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Human Side of Learning – To Play or Not to Play

1. Introduction

From the very beginning the world has always been changing. These changes are mainly unpredictable and non-continuous. Processes and events, which we couldn't imagine a few years ago, are happening nowadays and making new challenges.

It is essential to realize that the relaying new knowledge process is strongly connected to the human beings and for thousands years it has been to improve individuals' and societies' life. The knowledge medium, which was widely used from the ancient civilizations to the present XXI century, is information [Luenberger 2006, pp. 1–4]. It contains a record giving answers to questions: what, how, when, who, where and why. These pronouns have helped to define activities indispensable to make better the processes in human environment and inside an individual human being. Although today we are used to thinking that the most important information channel is a visual language, such as writing in letters and in the consequence an alphabet and a print. The first natural way of communication was a speech, invented about 50 thousands years ago.

2. Communication process in relaying new knowledge

Through many ages the communication process was not appreciated in relaying new knowledge to new generations. Techniques in that field, which was being developed by the ancients, such as logic, grammar rules and others were usually aimed at improving the way of communication and making a planed influence receivers by people possessing these uncommon skills. If nowadays it had been used only this way of communication, the relaying knowledge process would

work only in limited, narrow channel. This process could be defined as teaching. It creates a possibility of informing someone what a certain road sign indicates turning right, but an apprentice will not be able to do it. It is also possible to convince a man about a high level of safety of parachuting, but does it mean that he will not be afraid of that? The traditional communication process described above is shown in the figure no. 1.
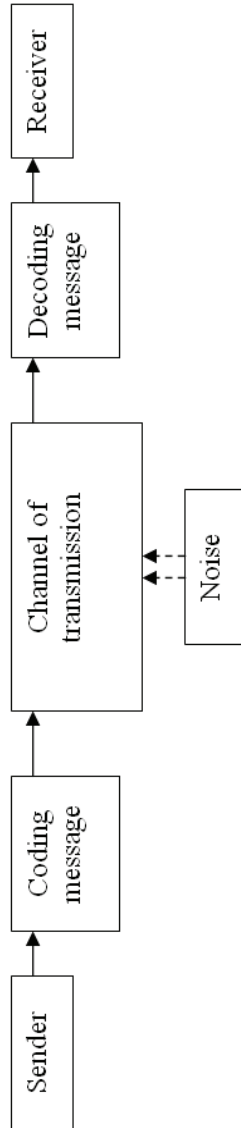
Figure 1. Traditional communication process

The traditional communication process is widely used in one-way techniques of relaying new knowledge, such as lectures, presentations or speeches. In this case teaching is focused on relaying theoretical knowledge, essential to understand a core and structure of the topic and to present generally rules and a mutual dependence various factors.

Besides the traditional way of communication there is also the process, which is more complex and efficient in relaying new knowledge. The main characteristic element is a feedback between a sender and receiver. This type of a communication process is named as learning and it is shown in the figure no. 2.
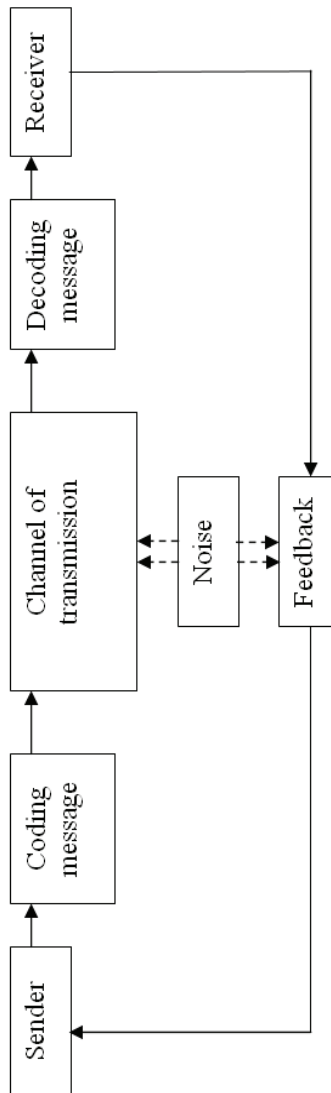
Figure 2. Complex communication process

It consists of four stages, defining knowledge not only as a set of information, but also abilities to use it in practice and forming new attitudes and behaviors. The process is most relevant in training and teaching employees and managers of firms. Because of theirs up-till-now experience connected to the ways of relaying new knowledge, customs and obtained behaviors they are very specific group of learners [Statt 2000, pp. 21–22]. At universities there is still a huge attachment to the traditional way of transmitting knowledge, however the experience based on trainings slowly influences on the academic lecturers.

3. Learning stages and styles

The first stage in the complex relaying knowledge process is described as unconscious incompetence, which defines knowledge of learners in two dimensions: they not only do not know anything about the case, but also they are not aware of theirs incompetence. The second stage is conscious incompetence. While this stage an apprentice realizes that he has a lack in his knowledge, but he is not able to get enough information to fill it up. The third stage of the complex definition of knowledge is conscious competence. In this case the learner managed to obtain theoretical knowledge, but if he wants to put it into practice he has to put in his work a conscious afford, which must be amplified with true motivation. Seldom does it succeed. The fourth stage of efficient educational process, which is able to be achieved when two sides of educational interactions are simultaneously committed, is unconscious competence. Then the obtained knowledge turns into abilities, customs, attitudes and behaviors. This stage is also called the learning process in the contrary to the teaching process, which occurs at the third level and is widely understood as a traditional communication process [O'Connor, Seymour 1998, p. 29].

In order to start the learning process, following the teaching process, it is important to use the special techniques, called 3A. The technique is based on three rules:
— awareness,
— abilities,
— action.

This technique is aimed at a gradual way of obtaining and improving knowledge. In the first phase, which has to be initiated by a teacher (trainer in companies), the opportunity to get new useful tools has to be shown to the learners. Afterwards there is a time to relay certain knowledge and procedures to do new tasks. In the last phase of the 3A technique a teacher (trainer) should convince apprentices to put into practice their new knowledge by practical exercises. They should be strongly connected with jobs and professional tasks, indicating the relevance of the training [Szczepanik 2006, pp. 16–17].

In the literature it is claimed that a learning process influences both human values and beliefs, and in the end it can create emotions indispensable to an

efficient way of obtaining new knowledge. As far as learning is concerned this process is used to be carried out on many different levels:

– the first one is an environment, which gives to a learner general knowledge about his surrounding and people who he goes along with,
– the second level is a behavior, which is to say actions in the real world,
– the third means skills and flairs,
– the fourth level of learning consists of forming beliefs and values,
– fifth – creating the identity of learners, which takes an effect as a definition of a life mission,
– the last but not least, the most profound level of learning, is when a learner can base his thinking on spiritual values and merits.

It is worth mentioning that most of courses, trainings and school education are focused mostly on the first, environmental level. Rarely does it reach the second and the third one making an influence on behaviors, abilities and skills. Very often only the first level is understood as an education process and the others are left to a learner. Additionally as adults are concerned during the school education they obtained three main barriers against effective learning [Dryden, Vos 2000, p. 99]:

– critical and logical ("at school I always felt bored and confused, so for sure nothing has changed"),
– predicting and emotional ("I'm sure I again will not know what it is about"),
– critical and social ("hardly anyone is an omnibus, so I will not be different from others").

In the literature there is a clear division of learning styles. Scientists point four main styles and give name to people who represents them. First style are connected with Activists. They involve themselves fully and without bias in new experiences. They enjoy the "here and now" and are happy to be dominated by immediate experiences. They are open-minded and this tends to make them enthusiastic about anything new. Their philosophy is to try anything at once. Their days are filled with activity, but reveling in short-term crisis fire-fighting. They tackle problems by brainstorming but as soon as the excitement from one activity has died down they are busy looking for the next. They tend to thrive on the challenge of new experiences but are bored with implementation and long-term consolidation. They are gregarious people constantly involving themselves with others and being the life and soul of the party.

The second style of learning are embodied in Reflectors. They like to stand back to ponder experiences and observe them from many different perspectives. They collect data, both first hand and from others, and prefer to think it over thoroughly before coming to any conclusion. The collection and analysis of data about experiences and events are what really counts, so they tend to postpone reaching definitive conclusions for as long as possible. They prefer to take a back

seat in meetings and discussions. They enjoy observing other people in action. They listen to others and get the drift of the discussion before making their own points.

The third group of learners are like Theorists. Theorists adapt and integrate observations into complex but logically sound theories. They think problems through in a vertical, step by step, logical way. They assimilate separate facts into coherent theories. They tend to be perfectionists who would not rest easy until things fit into a rational scheme. They like to analyze and synthesize. They are keen on basic assumptions, principles, theories, models and systems thinking. Their approach to problems is consistently logical and feel uncomfortable with subjective judgements and lateral thinking.

The fourth style of learning is recognized at Pragmatists. Pragmatists are keen on trying out ideas, theories and techniques to see if they work in practice. They positively search out new ideas and take the first opportunity to experiment with applications. They like to get on with things and act quickly. They are essentially practical, down to earth people who like making practical decisions and solving problems. They respond to problems and opportunities as a challenge [Wilson 2000, pp. 108–111].

4. Types of knowledge receivers

In the communication process, described in the figure no. 2, all senses of a human being are engaged. The process is carried through our sight, hearing, taste, touch and smell. Another channel of getting new knowledge is movement. It is considered that specially learning processes at more profound levels, such as behaviors, beliefs, abilities or values, happen through what people do. It is not possible to overestimate the importance of using all senses in the learning process. Relaying new knowledge is not efficient enough, while a theory is departed from practice. It does not mean that learners should do the same things which they will have to do at their work, but things strongly connected in figurative meaning and analogous to these ones in a real work [Kolb, Kolb 2005, pp. 195–196].

As far as creating new patterns in a human brain is concerned, that part of human body is reckoned as the most sophisticated tool in the world and it is not possible to compare it to any other invention of a mankind. Many scientists say that much information and knowledge are stored in the brain branches system, which is similar to branches of a tree. The matter is so complex that i.e. when a man is asked to list economic efficiency indexes, he does it with a certain names of them, and he hardly realizes that they can measure also usual actions in a common life.

People in their learning process can be divided into at least three groups [Dryden, Vos 2000, pp. 349–360]:

- "movement and touch" learners, who learn most efficiently when they are running, walking, waving, swaying and touching other things and they can experience on their own,
- "sight" learners, whose the best way of obtaining knowledge is to see what they should remember,
- "hearing" learners, who prefer hearing to any other senses, they like learning through sound, especially music and a verbal language.

Scientists from the Specific Diagnostic Studies in Rockville in the USA made a research in that field and results of that appeared more than surprising. The research was carried out in primary and secondary schools in the USA and confirmed that most young people simultaneously use in learning processes more than one human sense. Another conclusion drawn by the scientists was that the elder people are the more a sense of sight in getting new knowledge they use. Obviously it does not mean it is the most efficient way of learning.

The facts shown above are a very strong reason for implementing in professional trainings new creative methods of learning, based on games and case studies. They take advantage of simple interpersonal interactions and a hidden level of childish creativity and vitality, which has been put out through years of adulthood.

Jan Mądry, the Board President of Training Partners Sp. z o.o., claims that a good teacher or a trainer does not repeat a piece of information twice in the same way. "Simply, I talk about the subject and simultaneously show some graphs or pictures connected to the case. Additionally I go round the class and move my arms, hands, use my face to express feelings and emotions" [Flak 2003, www.pracuj.pl]. Always after the teaching stage, the third one in the four-stage learning process described above, he make an exercise, which is to strenghten the knowledge and put it into practice.

Trainers with great experience in trainings for companies and firm maintain that there are several types of participants who behave in many different way during sessions. It is a great possibility of being the same situation among learners, despite their age. They are shortly described in the figure no. 3.

Figure 3. Types of participants in teaching process

Type of participant	Features
Calm Cindy	Calm Cindy is a participant, who likes being hidden behind others' backs. She takes part in a training in a passive way – not because of being bored, but shyness. She does not cause troubles – the truth is she does nothing. If Calm Cindy has to learn anything, a trainer should force her to active attitudes, besides her calm nature.
Dominant Derek	Dominant Derek is a person, who is eager to talk all the time – on every topic he has something to say and can give five examples. He is either a talkative person or he wants to impress others.
Always Against Adam	Adam never agrees with a trainer and always has arguments for a thesis against the widely shared – I think, a trainer is wrong saying an elephant has a trunk – Adam says – because I saw an elephant, which...
Disturbing David	David often breaks a sentences of others or talks to participants. Probably he is not interested or he has so many opinions about the subject and he can't stop talking. No matter what a reason is, he makes a noise and a disorder.
Doubting Dorothy	Dorothy claims, that whatever a trainer or one of participants propone, will not work. It can't work – says Dorothy – we tried it a year ago, besides we can't meet criteria, it is too expensive and takes too long. Anyway, managing board will not allow to do it. Dorothy is often against any changes. She is pessimist and can make troubles. Because of this vice she can destroy an innovative atmosphere.
Complaining Chris	Complaining Chris is not satisfied at anything. Why is there not fresh coffee – he asks – for dinner there were awful beetroots and I can't see the words on a blackboard. Can we change a topic of a training, because the old one is really boring? Chris can find a problem in every situation, but he will not solve it for sure.
All Knowing Agnes	Agnes always knows the best solutions. She knows the best answer and nobody else can do it. A right answer is only one – which she gives. If someone has a different opinion, she will fight till the end. Only her idea must be discussed (discuss means adore).
Malicious Mary	Malicious Mary is worse combination of Adam and Dorothy. she does not agree and does doubt, her attitudes is more personal. She likes attacking a trainer – he is the most visible person.

Having Personal Problems Peter	Peter is a man, who every few minutes is like Dorothy, Adam, Chris… He has personal problems (depression, family crisis, misunderstanding with his boss) and unconsciously disturb others.
Clowning Conrad	Clowning Conrad every minute plays a fool and makes jokes not necessary connected to a topic.
Wise Willy	Wise Willy must boast he has finished two faculties – As the latest research says – claims Willy – it seems, that interdisciplinary definition of the problem allows draw a conclusion that…
Changing Topic Tom	Changing Topic Tom is a person, who when a trainer finishes a sentence, claims: "indeed, it makes sense, I remember, when I was on holidays and there was a swimming pool, and…" Tom likes giving examples not suitable to a topic.

Source: Eitington, J.E., 1996. *The Winning Trainer*. Houston: Gulf Publishing Company.

5. Teaching techniques without a play

Training techniques without playing, improving knowledge and skills of learners (students, employees during trainings etc.), are different from each other by a level of creativity. As the result of that they can give various effects of a learning session. It is worth mention about six of them [Jolles 2005, pp. 98–110]:
— a presentation,
— a lecture,
— a discussion,
— a case study.

A presentation, a lecture and a discussion are aimed at relaying new knowledge at the stage of conscious competence – when the teaching process ends. The most important question asked to the participants is "why" and it should be mentioned as often as possible. It is better when a lecturer asks open questions, because in favouring circumstances it lets change attitudes and behaviors of learners. They are also intangibly forced to an open, mutual conversation.

A case study fits when the aim of a learning is to develop analytic and creative thinking. This technique works in the unconscious competence stage, which is formed not in a direct way but through analogous tasks let participants understand the facts to the real life. Similar technique to the case study is playing parts, especially indispensable in shaping roles in a team or a firm.

These teaching techniques are mostly based on the traditional communication process, shown in the figure no. 1. It contains theoretical knowledge without an opportunity to test it or use anyway in practice. They are loved by academic societies and hated by adults, who have to develop professional skills during trainings. It is so because in today's demanding corporate environment,

classroom time is still valuable, but learning organizations must adapt with the times and implement new approaches. Classroom learning should no longer consist of isolated events meant to transfer information from a lecturer to a student. Rather, face-to-face instruction should serve as an extended process where learners can also converse with peers to discuss the content they have absorbed in advance of the day's classroom meeting [Minocha 2006, p. 20].

6. Teaching techniques with a play

Nevertheless the technique which becomes more and more popular among training companies and universities are games and plays. The importance of this technique derives from the fact that 50% of a human brain develops and shapes up till the four year of a human life. When a child is 10 years old, 80% of its brain is shaped and the last 20% of the human supercomputer develops till the eighteen birthday [Dryden, Vos 2000, pp. 213–229]. Tony Buzan, a specialist at training with games and plays, has such experiences: "After thirty years questioning people, what the word education means for them, I drew a conclusion that there are nine basic definitions. There are: boredom, exams, homework, wasting time, a punishment, irreality, lessons, hatred and fear. However, when you ask a four-year child who attend to a good infant school, it says it is a great fun" [Dryden, Vos 2000, p. 175].

Nowadays most of training specialists and scientists admit that there is a real need to come back in relaying knowledge to a cheerful feeling of a play, which was present in every of us in an early childhood. Rafał Szczepanik, a partner in Training Partners Sp. z o.o., claims a good play should both make fun and relax and integrate employees. It mustn't base on criticizing and mocking behaviors of participants, but it ought to consist of discussion about roles in a team, ways of decision making, verbal and non-verbal communication, customs and behaviors [Szczepanik 2006, p. 16]. This technique is so innovative because it turns the great rule of training, which Gordon Dryden formed as: "Remember about the rule which you learnt making puzzle: it is much easier to do it when you can see the whole picture before." As the games and plays are concerned, they should be unpredictable and the aim of that should be hidden till the and. In addition, today's most successful learning programs embrace advances in technology. Therefore, the most optimal learning programs should consist of both classroom time and e-learning methods. By offering a variety of learning models, people learn in different ways.

"By 2011, gaming will emerge as a critical component in a majority of corporate learning solutions. Game-based learning can significantly accelerate the transfer and application of knowledge. It is recommended to leverage the scalability and immersion characteristics of games to accelerate the time to competency and depth of competency" [HR Focus July 2007, p. 5].

As Plato said: "You learn more about a person in an hour of play than in a year of conversation", learning from games is truly captured when games are employed as an educational tool. Nowadays many universities have been demanding major changes in use of real-world applications, cases, spreadsheets, and collaboration with other functional areas, which can be described as "learning by doing". All applications are mostly in the world-wide-web, using distance and blended learning [Erkut 2000, p. 24]. Video game techniques can be used for a variety of corporate training and academic purposes, from teaching simple tasks to higher-level management skills.

For example, L'Oreal, the French cosmetics company, uses an online game, the e-Strat Challenge, for recruiting managerial candidates (www.e-strat.loreal. com/_int/_en/index.aspx). Many companies, from the military and airline industries, use simulations to train employees to perform tasks or to learn emergency evacuation routes. "Examples of these applications include Cold Stone Creamery's ice cream scooping game, which became popular worldwide, and a similar game Quiznos has developed for building a submarine sandwich, called Sub Commander, according to the companies' Web sites" [HR Focus, July 2007, p. 5].

Figure 4. Companies in teaching process

"While IBM's research may be aimed at helping to build its own consulting business, it comes at a time when there's a flurry of corporate experimentation in games. McKinsey & Co. is using video games to test recruits for leadership potential and assess their team-building style. Royal Philips Electronics (PHG) and Johnson & Johnson (JNJ), meanwhile, are using multiplayer games to improve collaboration between far-flung divisions, as well as between managers and their overseas underlings. What distinguishes the latest corporate forays into the gaming world is the degree to which companies are tapping virtual environments to hone the leadership skills of their workers. By 2011, 80% of Internet users will have avatars, or digital versions of themselves, for work and play, according to market researcher Gartner (IT). By the end of 2012, half of all U.S. companies will also have digital offices or 'networked virtual environments,' adds Gartner. The online game world will become an important place to hold meetings, orient new hires, and communicate across the globe."

Source: McConnon, A., 2007, June 14. IBM's Management Games. No fooling around: Big Blue is promoting a video game that could change the way companies develop leaders and manage projects. *BusinessWeek*.

Another innovative way of relaying new knowledge at the unconscious competence level is a survival game. Most of outdoor trainings which are offered in Poland are focused on team building, improving interactions in a team or a firm or is only treated as an holiday event. If the firm expects achieving such goals, the most essential things are a exciting, innovative idea, good organization and safety of participants. If the firm mostly wants a profound educational effect (communication, conflicts solving, change management, project management, planning, time management), the training session should be prepared in order to the four-stage learning theory.

It is worth saying that a survival session can not be an exhausting marathon of games and plays. It must base on the assumption that at first participants experience, then discuss and analyze and at last – plan how to put it into practice. If trainers concentrate only on an innovative way of learning and pass over in silence discussion, drawing conclusions and individual experiences, the training session will not achieve the aim.

7. Conclusion

The process of learning, so relaying new knowledge at the four stage of the efficient learning theory, has always been changing. Innovations in teaching techniques are aimed at increasing their efficiency. The positive effects of that should be both for lecturers and their student, trainers and employees as well..

Increasing popularity of business simulations is the fact. They plunge students into real business situations. In a real-time simulated business environment, students strategize, make decisions, and see the immediate consequences of their actions. Then they learn from their mistakes. They do according to the Chinese proverb: "When I hear, I forget. When I see, I remember. When I do, I understand" [Bisoux May/June 2007, p. 38].

Playing games do not stimulate learning on their own. Computer based simulations throw a problem out there and provide a sophisticated model of play, but at the end of the day, the game is a mechanism for conversation among colleagues. It provides a shared experience and common language to discuss an issue. The experience remains much longer and to more extend then a traditional presentation. In addition it causes a strong addiction to such a way of learning, which makes people willing to answer to the title question: to play.

Abstract

The paper consists of basics characteristic of adults' learning process and a comparison between playing and not-playing during the process. The authors tries to show the difference in effectiveness when training in these two ways. There are also some examples of training styles in different companies.

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