



SIMAGES

The Official Online Newsletter of the North American Simulation and Gaming Association (NASAGA)

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NASAGA 2003 MONTREAL

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NASAGA Annual Conference

October 15-18, 2003

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Editorial Board

Sivasailam Thiagarajan
Raja Thiagarajan
Matthew Richter
Les Lauber

Table of Contents

Column: The Chair in the Corner <i>by Chris Saeger</i>	2
Report: NASAGA 2002 Conference <i>by Matthew Richter</i>	3
Announcement: NASAGA 2003 <i>by Sonia Ribaux & Charles Dupont</i>	4
Announcement: NASAGA Seats New Board Members <i>by Les Lauber</i>	4
Announcement: ISAGA returns to Japan in August 2003 <i>by Professor Rei Shiratori</i>	6
Column: Leadership <i>by Matthew Richter</i>	7
Article: Playing Games and Learning Too: Interactive Computer Games in Adult Learning <i>by R. Yvette Duncan, Bernadette Howlett, Carey Ann Shoufler, and Armi Trenas</i>	9

THE CHAIR IN THE CORNER

BY CHRIS SAEGER

It is a great personal honor for me to be able to serve you as the chair of NASAGA for 2003. The Association has a wonderful tradition of innovative practices and truly dedicated people engaging in learning that makes the world more joyful.

Tradition of innovation, is that an oxymoron? Tradition implies stability while innovation is change. I invite you to ponder that for yourself.

On the tradition side, I know that many of you are new to NASAGA and have not had the opportunity to discover our history. Over this year I hope that we will find a way of creative story telling as we gather around the electronic fire and learn from some of the Wisdomkeepers of our tribe. I have talked from time to time with Barabara Steinwachs (one of the wisdomkeepers herself) about an oral history project of some kind to help all of us honor our heritage. When her other volunteer work settles she promises to help out.

On the innovation side, we are always engaging in new ways of creating learning and improved performance. This year the conference featured much online learning and an Improv in Business series of sessions. These sessions attracted new people to the conference some of whom became die-hard Nasagans overnight. The addition of new ways of learning is at the heart of what we do.

What does all this rambling mean? That in the end is up to you. For me, here is the heart of the matter. The great benefit of NASAGA is a community of practice in which we



*A new regular column,
The Chair in the Corner is
written by the NASAGA
Board Chair for you,
NASAGA members. Chris'
term as chair began in
November at the San
Diego conference, and he
will serve until the
Montreal conference in
October.*



emerge from our “masks” as instructional designers, college professors, corporate trainers, OD practitioners, and Improv practitioners.

We emerge in play to learn from one another about practices and ways of being that can only be discovered in our differences not from our usual professional communities. To paraphrase the anthropologist Gregory Bateson, at NASAGA it is the difference that makes the difference. (For those fortunate enough to attend, the conference provides an environment like no other I know to foster playful collaborative learning.)

This year my wish for all of us is to take this spirit of “playing to learn from our differences” online in new and better ways. Some of you have already engaged with Thiagi in an email game to enhance our newsletter SIMAGES. The board hopes to have several online “conferences” where we can really advance the use of the e-learning technologies and infuse what can be a rather lonely experience with the joy and community we find at our annual gathering.

Speaking of the Annual Gathering, I first want to thank Matt Richter, Alain Rostain, Terry Scerbo and Josh Kerievsky for an incredible amount of work on the conference this year. It was an event to remember! I also want to invite all of you to come to Montreal next October 15-18th Sonia Ribaux and Charles Dupont will be our hosts. By the way, don't just attend, Present! Watch the website for the call for proposals.

For 2003, my warmest regards and invitation to you to write to me at chris_saeger@yahoo.com or meet me online at <http://groups.yahoo.com/group/NASAGA/chat> at 9:00 pm eastern standard time on the first Thursday of each month.

I am at your service.

chris

Note: I was asked by the editors to name this column. I decided to name it in honor of the place where I often found myself during my early educational experience. ■

NASAGA 2002 CONFERENCE

BY MATT RICHTER

Sadly, all good things must come to an end. And so it is with NASAGA 2002. This year's conference was about magic and fantasy, timely in this day of economic depression and global terror. Our goal was to stimulate the imagination and spark each participant's creative lights to illuminate both our spirits and our minds. And whether it was the magic show, the improv shows, the great sessions, the stellar presentations, or the food, everyone walked out of the Double-Tree in Mission Valley, San Diego a little better than when they came in. NASAGA has always been about the talent, dedication, generosity, and kindness of its members. And this year, we especially saw how special that is. We had 75 participants attending this year who had never been to a NASAGA conference. We had over 60 participants who not only had, but also took it upon themselves to welcome, initiate, and support the new members. Collegiality... that is the word that seemed to sum up NASAGA 2002.

Attendance wasn't our only achievement this year. We had a sub-conference called the Summit of Improv in Business, which introduced us to a whole new group of creatively brilliant innovators in the world of interactive education. Many have committed to join us in Montreal next year. We presented two life-time achievement awards to individuals who have contributed a lifetime of work and dedication to simulations and games, Susan Fowler, one of our keynote presenters, and Thomas Pray, Professor of Decision Sciences at the Rochester Institute of Technology and

"The connections I made were magnificent. Both intellectually and emotionally. To have the opportunity to learn from such amazing thought-leaders in training is so wonderful."



"People kept giving me ideas, games, tools, books, etc. I couldn't believe how generous people were with their materials. And it was all good stuff, too."



"This is the most stimulated I've felt in years."

creator of the DECIDE II Enterprise Business Simulation. Both Tom and his colleague Mary Jo Vaughn, one of our workshop presenters, are longtime leaders of ABSEL. Richard Duke, one of the leaders of ISAGA was also present, bringing together the top three professional organizations in simulation and gaming.

Three experts in the field of experiential education provided a frame for our event. This year's conference hosted three fantastic keynote presenters:

- ◆ Bill Horton, President of William Horton Consulting, author of *Designing Web-Based Training*, and acknowledged guru of on-line instructional design discussed

making web-based training, fun, successful, and cost-effective.

- ◆ Susan Fowler, consulting partner of the Ken Blanchard Companies and co-author of *The Team Leader's Idea-A-Day Guide : 250 Ways to Make Your Team More Effective and Productive-Every Working Day of the Year*, shared her Essentials of Design process and how she has integrated the concepts of adult learning with magic, puzzles, and games into serious training for Fortune 100 corporations.

- ◆ Andrew Kimball, CEO of QBInternational, author, speaker, and expert performance consultant demonstrated the various methods of blending both web-based and instructor-led training in order to fully maximize the probability of success with any given learning intervention.

But don't take our word about how great NASAGA was, listen to some of the participant comments:

"The connections I made were magnificent. Both intellectually and emotionally. To have the opportunity to learn from such amazing thought-leaders in training is so wonderful."

"People kept giving me ideas, games, tools, books, etc. I couldn't believe how generous people were with their materials. And it was all good stuff, too."

"This is the most stimulated I've felt in years."

So if you missed out this year, don't fret, we hit Montreal next. See you then. ■



**NASAGA ANNUAL CONFERENCE
OCTOBER 15-18, 2003
JOIN THE CIRCUS —
BALANCING PERFORMANCE,
PLAY AND IMPACT**

Ever thought of leaving it all behind and joining the circus? Here's your chance to escape your routine and participate in an unforgettable conference. Nasagans know that the annual conference generates a high level of energy and creativity. It's a chance for all of us to come together, newcomers and seasoned pros alike, in an atmosphere that is warm, open and generous. So mark your calendars to make sure you don't miss this high-class act. A note of warning: Once you join the circus you may never want to go back!

Montreal

Montreal is truly a unique destination in North America. It is a multicultural city with enough European charm to make you feel like you've crossed the Atlantic. Montreal is the home of the world famous *Cirque du Soleil* as well as the *École nationale de cirque* (National Circus School).

Come to experience the French flavor while being about to stroll around easily. To find out more about Montreal, visit <http://www.tourisme-montreal.org/>

More Information

Visit <http://www.nasaga.org/conference2003/> for information on submitting a proposal, registering for the conference, and much more.

NASAGA SEATS NEW BOARD MEMBERS

BY LES LAUBER

NASAGA's annual board elections at the 2002 San Diego Conference resulted in a combination of returning and first-time board members. Chris Saeger, Beth Levine, and Sivasailam "Thiagi" Thiagarajan returned to the board, while David C. Jones and Les Lauber took their seats at their first board meetings this year. This column provides brief biographies of each of these newly elected (or reelected) individuals.

Chris Saeger assumed the role of NASAGA's Board Chair after being reelected. In addition to serving as the Vice Chair last year, Chris works at AARP where he helps people to reach their goals by creating learning tools and opportunities. His experiences creating systems-based simulations and interactive learning experiences for a variety of organizations began in 1985. ASTD, Lakewood Publications, and the Potomac Chapter of the International Society for Performance Improvement (ISPI) have honored him for his simulations. He has presented both at NASAGA and ISPI national conferences. You can read some of Chris' work in McGraw-Hill's *Team and Organizational Development Sourcebook*. Prior to joining AARP Chris served in a number of leadership positions in staff and volunteer development at the American Red Cross. He consults on simulation design for manufacturing, information technology and health care companies.

Beth Levine was elected the Board's Vice Chair, and will become Chair next year. She served previously on the Board from 1998-2001. In her role as Executive Director of Organization and Management Development at the Foster Wheeler Environmental Corporation in Atlanta, Georgia, Beth works with employees at more than 15 offices and sites across the United States. She diagnoses performance problems and intervenes with any number of tools, including skill development workshops and 360-degree feedback processes. Beth's experience providing training and development to managers and leaders include work with both private and public sector employers. She has provided training designed by the Harvard Negotiation Project, become a certified trainer through the Ken

Blanchard Companies, and is a qualified administrator for the Myers Briggs Type Indicator.

Thiagi is the president of Workshops by Thiagi, Inc., an organization with the mission of helping people improve their performance effectively and enjoyably. He is also the CEO of San Francisco-based Qube, a company that provides human performance technology services. He has worked with more than 50 different organizations in high-tech, financial services, and management consulting areas. Thiagi has published 40 books, 120 games and simulations, and more than 200 articles. He currently writes a monthly newsletter, *Play for Performance*, electronically published on his website. He served as the editor of *NSPI Journal* and *Performance & Improvement* for more than 10 years. He currently edits the simulation/game section in Sage Publication's journal, *Simulation & Gaming*. Thiagi has made hundreds of presentations and keynote speeches at professional conferences. Thiagi previously served as president of NASAGA, ISPI, and Association for Special Education Technology (ASET). He has received 17 different awards and Presidential Citations from ISPI, including the society's highest award, **Honorary Life Member**. He also received an **Honorary Life Member** award from NASAGA as well as its highest award, **Ifill-Reynolds Award**.

David C. Jones' long and varied career brings him a lot of media attention—and a lot of personal happiness. In 1989 he decided to try his hand at improvisation comedy and enrolled in a training program with the Vancouver TheatreSports League. Something clicked because David exploded on to the stage and was invited to become a company member with the prestigious organization four months later. In 1992, he co-founded Rock-Paper-Scissors. When David

graduated from Langara College in 1996, he and business partner Diana Frances started up Rock-Paper-Scissors Productions with a new found vigor. Producing theatrical comedy plays in Vancouver they also started writing and performing for corporate clients a variety of customized comedy performances. The year 2000 found the company expanding into a partnership with Lee-Anne Ragan and her company Community Works. The resulting Working Better Together program was such a corporate hit that it was featured on the front page of The Vancouver Sun business section as well as being profiled by several other media outlets. David also co-owns Laughing Matters, a workplace facilitation organization that uses improvisation in it's training. A popular teacher, David tours around the province and teaches at several places in Vancouver. In 2002 he was nominated for a Canadian Comedy Award and also co-won a Vancouver Sun's People's Choice Award. He has recently started taking tap and accordion lessons, and owns a cat named Boots.

Les Lauber has been a training practitioner for more than eight years. His resume is diverse, eclectic, and unfocused. After stints as radio disc jockey, factory worker, pizza cook, news reporter, insurance agent, parking meter repair person, and loan industry analyst he turned to the good side of the Force. Currently employed by the State of Kansas, he spends his days designing and delivering professional development and leadership classes. He designs games in such topics as communications, problem solving, clarification of participants' roles in the organization, etc. Clients seek Les out for his skills in meeting facilitation, train-the-trainer sessions, and professional growth workshops. His recent addition of graduate school to his already hectic schedule still has his friends and family scratching their heads.

Oh, and incidentally, contacting your board members has never been easier. Just go to <http://nasaga.org/board.asp> and click on the name of the board member you want to e-mail. ■

PLAY FOR PERFORMANCE

As a NASAGA member you are invited to the January issue of this online newsletter. To access this issue point your browser to

<http://www.thiagi.com/pfp/IE4H/january2003.html>

This month's issue contains brief descriptions of six interactive lecture designs and 20 ready-to-play web-based games. Read, play, and enjoy!

ISAGA RETURNS TO JAPAN IN AUGUST 2003!

BY PROFESSOR REI SHIRATORI
(ORGANIZER OF ISAGA 2003, AND PRESIDENT OF JASAG)

In July 1991 the Japan Association of Simulation & Gaming (JASAG) in partnership with the Science Council of Japan jointly hosted an ISAGA Conference in Kyoto. Twelve years later, JASAG is once more preparing to host another ISAGA Conference in Japan in August 2003. The ISAGA2003 will be held at Kazusa Academia Park in Chiba, near Tokyo, from August 25 to August 29.

The main theme of ISAGA2003 is "The Social Contributions and Responsibilities of Simulation & Gaming."

This theme will be interpreted as widely as possible with particular emphasis on exploring how we can best apply simulation and gaming to help solve such contemporary social issues as war, poverty, segregation, ethnic conflict, and environmental problems. Games and Papers dealing with gaming simulations of conflict resolution, consensus building, and environmental policies are especially welcome. We will also explore more effective, efficient and stimulating Approaches to education, intercultural communications, and city planning.

Theoretical problems of simulation and gaming will be examined with a view to improving the social sciences through the introduction of the techniques and concepts of simulation and gaming. The fields of economics, political science, psychology and business management can

all be radically improved by introducing the agent-based modeling of simulation and gaming. Other important topics at ISAGA2003 are the analysis of philosophical foundations in

simulation and gaming as an academic discipline, and research into the historical development of simulation and gaming. The ever growing and massive popularity of PC and arcade games cannot be ignored when we look at simulation and gaming, their potential as agents of education and their essentially violent nature raise many ethical and moral problems that need to be addressed. Finally, we are of course very interested in any new and innovative techniques and technologies being developed in simulation and gaming today.

It is true that the knowledge and techniques of simulation and gaming have accumulated more in the developed countries of the North, while many of the problems which can be solved by simulation and gaming are found in the developing countries of the South. By inviting scholars, teachers and administrators from developing countries in Asia and Africa, we hope to even this unequal distribution and build a bridge across the digital divide. We hope that through ISAGA2003 we can all contribute to the construction of a fairer, wiser and more harmonious world. We welcome you all to contribute, gather and play at ISAGA2003.

Share your new ideas, techniques and analyses of simulation and gaming at this truly international festival of gamers and theorists. It is my sincere wish that ISAGA2003 will be the birthplace of a new knowledge and science of human beings. ■

CALL FOR SESSION PROPOSALS DEADLINE FEBRUARY 1, 2003

If you would like to organize one of our sessions and/or workshops as a convener, please fill in a form on our web site. Follow the link "Call for Session Proposals" from the top page at:

<http://www.isaga2003.org/e/>

Acceptance of your session/workshop proposal will be notified by February 20, 2003.

CALL FOR PAPERS DEADLINE APRIL 1, 2003

If you would like to contribute to one of our sessions, please send a summary of your paper in no more than 350 words to:

secretary@isaga2003.org

Please make sure to include the following information:

- ◆ Paper title
- ◆ Full name(s)
- ◆ Affiliation
- ◆ Complete address
- ◆ e-mail address
- ◆ Phone
- ◆ Fax (if applicable)

Deadline: No later than April 1, 2003.

Send via e-mail to:

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If you prefer to send your paper abstract by mail or fax, please contact:

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LEADERSHIP

BY MATTHEW S. RICHTER

Hi. My name is Matthew Richter. I am a Past President of NASAGA and a management consultant. I will be writing a regular SIMAGES column on leadership, with the intention of provoking thought and discussion on this complex concept. In this issue, we will set the foundation for future explorations by establishing the tenuous nature of leadership and formulating some common definitions. We will also begin to tackle one of the big debates brewing today about leadership: the belief that everyone in an organization can be a leader. In subsequent issues of SIMAGES, we will be exploring different aspects of leadership as a way of deepening and enhancing our understanding. You will notice that each column may have a different slant, a peculiar angle, or a conflicting view from the previous one. Remember, my goal is to provoke, for thoughtful provocation is a wonderful way to learn.

Defining leadership can be difficult. There are a myriad of courses, books, seminars, and articles that agree only on the fact that leadership is vague, overreaching, and gray. Some of the most respected definitions include the following.

Leadership scholar John Gardner (1995) defines it as “the process of persuasion or example by which an individual (or leadership team) induces a group to pursue objectives held by the leader or shared by the leader and his or her followers.”

Historian James MacGregor Burns (1978) says, “Leadership over human beings is exercised when persons with certain motives and purposes mobilize,

The point of this column is to take our time, explore, and most importantly, have fun debating the richness and color of so vital, and yet nebulous a topic. Please email me with ideas, suggestions, arguments, or stories. My email is matthew@thestorynet.com

in competition or conflict with others, institutional, political, psychological, and other resources so as to arouse, engage, and satisfy the motives of followers.”

Psychologist Howard Gardner (1995) says leaders are “persons who, by word and/or personal example markedly influence the behaviors, thoughts, and/or feelings of a significant number of their fellow human beings. The leaders’ voices affected their worlds, and, ultimately, our world.”

This column’s job is to tackle tough issues of leadership, to use these definitions as a lighthouse, guiding, but not limiting our discussions. One of the most fundamental debates in the leadership literature is the question of *who is, who should be, and who can be a leader.*

Leadership occurs at all levels in an organization. Positional status is not important. But while on the surface the idea that all people can universally be leaders is attractively inclusive, there are two inherent problems with the notion.

1. Leadership is dichotomous. It requires two parts: a leader and a follower.
2. The definition of leadership is nebulous and therefore the people we empower to be leaders don’t know to do so.

Let’s tackle these problems one at a time.

Leadership guru, Stan Slap(2002), says that leadership requires a vision of a place that is better than where we are, and an ability to communicate that vision clearly so that people want to embrace it. Perhaps what we really want is for our staff to manage the vision handed to them; to inspire the masses toward that goal, and not some other; and to act as captains to someone else’s lead. For example, it is the CEO, the Board of Directors, and the Executive Team who truly define the vision, values and direction for the organization, both operationally and philosophically. Leadership is a mobilization process, a gathering of followers in such a way that determines movement toward a delineated and accepted objective. Management teams must be focused and persuasive, but persuasion, though thoroughly connected to leadership, can reside and occur without it. To be persuasive about someone else’s vision is to be an instrument for that leader. If all of

us are leaders in our respective roles, then who is following? The notion that we, at times, take a leadership role is understandable. I may take the lead on a project, or come up with a great idea that gets implemented. But most often, this situational leadership role is accurately called management. These moments occur within the context of the leader's vision for that group's future. True leadership is sustained, inspiring, arousing, and cannot happen universally. It often involves an organizational change or shift in thinking. There must be some discretion as to who is a leader and who is a follower. If we continue to insist on universal leadership than at best, using the common definitions of leadership, we have a politically correct form of anarchy. And most importantly, there is nothing wrong with being a follower. We should respect that role as much as the role of leader. Visions remain visions without action making them real. Both parts are essential.

Although there are common traits for great leaders, more often the manifestation of leadership is unclear. How to be a leader, is more instinctive, a combination of learned skills and abstractions of character. There is a wonderful story about the great actor Laurence Olivier. William

Goldman in his book, "What Lie Did I Tell?" describes how one night Olivier gave an exceptionally good performance of "Hamlet". He had been performing the role on and off for years, but that night something was especially wonderful. Inspiration oozed from him. The audience was rapt and his fellow performers moved to greatness themselves. At the end of the night, his co-star went to his dressing room to congratulate Olivier on his accomplishment. She found him sitting at his dressing table, his costume and make-up still on, his head buried in his hands.

"Larry, what's wrong?" she asked. "You were brilliant tonight."

"I know," he said.

"Then why do you seem so upset?" she asked.

Olivier replied, "I don't know how I did it."

Even the great leaders of our day such as FDR, Bill Gates, and Martin Luther King, Jr. have a difficult time, as did Olivier, explaining how they did it. We are left with a semantic lack of clarity over the general use of the word leadership. People are unsure of what to do, and how to do it. No one standing at a podium announcing that

everyone has the ability and responsibility to be a leader has also provided a recipe for how to do it. Still, the amount of pressure we put on individuals to be leaders is astonishing.

Perhaps, the fashion in 21st century America is to value the inspirational tendencies great leadership exhibits without recognizing the organizational consequences and operational disruptiveness of such endeavors when management skills and individual contribution is not equally valued. In other words, we need managers to manage. We need staff to be staff, and we need a few good people, *anywhere in the system*, to rise above the fray and lead. Of course leadership is a wonderful thing. In fact, I would argue it is the most fundamental and critical component of organizational management. But, we must stop politicizing leadership as a function of all employees. We need leaders, at all levels, who can, as Stan Slap says, get us to take their hand and follow them toward a better place in the world.

When we say we want everyone to be a leader, then, are we sure we mean it? ■

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FOR SIMAGES TO:

thiagi@thiagi.com

ABOUT NASAGA:

THE NORTH AMERICAN SIMULATION AND GAMING ASSOCIATION (NASAGA) IS A GROWING NETWORK OF PROFESSIONALS WORKING ON THE DESIGN, IMPLEMENTATION, AND EVALUATION OF GAMES AND SIMULATIONS TO IMPROVE LEARNING RESULTS IN ALL TYPES OF ORGANIZATIONS. WE BELIEVE GAMES AND SIMULATIONS ARE AN EXTREMELY USEFUL TOOL FOR CREATING RICH LEARNING.

IF YOU WOULD LIKE TO JOIN NASAGA OR ARE CURRENTLY A MEMBER AND HAVE QUESTIONS REGARDING YOUR MEMBERSHIP, VISIT WWW.NASAGA.ORG

PLAYING GAMES AND LEARNING TOO: INTERACTIVE COMPUTER GAMES IN ADULT LEARNING

BY R. YVETTE DUNCAN, BERNADETTE HOWLETT,
CAREY ANN SHOUFLEER, AND ARMI TRENAS

Introduction

For most people, the notion of playing games evokes images of having fun. People might conjure the image of children wildly playing tag or, in a more modern version of gaming, beating the Solitaire game on the computer.

So, what happens when we combine games with learning and technology? You get what William Powell (2002) refers to as “entertainment in the guise of learning” (p. 32).

This series of four articles investigates the use of interactive computer games as an instructional medium. In this first article we will begin with the history and definitions of games as well as some of the elements and principles for using games in a learning environment.

A Brief History

Games have a long and distinguished history of use for instructional purposes; most simply because they make learning enjoyable. Most histories of gaming trace the use of games for instructional purposes to early war games such as chess. According to Carlson (1969): “The rise of educational games, then, is a product of a complex of factors: The long rich history of war gaming, the development of computers, and quite

recently, the growing appreciation by educators of a link between play and learning” (p. 22-23).

Technology is revolutionizing the way people learn and learning games developed through technological channels will reach a rapidly growing professional population. Information gathered from a survey conducted at the Training 2000 Conference in Atlanta, Georgia, indicates that 94 % of the training and development professionals surveyed believe that technology-based instruction provides a solid and novel direction for professional development (St. Amour, 2000).

In fact, Prensky (2001) has postulated the existence of a “games generation” in the corporate workforce that has grown up accustomed to playing computer games. The implication is that this new generation processes information differently and may require (or at least strongly prefer) new approaches to learning:

Definitions

Thiagarajan (1999) asserts that games have “four critical characteristics: conflict, control, closure, and contrivance” (p. 528). These characteristics are defined as follows:

- ◆ **Conflict** arises from competition, which can be either player versus player, team versus team or individ-

ual versus a pre-set goal such as time or a best score.

- ◆ **Control** relates to the rules of the game. This determines elements such as which player takes a turn, when the players take turns, and how to make game-related moves.
- ◆ **Closure** helps determine how and why the game comes to an end.
- ◆ **Contrivance** adds elements of fun and competition in the game. “Contrivance in games prohibits the most efficient solution to the problem (for example a basketball player taking the ball and running with it)” (Thiagarajan, 1999, p. 528)

When games are developed for specific instructional goals or for use in a particular instructional setting, game characteristics may be modified for the situation. For example, versions of Jeopardy can be developed for individual review of concepts or for competition between teams in a classroom setting.

Elements

One way to break down a game into its component parts is to look at the elements discussed below.

Roles

Although players assume no special role in most non-simulation games,

some games ask players to assume a character. For example, in Jeopardy, players (or teams) role-play game show contestants.

Scenarios

Scenarios are “the stories and settings built into a game” (Stolovitch & Thiagarajan, 1980, p. 26). If a game does have a scenario, the scenario may need to be adapted for the instructional purpose.

Scoring systems

Scoring systems determine the criteria for gaining points and/or winning the game. In Jeopardy, a player gains dollar points by selecting a square with a specific dollar amount and supplying the correct question for the answer associated with that square.

Media

Games can be adapted to use many different media. The component parts provide the foundation upon which a designer can build and deliver any interactive game. Once the elements for a game are in place, it is important to guide the development for delivering a game in the requisite environment.

These components can include any combination or use of text, graphics, photos, animation, video and sound. The number and type of media need to be carefully considered because they can produce distractions for the learner, generated through the stimulation of multiple sensory channels, and can result in channel jamming.

Summary

The information in this article provides a foundation upon which we can begin to look at games from a more pedagogical perspective. In the second installment we will address the skills and knowledge provided by games as well as some of the advan-

tages and limitations that should caution a designer in integrating games into the classroom. ■

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