

Developments In Business Simulation & Experiential Exercises, Volume 22,1995

ENHANCING THE EFFECTIVENESS OF OUTDOOR-BASED EXPERIENTIAL TRAINING USING VIRTUAL REALITY CONCEPTS

John Campbell, Executive and Staff Training Ltd., United Kingdom
Lenny Diamond, Roland/Diamond & Associates, Inc., W. Hartford, CT
Richard J. Wagner, University of Wisconsin-Whitewater

ABSTRACT

Outdoor-based experiential training has become a popular technique for training managers by directly involving them in the learning process. They offer training in a setting which is fresh, motivating and appear to be very effective in eliminating many of the role conflicts often found in the work setting.

But, do the skills learned in the outdoors actually transfer to the work setting. This paper discusses a new concept, virtual reality activities, which has been found effective to improve the effectiveness of transferring outdoor-based training to the work setting. While not for all organizations, virtual reality activities recreate the participant's own work environment in a developmental setting. Examples and guidelines should allow the reader to evaluate the potential effectiveness of this type of training for their own organizations.

INTRODUCTION

Outdoor-based experiential training (OBET) programs have become a popular technique for training managers in improving group and individual behaviors. Studies have shown outdoor-based programs to be an effective training tool (Bronson, Gibson, Kichar & Priest, 1992; Wagner & Roland, 1992), but criticism of these programs by many training professionals, and skepticism by many managers continues to be found (Wagner, Baldwin & Roland, 1991; Wagner & Lindner, 1993).

The outdoors offers some unique advantages not found in the typical training setting. It appears to be a very therapeutic setting which motivates most people to actively participate in the program. The outdoor environment tends to eliminate the role conflict so common in office settings, and gives managers and subordinates a fresh and unbiased view of each other. Outdoor-based activities require making decisions and solving problems in an ambiguous setting, where previous experience is generally not available to help participants deal with the situations they encounter. For example, few corporate participants have any "experience" in climbing the 12-foot wall or getting the whole group through the spiderweb. Outdoor-based activities offer a

flexibility difficult to find in an indoor setting. The activities offer single-layered problems, with one solution, and multi-layered problems, where one solution leads to another problem.

While outdoor-based programs appear to be an effective method for enhancing the skills of management employees in such "soft skill" areas as problem solving, teamwork and interpersonal communications, many concerns still exist as to whether these programs are "real training" or simply a form of management "fun and games". In trainer's parlance the question is simply "how do these activities, appealing as they are, transfer to the work setting".

These programs do have many detractors and doubters. In surveys of Training Directors taken in 1989 (Wagner, Baldwin & Roland, 1991), 1992 (Wagner & Lindner, 1993) and 1993 (Wagner, 1993) many negative comments about outdoor-based training have been expressed. Examples of these comments include the following:

- Interesting and entertaining, but not relevant as training
- I do not view this as serious training
- A fad or gimmick
- Sounds like fun, but is it really training?
- Not appropriate to our type of business
- Too touchy-feely for our company
- It is hard to tie this type of training to actual job skills
- A form of company paid vacation
- A place for men and boys to play their games
- It is used so the trainers can go outside and have some fun
- Benefits are only short-term in nature

While having advantages as a setting, a growing concern to many of the trainers we talk to is the lack of "reality" in the outdoor setting and the concern that the participants are focusing on the activities themselves, and not on the learning. The comments from the Training Directors above would seem to support this concern with the lack of "reality" in outdoor-based experiential training.

Developments In Business Simulation & Experiential Exercises, Volume 22,1995

Transfer of Training

“Training that results in negative or zero transfer is either detrimental or of no value to an organization from a cost/benefit viewpoint” (Wexley & Latham, 1991, p. 96). It has been estimated that only 10 percent of the money spent on training results in an actual and lasting behavioral change on the job (Wexley & Baldwin, 1986), and the problem might even be worse with outdoor-based training if the comments of the Training Directors in our surveys do reflect reality.

A number of strategies which can enhance the transfer of training to the work setting have been proposed. These strategies include: providing as much experience as possible with the task being taught (Wexley & Latham, 1991); designing the training content so that the trainees can see its applicability; and providing trainees with the knowledge, skills, and feelings of self-efficacy to self-regulate their own behaviors back on their jobs. Stuart and Binsted (1981) proposed that the transfer of learning will be maximized if the learning situation is similar to the work situation. Based on the continuing controversy about the effectiveness of outdoor-based experiential training, it would seem that organizations using OBET should be very concerned with insuring that the maximum level of training transfers to the work setting. One new and potentially vital link in the OBET process which may greatly enhance the transfer of training to the work setting is called “virtual reality training”.

VIRTUAL REALITY TRAINING

What Is Virtual Reality Training?

The term “virtual reality” has become more commonly used in the last few years, especially in the computer simulation area. In its generic sense “virtual reality” means to simulate reality so closely that the simulation is “virtually the same as reality”. In a training sense, virtual reality is designed to simulate the work setting during the training process. Stuart & Binsted (1981) proposed that the level of transfer of learning will be increased as the links between the participants work situation and the learning events are strengthened. Kirk (1986) developed a model, which suggests that a learning event will effectively transfer to the work setting only if it matches the participants points of reference in terms the environment with which they are familiar. This could include a match in terms of the job, the organization’s expectations, or a host of other possible

areas. These models refer to this in terms of matching “realities”.

Specifically, virtual reality is trying to recreate as nearly as possible participants’ own working environment in a development setting. Virtual reality transcends the traditional boundaries of experiential “learning games” by providing real projects, which replicate the participants’ own working environments in a development setting working with real clients. In addition, virtual reality activities actually have positive values for both participants and clients, thus making the payoff “real” for both parties.

Virtual reality training presents a unique opportunity for the participants to:

- * Experience the entire life cycle of an organization, from creation to termination.
- * Experience penalties and payoffs, which are real and inescapable, since they are controlled by someone outside of the development environment.
- * Experience real feedback on their performance from real customers.
- * Confront their actual behaviors and attitudes about a number of work-related areas, including: customers; project management; keeping your promises; people with different values who are both within and outside the organization; many work issues such as leadership, teamwork, decision making, communications, problem solving, etc.; and finally about themselves.

An example of virtual reality training conducted in England by Executive and Staff Training Ltd. of Harrogate, North Yorkshire should help to clarify what virtual reality activities are all about and how they can be used to create very powerful learning scenarios. A major International Oil/Petrochemical Company had developed a series of twelve core values through which it intended to manage its business. It recognized that the organization was better at some than others. Rather than just issue these as tablets of stone, which would probably have gone the way of all corporate tablets, the organization decided to run a series of workshops aimed at helping people to understand how these values might actually operate. In Europe an experiential program was developed to bring the message to the second tier of management in a division. The program that was developed explored leadership, teamwork, quality, relationship to the community and the choices that managers have in making decisions - to

Developments In Business Simulation & Experiential Exercises, Volume 22,1995

approach them in a values-driven way or to cling to old habits.

Participant groups were a mixture of nationalities with no more than 50% British in any one program. Incidentally, some of the exercise were written in French, and some of the facilitating was conducted in French, German and Dutch - which was a great challenge to the first language English speakers who had previously relied upon English being the corporate language to survive.

The final phase of the experiential program, and the focal point of the entire program was the virtual reality exercise. The trainers arranged for the students, who were 18 years old and from a nearby school in North Wales - which is a very nationalistic area, with many people having Welsh as their first language and a deep-rooted anti-English feeling - to be involved in the exercise. The brief given to the training course participants was that their Company had decided to build a noxious chemical plant next door to the school in area of outstanding natural beauty. Their task was to explain in a participative fashion to eighty 18-year-old students how the company intended to do this in a values driven way. The students had been given the brief four weeks before so that the teachers in the School could use the exercise as a case study in their lessons.

Participants in the training program were given the brief three days in advance, and told that they would have one day to plan it, including making all the necessary arrangements with the school. Reactions ranged from "this is what we would give the junior engineers to do", through "lets bombard them with all our corporate exhibition material" to

"oops, the stakes are pretty high here we'd better take it seriously".

What Does Virtual Reality Contribute to the Training Process?

This exercise, in a variety of guises, was run in four different schools eight times over an eighteen-month period and it always provided the most profound learning experience of the whole training program. The specific learning points, which seemed to emerge from the virtual reality activity, were:

- Our assumptions about the community
- in which we find ourselves are often inaccurate and this has potentially disastrous consequences for the organization.

- * Other people invariably see us in a different light than that in which we see ourselves
- * A fair degree of humility is an asset when you try to operate in someone else's culture or environment. In many situations this is not an asset, but is a requirement.
- * Creating and running a team of people from diverse backgrounds, under the pressure of daily operations, is no easy matter - even when there is some common thread of corporate culture and purpose.
- * Expectations of team leadership and decision-making styles tend to follow cultural preferences when you are under pressure - and since you are under pressure at work a methodology for harnessing diversity becomes a must.
- * When you can harness the "best" of each culture the team becomes a very exciting and effective place in which to operate.

We believe that these insights could only have been achieved using experiential methods and that the virtual reality concept - which takes the experience beyond a game - punches home the learning in an unforgettable way. The points discussed above would be impossible to learn in a traditional "classroom" setting. For example, our assumptions about other people are often reinforced in a classroom setting, instead of being questioned as they are in a virtual reality activity. In a classroom setting, even using small groups and simulation activities, we tend to learn from experiences and those of the others in the group. This often has the effect of reinforcing our old behaviors. In a virtual reality activity we learn from new experiences, and can expand our beliefs and understandings, and not simply reinforce our previous values.

In addition, Ron Zemke (1993) has recently suggested that "there is room for a little altruism in all the fun" of experiential learning. He has suggested that activities such as a "weekend in Florida doing a roof repair" might be an effective form of experiential learning. We think that a virtual reality activity could be an effective way of providing both a community benefit and a real life training situation instead of the "fun and games" of many experiential programs.

Developments In Business Simulation & Experiential Exercises, Volume 22,1995

Virtual Reality in the U.S.

Virtual reality concepts have also come to the U.S. with a little more emphasis on Zemke's idea of altruism, but with still maintaining the basic principles of virtual reality discussed above. In the U.S. one popular model developed by Roland/Diamond Associates of Keene, New Hampshire uses a community-based team development program to accomplish what Zemke seems to be calling for in conjunction with a major organizational development effort.

This model begins with a complete organizational analysis to determine organizational and individual needs and resource availability. Following this step a *Design Team*, consisting of representatives of the organization and of the local Volunteer Center (VLC) and/or the Community Service Agency (CSA) meet to choose an appropriate community service program (CSP) for the virtual reality project. Participants must come to a consensus on an acceptable project, complete an initial project plan and assign roles and responsibility to team members. The team then meets with CSA representatives to finalize logistics and determine criteria for performance feedback to the group.

A recent example involved a group of Corporate Managers who took on a painting project at a local Community Center. The project looked impossible at the outset, due to its size and complexity, but the Managers shouldered the load and planned its efforts very carefully prior to beginning. Much to the surprise and pleasure of everyone involved, the task was accomplished on schedule.

Guidelines For Using A Virtual Reality Activity

As with other types of training a virtual reality activity is effective in many, but not all, training situations. A key question the training professional is always concerned with is "when should I use this type of training activity"? Our experience suggests that virtual reality activities appear to be most effective when:

1. There is a need to ensure the transfer of experiential learning and there is a danger that the participants might finish the program remembering the activities they used, not the learning they experienced.
2. It is advantageous to create a genuine work related "risk zone", as opposed to the physical risks of outdoor experiential training.

3. There is a value in touching the physical, mental and spiritual parts of participants in an inescapably real, yet still "safe" way.
4. There is value in exposing participants to the "big picture" by simulating the birth, evolution, maturing and death of an organization.
5. When people are cynical about training interventions because that isn't how it happens in the real world. Using a virtual reality activity solves this dilemma, because with virtual reality that is how it happens in the real world.

DISCUSSION

A virtual reality activity can be a valuable addition to the training and development process. Under relatively "safe" conditions it is possible to replicate something as complicated as the problems of multinational teams functioning in an environment where there is a strong corporate flavor which is at odds with the culture of the host country. Virtual reality allows trainers to develop a realistic simulation for the participants to practice the skills acquired in the experiential program, and to do so in a setting in which both parties stand to gain from a successful completion of the activity.

Virtual reality activities offer participants a chance to gain insights into themselves and other members of the group that would simply not be possible in the traditional training program. The opportunity to break out of their typical mold, and to work on an activity with "real" consequences is a unique value of a virtual reality activity. In the example discussed above, the reactions of the participants to the project developed in a very important and valuable way. The opportunity to see the problem of building a new plant, as other people would see it could not be replicated in any other training method we know of, except virtual reality training.

The example discussed above is not the only example of a successful virtual reality activity that we have used. Some other examples include:

Managers in a Telecommunications company learning leadership and sensitive to the needs of the customer by building walls and other manual tasks for an organization whose decision-making style was totally by consensus, and which did not value big business.

Developments In Business Simulation & Experiential Exercises, Volume 22,1995

Middle and Senior managers of two major British Companies on a joint program looking at leadership, challenging the status quo, creativity, and the ethics of being a multi-national organization. Their project was to recommend a marketing plan to an organization whose image was stuck in the drop out bohemian 1960s (and their posters confirmed it).

Regional Managers from a major retail chain recommending a retailing policy, and practices to the Management of a National Park who run a number of visitor centers, whose prime responsibility is information and education, but who also have to generate income.

Project team members from a multi-national computer company learning and practicing projects management skills, including changing teams, and doing construction projects for the Forestry Commission.

Programs like those discussed above require sensitive and persistent facilitation skills, but can move mountains when properly facilitated. Unlike traditional training programs, which seem to focus on securing a compromise solution for both parties, virtual reality activities focus on the Win/Win scenario, in which both parties stand to gain from the activity. In fact, virtual reality activities can be accurately described as a Win/Win/Win scenario, since the trainers, the participants and the customers all stand to gain from a successful completion of the exercise.

While the value of virtual reality activities cannot be overstated, they are not simple programs to manage or to create. They require a great deal of effort and research on the part of the facilitator, and a strong commitment from both organizations involved in the activity. However, the benefits are worth the effort. Virtual reality activities can help move experiential programs from “fun and games” to a major contributor to the training field.

REFERENCES

- Baldwin, T.T., Wagner, R.J. & Roland, C.C. (1991, April) Effects of Outdoor Challenge Training on Group and Individual Perceptions Paper presented at the annual conference of the Society of Industrial and Organizational Psychology, St. Louis, MO. (April 1991)
- Bronson, J., Gibson, S., Kichar, R. & Priest, S (1992). Evaluation of team development in a corporate adventure training program. Journal of Experiential Education, 15(2), 50-53.
- Gilley, J.W. & Egglund, S.A. (1989) Principles of Human Resource Development Reading, Boston, MA.: Addison-Wesley, Inc.
- Kirk, P. (1986) Outdoor management development: Cellulose or celluloid? Management Education & Development, 17(2), 85-93
- Morgan, G. & Ramirez, R. (1983) Action learning: A holographic metaphor for guiding social changes. Human Relations, 37(1), 1-28.
- Stuart, R. & Binsted, D. (1981) The transfer of learning: Designing reality into management learning events. In Nixon, B. (Ed.) New approaches to Management Development. Gower: Farnborough, U.K.
- Wagner, R.J. (1993) A survey of experiential training practices. Unpublished manuscript.
- Wagner, R.J., Baldwin, T.T., & Roland, C. (1991) Outdoor Training: Revolution or Fad? Training & Development Journal, 45(3), 50-57
- Wagner, R.J. & Campbell, J. (1994) Outdoor-based experiential training: Improving transfer of training using virtual reality. Journal of Management Development, 13(7), 4-11.
- Wagner, R.J. & Lindner, J.M. (1993) Data on outdoor-centered training/who's doing what? Sales & Marketing Management, 145(2), 39-40
- Wagner, R.J. & Roland, C.C. (1992) How effective is outdoor training? Training & Development, (46), 7, 61-66.
- Wexley, K.N. & Baldwin, T.T. (1986) Management development Journal of Management, 12, 277-294.
- Wexley, K.N. & Latham, G.P. (1991) Developing and training human resources in organizations, 2nd. Ed. New York: HarperCollins.
- Zemke, R. (1993) Experiential learning: There is room for a little altruism in all the fun Training Magazine, 30(10), 7