Enterprise social collaboration as a new e-learning method

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Abstract: Social collaboration is a concept, which is modern and its importance starts to become more intensive by using new technologies in companies. Social collaboration brings many advantages in communication and knowledge sharing within the company. The contribution clarifies the importance of social collaboration with a focus on knowledge management and offers an overview of IT tools supporting it. The aim of the contribution is to investigate social collaborative IT tools and coming out from the survey in (Girchová, 2018) to bring new opportunities in education at higher schools and universities by using these tools.

Keywords: social collaboration; social collaborative IT tools; knowledge management; knowledge sharing; e-learning

JEL Classification: O33, O32, I20

1 Introduction

The business environment is rapidly changing in the last ten years. The automatization and the using of artificial intelligence changes not only the business processes and technical environment, but also the nature of work. Hansson in (Hansson, 2017) writes "Over the past 20 years companies have automated and outsourced much of their structured or process-oriented work. What work is left is unstructured, complex, and highly collaborative". These features are typical for most international and distributed companies over the world. The production is oriented on the distributed processes and the companies hire the people for projects. The product as a result of the project-oriented process is the result of human know-how. Therefore, good project management has a great impact on the success of a whole company. The unstructured work is creative work hidden often in the tacit knowledge of employees. It is the dynamic complex process, which is technology-centred dealing more with digitalization and emphasis on collaboration. The usage of mobile devices, plenty of software application and the ubiquitous Internet is a cornerstone for open and fast communication and work over the world.

The great impact on the changing working environment has also brought about by the newest generation of employees. The generation of "Millennials" (born 1977–1997) has the strongest influence on the changing nature of work right now. They are more oriented on using technologies, expect the flexible workplace and „instant access to information, immediate feedback from superiors, the ability to express their opinions honestly and openly with those with whom they work, and opportunities to engage in personal development and career advancement whilst working" (Hansson, 2017). The business environment has to admit the new philosophy of work, which is based more on open collaboration. The Millenials do not accept the strong hierarchical management and prefer to communicate about their knowledge, skills,

ideas, job requirements and expectations. All these expectations are projected in the term „social collaboration".

2 Social Collaboration

There are two very similar terms, which can describe the work in the company. They have the same "word" in some leanguages (e.g. in the Slovak language). These two terms are Cooperation and Collaboration. Although it seems to be the same, Downes in (Downes, 2010) described the difference between these two terms given by the role of the individual in the group collaborating people: „Collaboration belongs to groups, while cooperation is typical of a network. The significant difference is that, in the former, the individual is subsumed under the whole, and becomes a part of the whole, which is created by conjoining a collection of largely identical members, while in the latter, the individual retains his or her individuality, while the whole is an emergent property of the collection of individuals."

Other authors as (Hansson, 2017) stated that „Collaboration" can be defined as a „[c]ooperative arrangement in which two or more parties…work jointly towards [the achievement of] a common goal". (Hansson, 2017)

Or, collaboration means: "…working together with co-workers or external stakeholders on documents, project plans, reports, or other types of content in order to create a revised or final version of that content or enable project execution." (Alfresco, 2015)

The deeper insight into the topic of social collaboration is given by Downes, who uses four dimensions of it: *Autonomy, Diversity, Openness and Interactivity*. The social collaboration is very popular in the groups of young people.

Autonomy means "the actions of the individual are determined with reference to the needs and interests of the group and are typically directed by a leader or some sort of group decision-making process. Groups often have a 'common vision' to which each member is expected to subscribe." (Downes, 2010) It is the opposite of the cooperation where each participant follows own profit by using the cooperation with other parties.

Diversity. The group of people who practice collaboration use the "same language" to follow the same unique aim. There are no more aims, so there is no diversity of aims and objectives. Although the participants have different roles, they follow one common aim (e.g. to make a product; to offer a service to customer etc.) On the other hand, there is no joining member by cooperation. The participant uses his/her own language, tools following own preferences in the cooperation.

Openness. The social collaborative group has an exact "border". It means there is clear who is a member of the group and who is not. By cooperation, the members can join cooperation and go away from cooperation if they want.

Interactivity. In the case of a collaboration, information typically diffuses from the centre to the periphery. It comes from the role of "informal leader" (or leaders) in the group and the core of strong members in the group. Dynamic of the collaborative group comes from the ideas of "centre" to other participants in the group. In the cooperative group is the equality between the members.

Many modern companies prefer doing projects and project management. Project thinking plays a crucial role by their producing, acting or hiring the employees. The dimensions of social collaboration support this way of management and create a collaborative work environment.

Also, it brings a few advantages as "Streamlined operations; Reduced costs; Enhanced cohesiveness amongst teams; More engaged employees; Greater employee retention rates; Better customer experiences; Increased referrals; and A significantly better bottom line" (Hansson, 2017).

3 IT tools for social Collaboration

Today companies and enterprises are usually international and distributed over many countries in the world. Departments are in various countries and sometimes the department is located in several countries. There is no possibility to have personal operative meetings for discussing the problems. So the natural way how to manage the production and acting the issues is to use IT for cooperation a social collaboration.

All the IT tools supporting collaboration and cooperation are called Groupware. The term groupware covers with a large scale of possibilities on how to use and combine many IT technologies. According to Pinola (Pinola, 2019) „…groupware references several types of computer-supported collaborative working environments"....„collaboration software operates as a portal from which users create and update version-controlled documents, manage online content, share assets like calendars and inboxes, and confer through chat and messaging features"..."The term groupware covers both very broad and very specific software implementations." (Pinola, 2019). Here are some classification aspects of social collaborative IT tools. We can classify them by the type of collaboration, by the way of collaboration, by the functions which they are able to offer the user, by the way of deployment (Girchová, 2019).

By the type of collaboration (in terms of response speed and content): Synchronous, where users are working or doing tasks together at the same time (known as "realtime" collaboration software) or asynchronous where the users work at different times.

By the way of collaboration: conference tools, communication tools and coordination tools.

By the functions they provide and their intended use: business communication tools, content and document management tools, including knowledge and information sharing, time and human resources management tools, and project management tools. Often there is no exact line between the types and one IT tool can provide more functions.

By the way of deployment: The software can be installed on its own corporate servers, or the company can use the servers of one of the web hosting providers, or use the cloud services and leave the management of the tool to its provider. Each solution has its advantages and disadvantages and not every company suits all solutions.

The companies gain many advantages by using the social collaboration software and IT tools. Some of them are mentioned in (Patterson, 2019). Although there is no methodology on how to measure the effectiveness of IT tools for social collaboration, Patterson wrote, that some results in companies proved the effectiveness of them.

a) "Social learning approaches have a 75:1 ROI ratio compared to formal web-based training.

b) Course completion increased to 85% on HBX, a Harvard Business School online education initiative when it introduced social learning.

c) Productivity gains enabled through using a social learning platform can be as high as 35% by being able to connect with others using social tech.

d) 82% of businesses that use social learning tools want to increase their use in the future." (Patterson, 2019).

However, the usage of social collaboration IT tools bring advantages to companies, but to achieve mentioned effectiveness is necessary to know all features of the tools. The survey in (Girchová, 2019) showed several contradictions. The survey was carried out the IT company, where we supposed (Girchová and Rakovská) that the employees have some information about social collaboration IT tools and they were inclined to use them. More than half respondents answered first and second questions "No" (The first question: "Do you know or have you got in touch with a term "Enterprise social collaboration"?"; second one: "Do you know or have got in touch with a term "Enterprise social collaboration tools"?). Further questions were deeper in the topic of social collaboration IT tools and the survey offered the questions whether the respondents use specific groups of IT tools (synchronous, asynchronous, communication, conference, project management tool etc.); whether the respondents use a specific tool (instant messaging, video calling, document publishing, blogging, project managing, news, conferencing, time and task tracking). The respondents were more informed about specific IT tools. Most of them use these tools regularly. Here we can see the first contradiction - the employees know the IT tools, but they do not know that specific IT tools belong to groupware or to social collaboration IT tools. Then we asked about using the software: ASANA, Azendoo, Salesforce, Chatter, Confluence, Jira, Jive, Ryver, Salesforce, Community Cloud, Google docs, Samepage, Slack, Skype, Social table, Webex, Workplace by Facebook and Zimbra. The respondents mostly use Confluence, Jira, Google docs, Slack, Skype, Webex. None of the software is universal so none has all the functionalities and features. So it is natural, that users prefer to combine the software tools of social collaboration. Second contradiction was, that although the software as Google for works, IBM Connection and Office 365 are the leading Vendors in the group of social collaboration suites (Technology Advice, 2019), the respondents prefer open source software (Google docs, Slack etc.) This specific users` approach comes from the character of the company (IT company).

The result from the survey shows that people often do not understand social collaboration terminology, but they use intuitively the tools, which are useful for them and the usage of it has an intuitive interface. Ranking lists of social collaboration software offer a various combination of three best software tools, depending on the importance of the chosen software features. Here are some examples of the best and popular social collaboration tools for the year 2019 and 2020:

e) *Techradar* (FEARN, McCASKILL, TURNER, 2019) mentions (2020): Office 365, Slack, Asana, Podio, Ryver etc.

f) *Finance-online* (Financeonline, 2019) mentions the most popular software (2019): Monday.com, Wrike, Zoho Projects, Asana, Jive etc.

g) *PC* (DUFFY, 2019) mentions (2019): Zoho Projects, Asana, Liquid Planner, Podio, Slack etc.

As we see, the variability for comparing the social collaboration IT tools and software is wide and is based on the type of company (IT company, sales company, production company etc.) It is not easy for managers to choose an appropriate tool in the company. So it is necessary to start teaching the students more about social collaboration and IT tools for supporting it. It is important for managers to know the terminology and functionality of each IT tool and how to combine them. Another important thing is, to teach the students how to use all these software and IT tools in an effective way.

4 Collaboration Software IT tools at schools and universities

As it was mentioned before, it is good to prepare young people how to use social collaboration software in an effective way. Though they use much software for communication, sharing documents, pictures, voices, music etc., they do it an intuitive way. Some of the basic schools, secondary schools and the universities prefer to use Learning Management System (LMS) and the leader of LMS`s in central Europe is LMS Moodle (open source with good documentation, case-studies and also official support (PragoData Consulting, 2019)). LMS systems is very good for teachers (for managing and evaluation assignments, various tests, tasks, discussions etc.), but it seems that is too robust for students.

Project thinking starts to be very popular in the last years in education. Many times it is confused with essays or seminar papers and the term "project" is popular. We can teach project thinking also to small children and lead them to real collaboration and cooperation. IT tools can be very useful for teachers and are also supportive of teaching handicapped children. Especially children with an autistic spectrum of disorders who prefer media and IT tools communication.

The market offers plenty of software tools helpful in education for social collaboration skills development. Website Common Sense Education (CommonSenseEducation, 2019) introduces groups of student-collaboration tools from small children to secondary school. The authors wrote: „These tools mix productivity and creativity, getting students to share and collaborate on projects, give and take feedback, annotate, brainstorm, make media, or just hang out. No matter the use, there's tech here that'll show students how collaboration leads to better knowledge building as well as the development of social and emotional skills like teamwork." (CommonSenseEducation, 2019). Some tools are for small children (e.g. Drawp Unlimited, Makers Empire, Minecraft –Stellar collaboration tools) and advanced tools are for students at secondary school to university (e.g. Piazza – Advanced Q&A tool compels collaboration, higher-order thinking; Google drive, Microsoft Teams etc.).

The social collaboration is natural for students as a way of learning, sharing information and knowledge. They often prefer face-to-face collaboration before exams in the groups with a leader (or a person who divided roles and coordinates work or explains topics). They know social collaboration software as web-based tools that encourage the sharing of ideas, division of effort, and group-wide accountability.

As we mentioned before, the social collaboration tools are important also for developing emotional skills and teamwork. It is a very important feature because often the university students are not able to work together within the teams, which are created by the teacher. They are not able to accept other students. The wise students refuse to cooperate with other students, so here we can see „strong" groups and „weak" groups without a leader. The group without a leader with low creativity and low intelligence of work is not able to work effectively over projects and after the presentation of project they are depressed, frustrated and they want to stop working in the teams. Real work and real companies environment are not created only from „friendly groups", so it is necessary to train the children and students to collaborate with all types of people and the social collaboration software allow it very effectively. The main role of the teacher is not only teaching students how to use the software from a technical point of view but show them how to introduce and set the rules of collaboration, which are fair and comfort for all users of this software.

The university students should be able to use all features and functionalities of social collaboration tools (which are in Fig. 1) from a technical point of view (especially IT students or students with technical thinking). But many of them use only asynchronous communication,

the function of a social network, communication and conference tool, instant messaging, voice and video calls, presentation features with screen sharing and publishing the documents and articles. Only a few students are able to use advanced tools for project managing, time managing, track tasks, linking the data, reporting data or use the tools supporting the customers.

Functions and features of Social collaboration software	Communication tool	Conference tool	Coordinate tool	Instant messaging	Voice and video calls	
	Asynchronous communication (ability to add comments, create questionnaires, send emails)	Publication of documents and articles	Integration with data storage and backup services	Integration with communication services	Integration with third party services - others	Customer support
	Function of social network	Presentation features with screen sharing	Project management	Shared calendar	Tracking task	Supported languages
	Time tracking	Reporting, graphical representation of data	Mobile device support	Deployment in the cloud	Deployment on servers at the customer	

Fig. 1 *Some of the features and functionalities of social collaboration software*

The main role of using the mentioned tools is to prepare the students for a real work environment in the companies, where often employees need not only technical skills but also ability to use the tools in an effective way. The practice in the 21st century is oriented more on project and teamworking and it needs soft skills as better communication skills (clarity, confidence, respect, empathy, constructive feedback, friendliness etc.), teamworking skills (conflict management, listening, delegation, idea exchange, negotiating etc.), adaptability, problem-solving etc. This is the reason why it is necessary to spend more time preparing students on how to use social collaboration by using the groupware. The usage of professional IT tools for social collaboration in education brings the following benefits and supports:

a) *Creating the working environment (e.g. cloud solution)*

b) *Virtual learning teams*

c) *Problem- oriented projects*

d) *Case-based learning (working on the case)*

e) *Project management and project-oriented education*

f) *Creativity*

g) *Collective thinking (brainstorming or using other techniques of knowledge acquisition)*

h) *Goal oriented thinking*

i) *Responsibility for individual parts of the project*

j) *Self-assessment*

k) *Collective evaluation of project*

5 Conclusions

The Forbes (Forbes, 2018) introduces other advantages coming from using of social collaboration tools in companies: faster communication, comfortable collaboration, increasing team morale, allowing remote control, getting off of email, decentralization and flattening, coaching using real examples or conversation, more instant access, removing geographical barriers and harvest best practices. The respondents from the above survey agree with these advantages in the practice. Though they agree, the survey shows, that most of them use only the limited functionality of the social collaborative IT tools. They focus on the same functionalities mentioned in section 4 (the same functionalities as the students use). Here is the room to train the students in soft skills by using the professional open-source software of social collaboration. The soft skills are very important for teamworking and bring more creativity a satisfaction in organizational culture within companies.
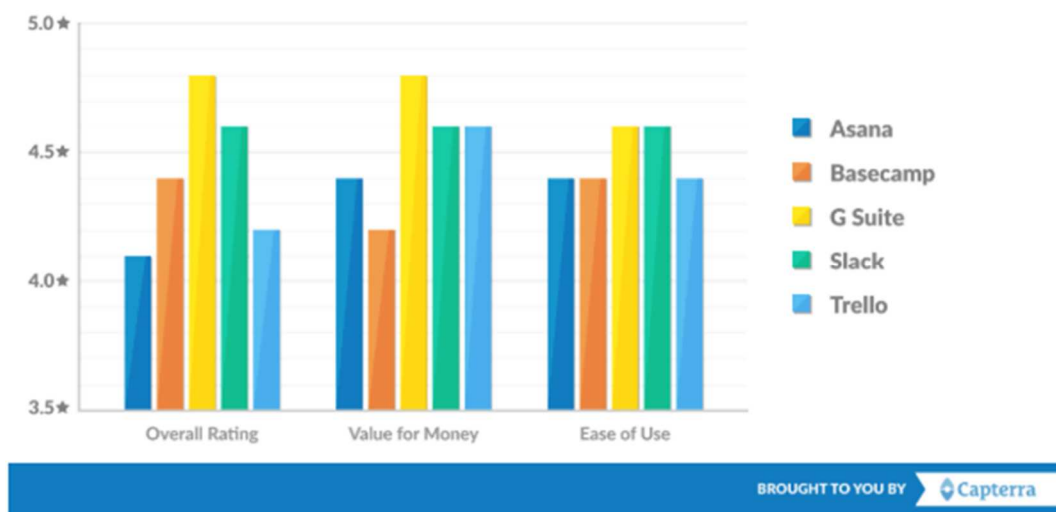

Fig. 2 *The top-rated collaboration apps for education professionals (Capterra, 2018)*

It is the highest time to follow the new trends in the social collaboration software Fig. 2 and orientate some important study topics (e.g. Project Management, Software engineering, Knowledge Management) towards a new way of teaching by using some of the software tools of social collaboration.

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