

Teamwork Game

V. Ruohomäki

Helsinki University of Technology, Laboratory of Industrial Psychology,
Otakaari 4 A, 02150 Espoo, Finland

Abstract

This Teamwork Game has been developed for teaching principles and rules of group work as a part of a group training programme. It is meant for teams both in industry and in the service sector. The aims of the Teamwork Game are to increase group members' abilities and skills to work in groups and to increase the group's functionality by creating common working principles. The Teamwork Game is a board and a card game, which simulates essential group phenomena and characteristics, and different aspects of group work. The team of three to eight employees answer question cards, discuss and solve problems, and then analyze group experiences in debriefing. The Teamwork Game has been applied in several organizations. The first experiences have been promising.

Keyword Codes: I.6.8; I.6.3; I.6.6

Keywords: Types of Simulation, Applications, Simulation output analysis

1. TOWARDS TEAM WORK

In an operative, flat and flexible organization common goals, mutual interaction and communication among employees are needed to achieve a flexible and client-oriented mode of action. Teams or groups in various forms have become an ubiquitous way of working both in industry and in the service sector. Most of the work and organizational development paradigms, like the Lean model, propose teams or groups as a base-line organizational solution and as a means for continuous improvement, e.g. quality circles. Work Groups are used to provide operationalize structural flexibility and effective organizational performance as well as human well-being in organizations.

Moving *towards team work* has often been seen as much too simplistic. Many organizations have faced difficulties in getting teams to function. Organizational changes towards team work generates new demands for different individual and group skills. Group organization can be seen as an open systems model, where each (semi)autonomous group creates its own principles or rules to work by (1). These principles include values, norms, procedures and activities. The level and quality of the principles are shown by the level of communication, productivity and well-being of team members in the organization. Experiences has shown that those teams which have fluent co-operation and good functionality usually have high productivity and high quality results.

When *working in teams* its members should be able to analyse situations, communicate and share their knowledge with each other, as well as make decisions and solve problems together. Because a group job is usually larger than former individual jobs, group members should broaden their knowledge of common concepts, principles and probable consequences of particular policies or events. A group member's position or role is different from her/his position as an individual employee. For example, a group member may be supported or pressured by the group, and (s)he may get feedback or not from others. Working in teams requires co-operation skills and the ability to meet and solve internal conflicts and disturbances in the group, between other groups and within the organizational environment.

2. GROUP TRAINING WITH SIMULATION GAMES

Nowadays there seems to be a great need for *practical methods* for group training at the operative level in enterprises. The variety of different kinds of methods is anyway large; from traditional lectures, group discussions and case studies to role plays and outdoor activities. Simulation games are a potential tool to be used in conjunction with other techniques and to reinforce their effects. They can also replace other methods to reach learning objectives of group training. In general, simulation games supplement the existing kit of techniques of a group trainer or teacher.

2.1. Group skills and forming teams

Simulation games are increasingly being used to develop behavioural and 'enterprise skills' such as communication skills, interpersonal and group skills, decision-making and problem-solving skills, and skills of critical reflection (2).

In a simulation game we can include relevant elements and characteristics of group work. With the games we can demonstrate those demands that arise from group work demands, organizational needs and the personal needs of group members. In the games participants have possibilities to practise their skills related to group work, like communication and problem solving, and to get feedback from other participants. It has been said that there are group tasks that require group cohesion and co-operation and those which can be achieved more effectively in a group in which there is a degree of conflict or competition (3).

Simulation games can be used for building and *forming teams*. The game could offer a group the experience of achieving together new objective by the deployment of its joint skills. We could promote change with games by encouraging the adoption of new ways of working together.

Simulation games are based on participants' *communication and interaction*, and they can reflect the real dynamic of group processes. When playing games employees can learn together co-operatively (4), which can also be one aim in real teamwork. Simulation games offer the possibility for the employees to take advantage of their own and each others' practical work and life experience, as well as to share their knowledge linked to those themes presented in the game. Employees can learn from the active game experience, through reflection and conceptualization and gain abilities to apply their knowledge in real work (5).

2.2. Positive effects of gaming?

According to the literature (6-8) we could assume that *positive effects* of gaming for group training could be seen, for example, in the following areas: attitude changes towards group work and co-operation, better understanding of different viewpoints, skill development in decision making and problem solving, self-awareness of one's own group role and assumptions about other persons, increased empathy for other group members, as well as in increased interactional and communication skills. These effects would increase group members' preparedness for working together and then facilitate changes towards group work in a good atmosphere. This all should accordingly increase the functionality of teams, i.e. their productivity and their members' well-being.

3. THE TEAMWORK GAME: AIMS, CONTENT AND MATERIAL

Our project group* have designed and developed *the Teamwork Game* to illustrate and handle group phenomena and to promote the formation of a group's activity principles. The game is meant first, to help in forming and building new teams, and second, to train present teams and to increase their functionality. The Teamwork Game is meant to be a part of group work training in a broader organizational and personnel development.

3.1. The aims of the game

The motive of the game is to increase the productivity and well-being of teams by developing their activity principles. *The aims* of the Teamwork Game are (9):

- to get to know the other group members better
- to develop co-operation, interaction and communication skills
- to get acquainted with group phenomena
- to form common concepts on teamwork
- to practice anticipating, identifying and solving problems
- to lay a foundation for common 'working principles' in a team.

3.2. The content of the game

The Teamwork Game simulates, on a general level, team-building and everyday *working in teams*. Our project group* have collected and selected those typical group work phenomena which we have faced in practice connected both with organisational and group work development projects for several years. The topics dealt with in the game have also been widely introduced in literature. The Teamwork Game includes three topic areas: group characteristics and some levels of group work shown in Figure 1, 'knowing each other' and the developmental stages of team-building (9).

The group characteristics dealt with are:

- Communication. For example, how is information transferred between groups?
- Common goals. For example, which goals can be defined by the group itself and which come from outside?
- Group cohesion. For example, is the group supporting or pressuring its individual members for conformity?

- Procedural and distributive justice. For example, how are decisions made, and how are rewards and punishments distributed?
- Autonomy. For example, what kind of decisions can a group make, and what are the rights of its members?
- Leadership in groups. For example, is there a rotating leadership in the group?

The levels of group work handled in the game are the group as a part of a larger work system, internal relationships in a group, and an individual in a group. The aim is to give a systemic concept of working in a group - a larger activity environment always has an influence on a group and its members.

In addition, issues like 'knowing each other' from the perspective of social cognition (10) are dealt with in the game. In group work, it is necessary to understand and tolerate the dissimilarity and individuality of other group members. The aim is to increase the self-knowledge of group members and to get some insight into their group role and behavior.

The developmental stages dealt with in the game are the formation of a group, conflicts in groups, the creation of activity principles, and mature group working. A group is a dynamic and developing or a declining entity. It is important to anticipate and identify the 'ups and downs' of a group life.

The basic idea of the game is that the above-described topics, phenomena and concepts of the group work are illustrated at the level of the real situations of everyday working with question cards. Participants select topics, make decisions, solve problems, discuss and argue about them. The issues learned through action and reflection should then be easier to transfer to real group work in the workplace. (9)

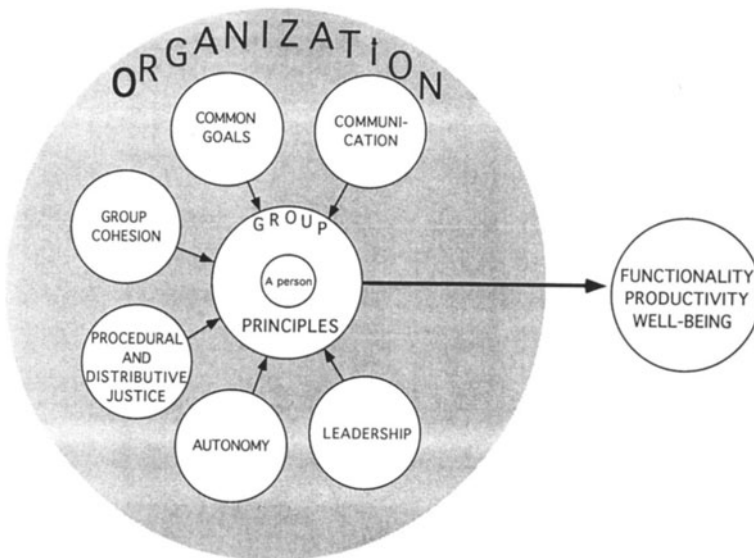


Figure 1. Topic areas of the Teamwork Game

3.3. Game materials

The Teamwork Game is a manual, *board and card game*. It has question cards (147 pieces) in four themes: 'knowing each other', 'characteristics of group work', 'problems in groups' and surprise cards. Other components of the game are: an answering leaflet (including alternatives "Yes", "No", "Yes, but..." and "1, 2, 3"), pawns (eight), a dice, a score board, diplomas for participants and a manual for the game leader.

Most of the question cards are general for all groups, while some of them focus on production groups, and others are for office and administrative groups. The game leader can tailorize the game for specific needs of the group by selecting suitable question cards to be used (9).

4. PLAYING THE GAME

The group of employees participate in the Teamwork Game as a part of training programme. The game is played by answering question cards, discussing and solving problems, and then analyzing group experiences in debriefing with the help of game leader.

4.1. Participants

The Teamwork Game is planned for employees who are working at present or who will work in the future together as a team. The game is meant for production groups in industry and for customer based teams in the service sector (offices, administration, etc.).

There are 3-8 *participants* in a game with a game leader, who will facilitate the group processes and arrange debriefing. Participants should know each other somehow beforehand. The participants do not adopt any other roles and there is no acting. Their behavior is natural and their reactions reflect their own everyday experiences. Supervisors and foremen can also take part in the game. Some observers can also be used with permission of the participants. (9)

4.2. A part of the group training programme

The Teamwork Game is a part of a whole *training programme*. The group work training programme is divided into three phases that are shown in Table 1: first, analysing the state of co-operation in an organization by a questionnaire, then, actual gaming including debriefing and later, forming working principles for the team (9).

The aim is to work through all the phases in the presented order in order to reach the learning cycle as a whole, for instance, during one to three days distributed over a longer period. The longer period would make it possible to consider the group principles and discuss the themes more profoundly.

Table 1. The team-work game as a part of a group training programme

Phases of training	Realization	Time
I Mapping the state of cooperation in an organization	Cooperation questionnaire	1 - 11/2 h
II Gaming and debriefing	Discussion and problem solving with question cards using the game board, dice, pawns and collecting points on the result table	2 - 4 h, (debriefing about 1/2 h)
III Forming group principles	Guided group discussion about group characteristics and activity principles	2 - 4 h

In the first phase, the level of co-operation and communication in an organizational unit is studied by a questionnaire. The data can be collected a few days before the actual game. The game day starts by presenting the results of the questionnaire. The aim is to tune the participants for the topics and the atmosphere of the game. It is orientation and briefing for learning in the game.

The actual gaming lasts from two to four hours depending on how profoundly the topics are handled - and how lively they are discussed by participants. Participants proceed by casting a dice, answering questions, arguing about them, solving problems, and collecting points. The winner is the participant who first collects all the points. The points are given according to a set of specific rules, for example, how many participants agree on the solution to a problem suggested by a participant. Participants need each other to gain points. In the learning cycle (5) the actual gaming is the concrete experience for further processing.

The actual game ends at a *debriefing*, where participants express their first reactions and reflect on their game experiences in a structured group discussion with the help of the game leader. Participants return to individual and group perceptions of the game, evaluate them and make connections to their everyday working. Debriefing is a crucial part of the learning cycle because of reflective observations and abstract conceptualization of the game experiences.

The third phase includes discussions on the topic areas of the game, giving feedback, reflecting learnt principles, and possibly also some lecturing when a game leader takes up important issues raised during the game. The real group principles are then designed in small groups, e.g., concerning common goals, division of work and relations to other groups. According to the learning cycle (5), this is the phase of active experimentation and application of the learnt principles.

5. APPLICATIONS

Our project group* have been *testing* the Teamwork Game in 16 different Finnish organizations both in industry and in the service sector. The teamwork game has been played in 36 work groups so far. Over 250 shop-floor and office employees, as well as some of their foremen and supervisors, have participated in the game. We have been testing, modifying and specifying the questions cards of the first game versions as an iterative process and making corrections on the basis of the feedback from the participants. Our final version has been ready since the spring 1994.

We have been *evaluating* the Teamwork Game by observing game sessions and by collecting information from participants' experiences with group interviews and with questionnaires immediately after the game.

6. EXPERIENCES FROM THE TEAMWORK GAME

Experiences from application of the Teamwork Game have been encouraging. *The game sessions* were intensive with joyful gaming and lively discussions. Discussions were constructive and dealt with the themes of the game. While playing the game participants reflected upon their experiences and actual situation in their group. The participants generally agreed that the game and the question cards simulated group characteristics, conditions and situations in their everyday organizational context quite well. The participants gave high praise to the game compared with traditional training methods.

The attitude of most of the employees on gaming was enthusiastic and motivated, while a few of them were uncertain and a bit skeptical. In evaluations immediately after the game, the mood of the participants was mainly positive and satisfied with the game experience.

The participants found that playing *facilitated discussions*, even on difficult issues, the more silent persons were also activated by the group process. It was important for the employees to hear each others' opinions and different viewpoints, for example on problem situations, where new solution possibilities were also expressed. The participants thought that they gained deeper personal knowledge of one's colleagues, which was considered very valuable.

Most of the participants regarded gaming as a *useful experience*, and they supposed, that it might promote co-operation in their working places. It is anyway unclear for us how well participants have been able to transfer their game experiences and learnt principles into real group work. We haven't had possibilities for follow-up studies so far. If participants have learnt something new from the reflection on their game experiences, it should show up as a changed real work practise, for example, in cooperative effectiveness or increased productivity. In practise, these kinds of results are naturally mixed with other developmental activities in organizations, like other training or changed supervision practices, which makes the evaluation of training very difficult.

In our cases, the game seemed to be most useful for those groups which had been working together for a relatively short time. The game functioned well both in production groups, and in office and administrative groups. However, it is not yet clear which would be the best phase of group formation or developmental context in organizations for using the Teamwork Game.

According to our experiences, *the role of the game leader* seems to be essential for the successful application of the Teamwork Game. When running the game, the game leaders should find a suitable balance between 'funny playing' and the psychologically demanding processing of group phenomena. The game leaders should be well trained and they should have strong practical experience in group dynamics and processes. The game facilitators should be trained in the application of the Teamwork Game, which might limit its wider applications in organizations.

In general, the Teamwork Game can be seen as an inspiring, quite easy and inexpensive method for group training, as a part of wider developmental project. We assume, that the Teamwork Game could provide a promising challenge for personnel development in working life.

* A project group Virpi Ruohomäki, Paul Buharist, Matti Laitinen, Juhani Sulander, Tiina Tanskanen and Matti Vartiainen from the Helsinki University of Technology, Laboratory of Industrial Psychology, planned and designed The Teamwork Game during the years 1992-94.

REFERENCES

1. A. Pulkkis, M. Vartiainen, J. Sulander and M. Laitinen, From production groups to productive group work, in V. Orpana and A. Lukka (eds.) Production Research 1993, Proceedings of the 12th International Conference on Production Research, Lappeenranta, Finland, 16-20 August, 1993, Elsevier, Amsterdam, (1993) 661-662.
2. F. Percival, S. Lodge and D. Saunders (eds.), The Simulation and Gaming Yearbook 1993, Developing Transferable Skills in Education and Training, Kogan Page, London, 1993.
3. A. McClintock, Leadership and group skills: the use of a board game in skill development, in F. Percival, S. Lodge and D. Saunders (eds.), The Simulation and Gaming Yearbook 1993, Kogan Page, London (1993) 91-98.
4. D. Johnson and R. Johnson, Joining together, Group theory and group skills, Prentice Hall, New Jersey, 1987.
5. D. Kolb, Experiential learning: Experience as the source of learning, Prentice Hall, New Jersey, 1984.

6. M.E. Bredermeier and C.S. Greenblat, C. S., The educational effectiveness of simulation games; a synthesis of findings, in C.S. Greenblat and R.D. Duke (eds.) Principles and practices of gaming-simulation, Sage, London (1981) 155-169.
7. C.S. Greenblat, Teaching with simulation games; a review of claims and evidence, in C.S. Greenblat and R.D. Duke (eds.) Principles and practices of gaming-simulation, Sage, London (1981) 139-153.
8. R.L. VanSickle, A quantitative review of research on instructional simulation gaming: a twenty-year perspective, *Theory and Research in Social Education*, XIV, 3 (1986) 245-264.
9. V. Ruohomäki, P. Buharist, M. Laitinen, T. Tanskanen and M. Vartiainen, *Teamwork Game - manual for the game leader*. Institute of Production Economics, Helsinki (1994) (in Finnish).
10. S.T. Fiske and S.E. Taylor, *Social Cognition*, Random House, New York, 1984.