Predrag Prtljaga
Jelena Prtljaga, MA
Teacher Training Faculty, Belgrade
Preschool Teacher Training College, Vrsac

IT SUPPORT TO TEAM LEARNING

Abstract: Parallel to the fast IT development theories of team work have come to life. The paper deals with the main segments of team work and the ways they can be supported by informational technologies. Having in mind that nowadays new knowledge should be applied and team work should be transformed into team learning and brought back to schools. The authors have made an attempt to implement IT in team learning according to *Types of Work Wheel* created by Margerison and McCann.

Key words: IT, team work, team learning, communication.

Team learning and team work are the terms which, viewed apart from the existing theories, could seem pretty common, since nowadays as well as throughout the last century, teaching has usually been undertaken in a classroom with a group (team) of students. Of course, it has long ago become clear that this is not team work in the real sense, at least due to the fact that the results of learning are individually assessed – the first significant difference pointing out that team work is “something else”. Starting from this statement, it is obvious that team learning demands “common vision” (Peter Senge 2003), leading to results which can be assessed as a result of team learning or work. Considered in such a way, the emphasis in team learning is put in the engagement of a number of students who use their individual abilities in the segment where their contribution will be the most obvious, with the result of such mutual work (learning) overcoming the individual achievements of each student.

The British author Reg Revans had long ago dealt with team learning, but it has recently become a current issue again, after the Americans have “discovered” the

possibility of using team work in industry, as a way of faster and more efficient solving of problems in business. In the era of fast changes and new knowledge concentration, it was necessary to find a good method for adequate and adjusted use of the segments applicable in a given organization, in a way which will not cause great shocks in the business process itself, resulting in system changes and enabling further development. In other words, new knowledge should be applied and team work has been transformed into team learning and brought back to schools.

The theories dealing with the introduction and application of team work in business have with minimal changes been applied as theoretic grounds for team learning, so that the two terms have been made almost equal and become so interwoven that it is today difficult to make any difference between them, if there is any. This is the reason why there are terms in the process of education which turn students into “reporter-advisers”, “creator-innovators”, “explorer-promoters”, “assessor-developers”, “thrusters-organizers”, “concluder-producers”, “controller-inspectors”, “upholder-maintainers”, and finally, “linkers”. Consequently, the *Types of Work Wheel* created by Margerison and McCann underlies the segment of “raising of questions”, which is the first component of team learning concept. This theory and others similar to it were created in the time when computer and IT development reached its peak, but the possibilities, which are soon to become available to everyone, have not been considered yet. Our attempt is to build IT into such theories with the assumption that it is possible to prove that fast IT development is based, among other things on the demands made by team learning.

Before considering single elements of the *Types of Work Wheel*, we will define the basic aims to serve for the evaluation of team work, i.e. to be the referent point serving to confirm that it is really team work that is going on and we really address the needs and reach the aims of team learning:

- team learning is really going on when all the team members are focused on **solving a single, common task** and when **there is cooperation** among them;

- team members have to know **what their task is**, what is expected from them; on the other hand, freedom has to be allowed for the team members to **change roles and tasks** attempting to come to better solutions;
- the aim of learning is not to acquire new knowledge, but to learn **how to acquire knowledge** and how to subsequently **apply it – make it useful**.

Having defined the basic aims and demands of team work, we will state the elements of one of the possible concepts of team learning:

- raising of question
- differences assessment
- communication and
- revision;

If there is not a question (problem, task...) we do not need a team, so the existence of a question practically is a precondition for creating a team. The second element is a demand for the team members to have different and various opinions. If there are no different opinions there is only one way leading to the solution of a problem, which i s most often wrong and inefficient result of team work, i.e. team learning. If conflicts in problem solving are not allowed, we will face the result of an individual, not a team. Communication is an essential process, uniting the team – without it, a team is not a team and the result is nothing more but the sum of individual unconnected pieces of information and not a result of mutual efforts. The revision of what has been learnt serves to correct the processes in order to achieve a desired aim.

IT development has appeared as “the long arm” of the theories which appeared in the end of the last century, but also as something which has driven these theories. Computers have been existing for more than 60 years as “machines” capable of processing great number of numeric data. In the last quarter of the 20th century computer has appeared as a device handy to entertain us at home. Unexpectedly it is to get back into industrial plants, as a powerful “tool” in automation, as well as in organization of business tasks. Unremembered fast development of the technology brings us into new technological revolution, when knowledge is the greatest capital and its application the way of creation of new value. Team learning supported by IT

can be the source of new knowledge and a way to use new knowledge in the most efficient and economically most profitable way, reaching the basic aims of the “knowledge era”.

When there is “a question”, and we are facing a lot of questions nowadays in business world, they are to be solved quickly and efficiently. Therefore it is necessary to have teams ready and trained, i.e. staff educated to be willing and trained to work in a team. In order to educate for functioning in a team, it is necessary to previously define team activities. We will on this occasion rely on the mentioned Margerison-McCann Team Management Wheal.

The key activities are described in the following way:

1. Advising – information gathering and reporting;
2. Innovating – creating and testing ideas;
3. Promoting – research and possibilities presentation;
4. Developing – evaluation and testing of applicability of new approaches;
5. Organizing – establishing and implementation of the ways of work;
6. Producing – concluding and products delivery;
7. Inspecting – system work control
8. Maintaining – maintenance and protection of standards and processes;
9. Linking – coordination and integration of the work of the rest of the members.

ADVISING – When we deal with problem solving, it is necessary to raise a number of questions, followed by information gathering, sources definition, the choice of real, truthful and checked information, It is needed to reject already tried, incomplete and imprecise pieces of information. As a final step, it is necessary to once again check whether all the relevant information have been considered. The existence of internet can to great extent shorten the act of gathering of information, while it furthermore provides both segments of control: rejection and checking. Last, but not the least, the use of computers enables timely systematization, organization and preparation of information for the next step in team work.

INNOVATING – In conventional team work, during this phase the offered solutions are discussed within the team, confrontation of ideas and solutions is demanded, but

in the same time the reasons for the proposed innovation are given. This is not the phase when decisions are made. Physically, this activity used to ask for the gathering of team members in one room, at one place. The development of electronic transfer of information, sound and images makes the “gathering” easy and simple, with the team members who can on regular basis at a certain time discuss and debate even when they are not physically present, even if they are far away in different time zones; it is also possible to organize discussions on internet forums.

PROMOTING – The activity requires two aspects: presentation of ideas within a team and external presentation of a solution to people who do not belong to the team. Powerful presentational tools on computers (MS Power Point, etc) allow both tasks to be performed simultaneously, with small corrections, and to be made available to both interested parties.

DEVELOPING – Implementation of ideas in a concrete business environment is very expensive, so that if there were no informational technologies, it would be reject ideas which can even seem to be good without testing the effects of their introduction into the environment. Computers allow simulation and cheap selection, i.e. rejection of ideas. Apart from this, they accelerate the process of implementation pointing to the procedures to be avoided in the process.

ORGANIZING – The concrete procedure of introduction of a solution in the anticipated environment through the existence of simulated process, presentation and pre-delegated responsibilities makes the procedure significantly shorter and less complicated.

PRODUCING – If informational technologies are not a part of implemented solution, their contribution here is negligible, since all is now on those who implement it.

INSPECTING – With all the aspect of introduction of new procedures well analyzed, when the results are those expected and when it seems that there are no errors, it is necessary to inspect the implemented solution. It is often the case that the results in two theoretically similar or even the same environments do not give the same, equally good results. Monitoring by conventional means offers differences in results only when someone wants to analyse them; control supported by IT offers the results in interactive way and corrections can be made much faster.

MAINTAINING – Successful teams are to be maintained and supported. Due to Internet communicational systems it is possible to inform on daily basis the team members on the achievements and to make it possible for them to function as a team

even when not physically present. In this way it can be pointed to potential errors in the work of the team, leading to their avoidance in the future, while at the team level they can be much more efficiently overcome.

LINKING – All the elements of the team should be connected and put in function of only one idea. If we pointed out that team work has become a current issue again with the occurrence of IT, we can say here that this need, as in many other activities, has significantly influenced the development of communication and communicational means and tools based and in the range of informatics. Apart from the role of IT, we face a great need to use a universal language (English) in "linking", in order to make it possible for the team members, who obviously can come even from different continents, to communicate successfully.

It should once again be mentioned here that rather "industrialized" terms have been used in the paper, but "business process" can with no obstacles be considered an educational process and it can be applied in the classroom.

Have the goals of team learning been finally reached by the introduction of information technologies? Existence of informational means conditions the cooperation between team "components" – the lack of cooperation can easily be noticed and solved by exclusion, i.e. inclusion of new team members. The stated means allow simple role and task change among the members if the need arises. Finally, the existence of control grounded on IT means confirms whether knowledge has been acquired, i.e. whether it has been applied.

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