

The use and effectiveness of gaming/simulation for strategic culture change

15 December, 1998

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(article to be published in Saunders D. and Severn J. (eds)
"The International Simulation and Gaming Research Yearbook Volume 7:
simulations and games for strategic planning and
development" Kogan Page: London, 1999)

228842

Introduction

In this article we describe the use of gaming/simulation for a strategic culture change of a big insurance company.

Between 1992 and 1995, Delta Lloyd (DL), a large Dutch insurance company, underwent a total transformation. The rather bureaucratic and inefficient working processes have been revolutionised, the organization has been extensively flattened and virtually all the 2,000-strong staff has been trained to work in a team context.

To train this staff the TOP game, a tailor made game was developed.

The TOP game was run 140 times over a five-month period. It was embedded in a large-scale change programme which was vital to the organization concerned. We were in the fortunate position of being permitted to devise, carry out and evaluate the intervention; all of this with strong support from Delta Lloyd itself.

Gamers do not often get the opportunity to evaluate their approach. The leadership of Delta Lloyd stimulated us to accompany the consulting project with extensive research activities, a unique programme that should produce unique data.

In this article we describe the background of the change, the phases of the change programme, a rather detailed description of the so called green print, some special attention to the game itself and a detailed description of the effects of the green print.

Background

In late 1992, it was ascertained that, in comparison with its competitors Delta Lloyd had a problem with its cost ratios. At the same time, the management acknowledged a number of threats including: the rise of direct writers (who approach clients without using intermediaries), increasing competition intensified by Europe 1992, expansion due to mergers, the professionalizing of the intermediary; and the enormous growth of information technology. Furthermore, the work in DL lacked efficiency, and was not sufficiently customer-oriented. It was decided to instigate a radical change operation. In December 1992 meetings were held with large groups of staff in which the Board of Directors explained what was to happen. All the operational processes were redesigned, based on efficiency and teamwork. Furthermore, the organization was to undergo an extensive delaying.

The present (six) layers would make way for three new ones: the directors at the top, 40 managers under them and 140 teams headed by team leaders at the bottom. The latter would not be supervisors with extensive powers, but would operate more as a 'playing captain' on a football team. Each team would be responsible for a particular product-market combination. The team would be highly autonomous and be judged on previously agreed output. Each team would handle its own professional activities from start to finish, and inform the client, all within a 24-hour time frame.

The consequences for personnel were implemented in close consultation with the employees' council and the unions. Between 550 and 650 of the 2,800 jobs had to be cut. The nearly 300 managers were told that their old jobs had been axed, and that they could apply for jobs with a new profile. 60 per cent of them were given a new job. The total number of personnel was reduced by about 600 people.

Phases of the change programme

Delta Lloyd had embarked on a route from an organization with predominantly hierarchical and bureaucratic characteristics to a (de)layered, output-oriented, customer-driven organization, based on teamwork. In the literature, such a paradigmatic transition is termed a strategic culture change (see among others, Cummings and Worley, 1993). The change programme had three major phases, which we have labelled 'blueprint', 'red print' and 'green print'.

After the blueprint (the redesigning of the operations and the organization) and the red print (the staffing of the new organization, including slimming down) had been completed, an extensive and complex intervention was devised, to influence the behaviour, attitude and culture of the staff and organization in the desired direction (working in teams; collaboration; output-management; collective responsibility; team leader as 'playing captain'). This third phase of the intervention became known as the 'green print'.

A green print is the integral, consistent, feasible and relevant plan for an intervention in an organization, aimed at the actual implementation of the objectives of a large-scale innovation.

Integral means that all the steps and elements have been thought through in advance, taking account of their interrelationships.

Consistent means that all the elements of the plan support the same set of clear objectives. Feasible means that it meets the preconditions of manageability and workability. Relevant means that it makes a demonstrable contribution to the objectives.

The green print

In the case of Delta Lloyd the green print was designed using ideas from five areas of applied social science, ie, organizational development, intervention theory, design and use of gaming/simulations, learning and change and 'transfer of training' (see among others Cumming and Worley, 1993, Duke, 1974). The resulting green print can be best characterized as a set of interrelated decisions on 22 design parameters detailed in the following five subsections.

Subsection A

With respect to the content of the change effort

- How much depth and effectiveness are required? A choice was made for a strong emphasis on increasing awareness and creating the feeling of becoming 'consciously incompetent'. The focus was not on acquiring new skills or cognitions.
- A tailor-made gaming/simulation, a microcosm of the desired organization, was chosen as tool for dialogue and training. The gaming/simulation should function as a 'mirror' (How are we doing?) and as a 'window' (What alternative ways are there of doing things?).
- All staff members (from the Board to the security staff) to be involved in the same gaming/simulation, so that a company-wide collective experience was created. The objectives and debriefing sometimes varied slightly between groups.
- The characteristics of the gaming/simulation were such that, depending on the entry level and the capacities of the players, the assignments could be made more or less complex within the same framework.

Subsection B

With respect to the structure of the intervention

- A choice was made to commence the intervention very shortly after the new teams and groups had been put together. At that point, the interrelationships in the teams had not yet been determined and were open to influence.
- Over a period of about four months all groups (about 140) did the two-and-a-half day training course. A conscious choice was made to run up to

- 10 courses in parallel.
- Prior to the training course, extensive information, both oral and written, was provided and communication took place with everyone, particularly management.
 - The groups attended the training course from the top down. First the top managers, then other managers, team leaders and teams.
 - Among others, via carefully staged plenary meetings, the start of the intervention was turned into a psychological turning point, a 'rite of passage': the new organization is (now) going to work.

Subsection C

With respect to the actors

- All staff, so also the supporting functions, participated in all activities - because everyone has to learn the new organizational behaviour, albeit from different perspectives.
- The training groups were functionally put together, ie you participated in your 'family group', so that what you learnt will sink in better.
- The team leaders were given extra training to prepare their team for the gaming/simulation.
- The commitment of the managers was assured: through doing the training course themselves; by opening and closing their own staff's training course; and by participating as co-trainer (20 out of the 70 newly appointed managers did this).
- The training courses were run by an external trainer and one internal manager. The former had the important task of loosening up the group and questioning the things that were taken for granted; the latter focused on the integration and implementation. So, the external trainer supported the 'mirror' function of the game, the internal trainer fostered the 'window' function.

Subsection D

With respect to imparting meaning

- The relocation of 1,200 bureaus was seized upon as a good opportunity. The relocation took place simultaneously with the introduction of the new organization and the training courses.
- A choice was made to use a single name for the programme, the game and the underlying framework, and to design a single, appropriate symbol.

- Mystique was consciously created - among other ways in the form of: 'if you haven't done the gaming/simulation then you don't know what the new Delta Lloyd is like.'
- An underlying conceptual model and written materials, consistent with the objectives, supported the programme
- Heroes and anti-heroes were created ('This is how we do things (now)', and 'We don't do it like that (any more)').

Subsection E

With respect to preconditions

- In an intake session all the participants were (also) able to input their personal learning needs and questions, and as much account as possible was taken of their wishes.
- After three months there was a follow-up. The team's plan of approach, made on the training course, was discussed and evaluated.
- In the training sessions, in the periods between intake, training course and follow-up and in the whole change programme, feedback loops were made to continually follow the process and provide progress reports.

TOP-game

Why a gaming/simulation? Working in teams means a completely different way of doing things. This applies to everyone on the shop floor, but also to the managers who had to work in a team-effective way, and had to take on the role of coach. So, when the blue print (the new structure) and the red print (the staffing of it) were ready, the question was: how can Delta Lloyd ensure that the concept will work in practice, and how can we guarantee that it will *continue* to work? For this purpose, a special change and training programme was designed.

A company-wide approach was chosen consisting of information, communication and training. Everyone in the company, from top to bottom, was to take part. It was to be very fast paced, to intensify the feeling of the change having become reality. Furthermore, the company wanted all the staff to actually experience what the new process concepts, and working in teams, would mean. There was a fear that otherwise, the attitude might arise among management and staff that 'it will all blow over, and we can get back to normal'. A gaming/simulation was chosen to enable staff to practise the new team-oriented methods.

The game had to be tailor-made, because the exercise had to closely correspond to the new realities of Delta Lloyd. The game that was designed very carefully simulates Delta Lloyd's new processes. However, a fictitious insurance company in the game did not resemble Delta Lloyd, in terms of size or specific business characteristics.

The game

A total of 140 training sessions were carried out over a five month period (two months of which could not be used, due to incomplete teams over the holiday period). That means that often 20 training sessions per week were held.

There were 20 outside trainers, and 20 managers trained to be trainers from Delta Lloyd. All Delta Lloyd staff participated. A project of such breadth and size, carried out at such speed, is unique. Needless to say, a substantial budget and between 6000 and 7000 lost workdays were involved. The team training sessions were supervised each time by two persons: a manager from Delta Lloyd (who had been trained for this) and an outside trainer. In the game, the manager played the role of the team manager. Each training session was preceded by an information meeting (an 'intake' by the trainers with the whole group) and there was a follow-up three months after each training session.

The TOP game formed the key element of the training sessions. The participants had to perform as a team in selling insurance policies, processing policy transactions and paying out damages or payment of pensions.

The game simulates an insurance company called TOP. Every morning, a mailbag is delivered to TOP's front desk. The post must be divided among the various processes and be out of the door again before the end of the day. And the phone just keeps on ringing; all the participants can be reached by phone. One of the game operators continually inputs customer queries and so forth. The group is supervised by its real team leader. The participants are divided into separate groups covering the various roles (front desk, sales, customer relations, claims).

The following figure shows the structure of TOP insurance:

Figure 1 The organization of TOP insurance

Each team must divide its available capacity: the team members must help out where necessary, to provide the required result. At the end of the 40-minute working day, a team meeting is held to discuss the state of affairs, to see where things went wrong and how the routines can be improved. This is repeated four times.

The game is designed in such a way that it can be played with a variable group size (the loading can be varied). The game operators can also increase the pressure of work (if there is a wide discrepancy in the level of the participants) and they can increase or reduce the input of disturbances.

The groups go to the training session in their new team composition; the group has usually only just been put together when the training begins. So, the TOP game is played with the team one has to work with during the years ahead. In this way, the boundary between game and reality becomes very small. Work in the gaming/simulation, and in reality, flow over into each other.

At the conclusion of the training each team makes a plan of action for the first three months, with agreements about the 'hard' side of the work (processes, routines, results to be achieved) and about the 'soft' aspects (attitude and interaction with other team members), but also about the way meetings are run, taking over each other's work, sharing work, exchanging information. The follow-up three months later is intended to discover how much of this plan has been put into practice.

The evaluation study

In the evaluation study, the following sources and methods were used:

- documents (presentations, minutes of meetings, etc.) from various stages in the change process were analysed
- a (short) questionnaire was designed, with statements about the content of the innovation. This questionnaire was completed by a very large percentage of the participants at five points in time: during the intake (zero line), after the training sessions, during the follow-up (after 3 months), after one year and after eighteen months
- the trainers drew up a short report on each training session. They answered a number of questions. These reports were then analysed
- in-depth interviews took place afterwards, with 22 internal trainers (managers) and 10 external trainers. The content of these interviews was also analysed.

After the initial results were known, further analyses took place. Teams showing exceptionally positive or negative scores on the questionnaire data were analysed in depth, to discover explanations for their deviant scores.

The results can be categorized into four groups: 1) effects of the intervention; 2) explanations for the differences in effects; 3) effective elements of the intervention and 4) other effects.

Effects of the intervention

The analysis of the questionnaire data over the five measuring points produced a surprising curve. In the short term, there were very positive effects, which largely subsided (after one year) but subsequently tended to become positive again (see Figure 14.2).

Figure 14.2 Learning curve based on five measuring points

We have labelled this graph 'the learning curve'. It is also found in many other fields where people have to learn and change. We will return to this later. The curve and the results that came from documents, interviews and training reports, leads to the following conclusions.

The green print must be characterized as an intervention which 'de-freezes' the participants, and helps them to explore the new situation. The training sessions result in a feeling of optimism. To succeed as a team in a simulated microcosm proves 'doable' and productive. Of course, the game is designed for that purpose. The experimental learning in the game helps the participants to give meaning to vague, multi-interpretable and intriguing concepts, such as the ones that were used in Delta Lloyd to describe the organization of the future. The game makes it possible for each team to discover what 'teamwork' really means for its specific operational tasks. However, when the actual team work starts in the everyday work processes in the new organization, people discover that keeping the teamwork going and performing one's own role in the work processes is much more complicated, frustrating and fatiguing than in the relatively simple and well supported environment of the game.

To master the new skills, and to internalize and accept the new behavioural routines, while at the same time working for 'real', is a hard process. Everybody in Delta Lloyd had to go through this (re-) discovery phase, and had to struggle their way through the first months after the training sessions. The old Latin proverb *Luctor et Emergo* (I struggle and re-emerge), describes this phase very well. The clear dip in the curve of Figure 14.2 reflects this phase of struggle.

Our data show that the green print has had a strong (positive) influence on knowing what the change involves, and accepting the need for change. The green print led to a heightened awareness of what still needed to be learnt, and to a reduction in resistance to the change.

The learning curve, as it has been found in this study, displays surprisingly strong similarities to the dynamics in effects found in the many empirical studies on short-term psychotherapy treatments. It appears that there is nearly always a certain relapse after an (initially successful) short-term therapy. The recovery which follows this relapse is the result of the attempts, by trial and error, of the patient to put into practice what has been learnt in therapy. Relapse appears to be more a process than an event, and is an inextricable part of the learning process. Improvement observed at a follow-up is less marked than at the end of the initial treatment (Shapiro and Shapiro, 1982). Of course, strategies have been developed to avoid relapse. For example, 'booster sessions' (pep talk sessions or follow-ups) postpone the relapse but do not reduce it (Whisman, 1990). The same learning curve also occurs when acquiring psychomotoric skills, such as learning to play tennis, learning to drive or ski; in grief processes (see eg Kübler-Ross, 1981) or innovation processes (see eg Geschka, 1978). All these findings correlate with the results of our study. The (relatively) brief intervention (the training course using the gaming/simulation) is initially highly effective. There is a relapse (at the fourth measurement) and then an improvement once again at the fifth measurement.

Our data and the parallel findings in other areas, suggest to us that cultural change processes have to be understood as learning processes. They develop over a period of about two years and follow the learning curve described. From the perspective of the learning individual this process has two phases. The first phase includes the training and the period of relapse. The second phase starts when recovery occurs and the change becomes internalized by the individual.

In the first phase, the learning is done via imitating, trying, and experimenting. In this phase the learner tries to copy the new rules of conduct he picks up from the trainer or training situation. However, this conduct is not yet part and parcel of his personal style or repertoire. He also has to master the art of using the new skills in situations he did not experience in the training. He has to discover how the new behaviour can be made a part of his personal way of structuring, enjoying and improving his life at the office. Positive experiences, good and continuous feedback from the team and its management and the skill and 'guts' to accept mistakes and relapses are the learning principles that guide this phase of 'recovery'.

A green print such as the one applied in Delta Lloyd, is effective for the first phase and appears to put in place important building blocks for the second phase: people are consciously incompetent; the resistance is reduced; and the change has become clear (in words, in behaviour and in relevance).

In the period of 'recovery' it is important that the direction of the change process is reversed from top-down to bottom-up; the teams have to be 'in the lead'. Managers have to assist the teams to stay on track, and discuss with them experiences and interim results.

Communication about emerging best practices has to be structured. New productive behaviour and accomplishments have to be monitored, and transformed into the symbols of the new culture.

Formal and informal reward systems have to reflect and support the gradual institutionalization of the new cultural web.

In Delta Lloyd, according to those interviewed after eighteen months, the culture of the organization had changed considerably: more openness, more responsibility, more vulnerability, more mutual correction and better communication. The impact and the outcomes were considered to be astounding.

Explaining differences in effects

We were able to compare the effect-scores (the changes in the answers to the attitudequestionnaire) of all the teams. Although the average dynamics are well described by the curve in Figure 14.2, there were also significant differences between the teams.

For example, some teams showed no positive jump in the scores after the training, while others were changing more positively than the average teams. In some cases the 'dip' after three months did not appear, while in others the the drop in motivation was more extreme than the average.

De Caluwé (1997) tried to understand how to explain these differences. For this purpose, he collected data on many different team characteristics, eg, age composition, gender composition, line of business, trainer's scores on the team's resistance to change, style differences in teamwork as observed by the trainers, trainee- or trainer-team characteristics, etc.

De Caluwé used two methods to understand the influence of team characteristics on the effect-variable: cross-sectional analysis on all the team data, and in-depth qualitative analysis of deviant cases. For the methodological review of this analysis we refer the reader to de Caluwé (1997). Here we will summarize the insights from this analysis.

No characteristics were found which could significantly explain all the differences in effects. However, from the analysis a list emerged of favourable and unfavourable indications for learning and change by means of a gaming/simulation.

Favourable conditions for learning and change are: people are motivated, keen to learn and favourably disposed towards change; the importance of the change is understood and the training environment is perceived as realistic.

Unfavourable indications are: little motivation for, and little acceptance of the change; a feeling of loss of status due to the change; no active leadership or a not accepted leadership; hidden agendas or conflicts; uncertainty about the future; disenchantment in practice; or overestimating one's own abilities.

Also from this part of the study, it emerges clearly that the main function of the game is to increase awareness. People start to give meaning to the change, and positive motivation for the change is created. However, if subsequently a person is not stimulated over and over again to overcome new obstacles, this can cause a serious backlash. Active leadership, good communication and facilitating continuous feedback are important for implementation and internalization.

In addition, two further conclusions can be drawn from the study: teams with a lot of women and few men are very favourably disposed towards change; and if trainers with sufficient experience are used, then gaming/simulations are 'trainer-proof', ie there are no differences in effects between trainers.

Effective elements of the intervention

As stated before, everybody in the whole organization has been exposed to the same 'green print'. In experimental terms this means that *everyone* received the same stimulus. De Caluwé was not in the position to vary the stimulus over the different teams. The stimulus was a composition of 22 different design decisions (see section 4), and thus the question arose as to which of the elements of the green print were most relevant for creating the effects we have found. Since an experimental design was not considered in the interest of the client, de Caluwé had to rely on expert judgement to assess, in retrospect, what the strong and weak points of the green print were. For this he used the in-depth interviews with trainers (internal and external) and managers.

The effective elements of the green print that came out of this analysis are:

- the training sessions, particularly the use of a tailor-made gaming/simulation;
- the preparatory meeting prior to the training course, at which participants could input their own learning objectives;
- the training course being opened and closed by the team's own manager;
- making use of combinations of internal and external trainers;
- making use of a simple conceptual model to visualize the change;
- starting the change simultaneously with the physical relocation of the staff's workstations;
- working with symbols;
- the participants working towards their own plan of approach
- using feedback-loops
- working with (training) groups from functional contexts
- the speed at which the intervention occurred
- consciously creating heroes
- oral communication

- having clear objectives for the change
- starting the green print after the red print had been rounded off (no insecurity of the participants about losing their job)
- active managers, who use the opportunity of the intervention to develop strong relationships with their teams.

With regard to the gaming/simulation the positive working components are:

- a strong similarity to reality, in other words, a high simulation character
- the repeated experience: going through the Kolb learning cycle four or five times during the game
- arousing realistic expectations no promise that the game would solve all problems
- offering learning themes whereby participants observe and learn in a structured way
- the 'rule of three', whereby three people play one role
- different perspectives via 'role switching'
- an internal manager as game operator
- clear indicators
- unexpected events
- plenty of oral communication.

Finally, we want to mention two points which proved to be important and strong points of this process of change.

First, the (increasing) credibility of the change initiators (eg, the board, the managers, and especially the managers who acted as trainers) and the adequately exemplary behaviour shown by them. In addition, there was strong congruence between the views of the top management; the green print designers; the trainers; the expectations of the participants (at any rate, those expectations became increasingly realistic) regarding the nature of the change; the objectives; and the way in which it was tackled.

Second, it was very important that the intended change was given high priority over a number of years: there were no simultaneous and 'competing' changes, so that this particular change was given the time to become completed and internalized.

It is striking, furthermore, that the models, the TIs and the jargon from the gaming/simulation have had a lot of impact on reality. The models and the tasks which the design team developed to make a simulated 'Delta Lloyd-of the future', in other words, the gaming-elements used to create the non-existing Top Insurances Inc., became adopted by the teams to structure their work in the real Delta Lloyd. Obviously the structure and 'birds-eye-view' of this game-material were not only helpful to govern teamwork in the simulated world, but the teams also used this equipment to run their business later on. As game designers, we accepted this phenomenon as a not intended but positive indicator of success.

Other effects

To conclude the article, we quote some key players in the change programme. The chairman of the board states: "That score could be improved on, of course, but what you must realise, is that we are talking about a huge culture turnaround, which simply takes time. People have to start working in a different way and taking on more personal responsibility." The manager of Social Affairs comments: "The training sessions were the initial impetus, the undercoat; painting on the top coat must take place over the next few years. Management plays an important role in this. We feel the operation as a whole has been a complete success, but the follow up is a massive undertaking".

The total reorganization has borne fruit. Turnover and profit are increasing. Was the chairman of the Board ever scared about the risks? "If nothing had been done, the company would have been in big trouble. There's not much point in thinking about the risks. If you can only swim one kilometre and you fall overboard five kilometres from the coast, you don't think to yourself: I'll only manage one kilometre. We made a very conscious choice to do everything in one go and not by halves, otherwise you lose support. And communication is a key theme running through this project. In this type of process you have to keep communicating about what you are doing so that the top floor doesn't lose touch with the people on the shopfloor".

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Léon de Caluwé is a social psychologist. Since 1988, he has worked as a senior consultant at Twynstra management consultants, one of the largest consultancy firms in the Netherlands. His work there covers all social sectors, and sectors of industry. He is specialized in learning and change scenarios, in which the 'human factor' is of overriding importance. In his consultancy work, he regularly makes use of gaming/simulations. He recently obtained his doctorate, with a thesis on an extensive empirical evaluation of a gaming/simulation project.

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