working with complex cases (8).
- Individual learners appreciated individual learning questions answered in the context of the activity (4).
- The learners felt less isolated from fellow learners and the facilitator/teacher (3).
- Learners had a chance to take the role of teachers and share knowledge with the group to expand overall education (3).

The feedback contained no negative comments or criticisms.

The learning objectives of the game

Participants learn:

- that in the art of making a differential diagnosis, symptoms on their own are not as valuable as placing them within the context of symptom clusters;
- how to sort out symptoms that have similar presentations;
- how to obtain other information that is needed to clarify presentations;
- how it takes time to make accurate diagnosis versus having all the answers on a first or one-time only consultation;
- how in complex presentations of symptoms, having a treatment plan and building the therapeutic alliance is important to allow time to make more accurate diagnoses;
- how context is key!

How to play

Number of participants: Between 25 and 30 is optimal. (Certain cards can be added or subtracted as long as the facilitator keeps the key cards he or she wishes to illustrate certain concepts are maintained—see Table 1).
Duration of the game: Approximately 45–60 minutes (~5 minutes to explain rules, ~10 minutes for participants to attempt to 'sort' themselves, ~30–45 minutes of processing the activity).
Supplies: Symptom Cards (see Table 1), 5–6 tables or clusters of chairs.
Preparation: Adjust the number of cards to the number of participants. Make sure there are 5–6 tables or seat clusters.

Rules

Everyone is given a card that has a psychiatric symptom from one of the conditions being explored. In this case the symptom descriptions are based on DSM IV-TR criteria (the Diagnostic and Statistical Manual Text Revised in Psychiatry).

Each table is designated one of the psychiatric conditions; the facilitator reads out clearly each condition and designates a table for each. One other table/area is designated the 'unsure' table.

Once cards are distributed, participants have up to 10 minutes to sort themselves out by going to the proper table that the person thinks matches the symptom card. People at tables can discuss amongst themselves whether they agree they are in the right place and direct others to go to different tables. If someone is unsure of where he/she belongs, he/she can go to the 'unsure' table and everyone together during the processing portion of the game can try to figure out where that person's symptom card belongs.

After 10 minutes (or sooner if everyone seems to have found a seat and things are quietening down) the processing part of the game begins with the facilitator.

Processing

The following process questions are only a guide, as once the facilitation begins many different ways to compare, contrast and highlight information will be driven by the individuals participating.

Beginning questions:

(a) How did people experience the sorting phase?
(b) For those at the unsure table, what brought people to that table?

Next, have each group go round and read out their symptom cards. Start with the 'Unsure' table—and as the rest of the groups discuss their symptom cards, have people from the 'Unsure' table join the appropriate group. The facilitator should save the CME table for last. Have the entire large group participate in the process by soliciting questions and answers pertaining to the symptoms that are: core to the diagnosis; seemingly generic and could be in other symptom clusters; and whether any of the symptoms listed are out of place.

Examples of specific areas for exploration are offered to help highlight the need to put symptoms in context:

(a) Core/pathognomonic symptoms for a condition—e.g. BPD (card 1, 2), BD: Manic phase (card 23, 26);
(b) Symptoms that seem similar but can be distinguished by more context, e.g. BPD card 3 and ME card 29—similar actions although one is driven by self-destruction while the other is driven by the pursuit of pleasure.

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Table 1. Card content.

A. *Borderline personality disorder*
1. Frantic efforts to avoid real or imagined abandonment. A pattern of unstable and intense interpersonal relationships
2. Identity disturbance: markedly and persistently unstable self-image or sense of self*
3. Impulsivity—self-damaging (e.g., spending, sex, substance abuse, reckless driving)
4. Recurrent suicidal behaviour, gestures, or threats, or self-mutilating behaviour
5. Affective instability due to a marked reactivity of mood (e.g. intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days)
6. Inappropriate, intense anger or difficulty controlling anger (e.g. frequent displays of temper, constant anger, recurrent physical fights)
7. Micropsychosis: transient, stress-related paranoid ideation or severe dissociative symptoms*

B. *Cocaine-induced manic episode*
8. Cocaine use

C. *Attention deficit hyperactivity disorder*
9. Often fails to give close attention to details or makes careless mistakes*
10. Easily distracted by extraneous stimuli
11. Forgetful in daily activities
12. Often fidgets with hands or feet or squirms in seat
13. Is often 'on the go' or acts as if 'driven by a motor'
14. Often talks excessively
15. Often has difficulty awaiting turn

D. *Conduct disorder/antisocial behaviour formation*
16. Often bullies, threatens, or intimidates others*
17. Often initiates physical fights
18. Has been physically cruel to animals
19. Has stolen while confronting a victim (e.g. mugging, purse, snatching, extortion, armed robbery)
20. Has deliberately engaged in fire setting with the intention of causing serious damage
21. Often lies to obtain goods or favours or to avoid obligations (i.e. 'cons' others)
22. Has stolen items of non-trivial value without confronting a victim (e.g. shoplifting, burglary, forgery)*

E. *Manic episode*
23. Inflated self-esteem or grandiosity
24. Decreased need for sleep (e.g. feels rested after only three hours of sleep)
25. More talkative than usual or pressure to keep talking
26. Flight of ideas or subjective experience that thoughts are racing
27. Distractibility (i.e. attention too easily drawn to unimportant or irrelevant external stimuli)
28. Increase in goal-directed activity (either socially, at work or school, or sexually) or psychomotor agitation
29. Excessive involvement in pleasurable activities that have a high potential for painful consequences (e.g. engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments)

Note: To adjust number of cards to number of participants:

To decrease:

(a) Any card marked with an asterisk (*) above can be removed

To increase:

(a) Use the Diagnostic Category cards—distribute these cards as well to five participants and assign them the task to help gather and review people coming to their symptom cluster.
(b) Create a few extra cards with generic symptoms that can be distributed (e.g. psychotic symptoms [hallucinations, delusions]; suicidal thoughts or behaviours).

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Option

A 'Trick' table can be created. This is where one can construct an entire syndrome from other cards already fitting into other syndromes except for a key card, e.g. the CME group. The facilitator and the large group can discuss the fact all the symptoms of ME would be part of the CME cluster as well, plus cocaine induced it. A discussion regarding the fact that card 8, Cocaine Use, can be associated with all of the diagnostic clusters (e.g. see cards 3, 29, and that CD and ADHD have a high risk of associated development of substance use disorders) allows a discussion of concurrent disorders.

The facilitator wraps up the processing after about 30–40 minutes (or if the energy of the discussion begins to dissipate). This would include a summary of what the group discussed, the complexity of determining accurate diagnoses, why it takes a proper assessment that at the end requires more of an emphasis on a treatment plan over time versus having to have the diagnosis confirmed at the onset.

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'Context is Key' can be adapted to a variety of topics including other medical diagnoses, medico-legal concepts, and multidisciplinary skills. Examples of other medical diagnoses can include:

'Heart Attack' Chest Pain—using the clusters of myocardial ischaemic pain; esophogeal reflux; pericarditis; panic disorder; MSK injury. Use symptom cards describing the pain's quality, location, duration, etc. Compare and contrast the symptoms and add in the context of risk factors, diagnostic tests, and then use visual aids of ECGs and echocardiograms for the groups to try to claim belong to their table.

Fever and Respiratory Symptoms in Children—using the clusters of common cold; otitis media; gastroenteritis; pneumonia; croup. Many of the symptom cards can belong to any of them (e.g. lack of purposeful eye movements, poor tone, sleepiness), include diagnostic results of lumbar punctures, blood cultures, ear examinations, lymph node (swollen), fever temperatures, etc. Compare and contrast such items as common age of onset of a particular syndrome; associated risk factors with different conditions; and effective treatment strategies.

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Figure 2. Other examples.

This usually is a good segue into a discussion of treatment options (either as another future lecture or as part of the workshop being offered).

Conclusion

The importance of interactive methods of teaching using games should not be underestimated. Interactive games encourage learners to actively engage with the content, with the teacher/facilitator and with each other. 'Context is Key' optimizes the use of a group's background knowledge to help contextualize new information, compliments didactic teaching and addresses the issue of matching teaching methods to different learning styles.

Notes on contributors

Bruce Ballon is a psychiatrist and author. He is the Head of Youth Addiction Services at the Centre for Addiction and Mental Health and an Assistant Professor in the Department of Psychiatry. He has a keen interest in the media's relationships with mental health issues, and has designed numerous psychoeducational and therapy initiatives involving the use of film, television, the Internet, creative writing and art.

Ivan Silver is a psychiatrist specializing in geriatrics. He is the Director of the Centre for Faculty Development and Professor of Psychiatry, in the Faculty of Medicine. He has a keen interest in interactive teaching methods including games and simulations.

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1	Table 1: Have altered numbering as last item under section D was 22 and first under E was 22 (now 23). Assume this is correct now?
2	Please cite the figure