



The Eight Essential Ingredients of Small Group e-Collaboration Technology

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References to the Eight Essential Ingredients are derived from the work of Roy Soliman, Masters Candidate, Engineering Faculty, University of Technology, Sydney and included with his permission

Introduction

There is no doubt that remote collaborative technologies are allowing people in different geographical locations to work successfully together over the Internet.

This paper discusses the eight essential ingredients required for effective and efficient e-Collaboration and how Grouputer supports each ingredient in a way that provides a shared framework for group member interaction.

Definition of e-Collaboration

e-Collaboration is defined as collaboration that occurs anytime there are two or more people sharing complex information and knowledge building over the Internet, on an on-going basis for a specific purpose or goal.

Our focus is on knowledge building using the Team/process model which is differentiated by:

- It is used to facilitate the activities of a team
- Involves high levels of interaction
- Around knowledge building between the members of small groups
- Engaged in implementing a business process methodology, such as Six Sigma, or ad hoc problem solving session and planning

Its characteristics are:

- Members share a few common objectives
- Members have a shared stake in their success
- Members are often bound by the parameters of a project
- Members are interdependent
- Membership is tightly controlled
- Membership is relatively small (2-20)
- Most members both read and write content
- There is a higher level of interactivity
- Access and security are tight and often based on roles, groups, or projects
- New members can get up to speed by reading the group “history.”

e-Collaboration Technology

Technology plays a critical role in how people in organizations collaborate today. However, its role is to enable the interpersonal interactions that comprise collaboration. Economics, corporate culture, internal politics and leadership also significantly impact the efficacy of e-collaboration.

e-Collaboration technology grew out of several previous technologies:

- Group Decision Support Systems (GDSS) emerged in the late 1980's and offered knowledge building, real time collaboration in same place/same time meetings. These specialized systems were very effective at complex problem solving but were not widely adopted
- By the 1990's, audio conferencing had started to take off and supported two-way voice communication for groups
- Internet based web conferencing emerged in the late 1990's, providing tools to support information sharing, group collaboration on documents, application sharing and text chat. "These tools are great at sharing content within a specific context, but do little to support meeting or business processes." (David Coleman, CEO, Collaborative Strategies)

An e-Collaboration program combines these three technologies into a single platform that supports varying sized meetings and modes for structured problem solving and planning. To be really effective the e-Collaboration program must include the eight essential ingredients.

8 Essential Ingredients of e-Collaboration Technology

People

No one can collaborate alone, so by definition, collaboration requires two or more people. Differences between people play a crucial role in establishing the people-to-people process. When confronted with inputs people respond in different ways. These differences are utilized to jointly create solutions to problems. Some empirical research results show that team diversity is better than team homogeneity. However, in verbal communication as the number of participants increases, the amount of airtime each person receives is reduced. In a typical conventional meeting, each person has four minutes of airtime per hour.

Grouputer helps to address decreased air time for groups by changing the conversation from serial (one person speaking at a time), to parallel, where all participants have equal airtime through the medium of text-based discussion.

Parallel thinking leads to the creation of more ideas and as Marsden & Mathiyalakan's work showed, there is a positive effect on the quality of ideas generated and group size.

Shared Space

Shared space provides common areas for collaborators to share context, content and processes. Shared spaces also provide the point of focus for collaborators.

In a synchronous meeting, participants, led by a facilitator, work together in the same space. The shared space changes according to the activity in hand or in some cases two shared spaces may be simultaneously active. For example, a presenter may be showing slides while participants simultaneously brainstorm answers to questions in the presentation.

In a brainstorming activity the shared space is the collective area where participant's ideas collect for review, discussion and further processing, for example, prioritizing and action planning.

Implicit in the concept of shared space is the notion of awareness. The GDSS tool, Discuss, provides personal named workspaces for up to 12 participants. Workspaces may be visible or hidden. When displayed, keystrokes are visible to all, encouraging idea synergy and creativity.

Clearly the selection of the shared space must be appropriate for the activity at hand. For example, two people editing a document would need to be able to share the contents of the document and be able to interact with it, revising text, adding graphics, or proof reading.

Time

Time is an obvious management factor in e-Collaboration. In the same way conventional meetings occur at a specific time, so to online meetings.

Invitees automatically receive an email invitation containing a meeting url which when clicked opens Internet Explorer and delivers them to the meeting space. In an asynchronous meeting, participants self-navigate and are not aware of others who may be manipulating the shared spaces at the same time.

In synchronous meetings, meeting timers count down the allocated time and provide structure when the group is working in the GDSS tool, Discuss.

The GDSS accelerates decision making by a factor of four, so online meetings typically accomplish four times as much as conventional meetings. Sloan Management Review cites productivity improvements of up to 500%.

Common Objective

A jointly held objective is another of the essential ingredients required for e-Collaboration. Participants may be drawn to a group for different reasons but they must be united by a common objective. Most often the objective will have a degree of newness for all the participants.

For e-Collaboration activities it is helpful to articulate the common objective both verbally and on the Welcome page in the meeting space, so that there is no doubt as to the purpose of the meeting. It also encourages a focus on the objective.

Focus on the Objective

All participants should be focused on the accomplishment of the objective – otherwise the activity is not collaborative. Well designed technology should enable focus on the objective. A simple, structured interface that encourages participants to concentrate on the task at hand and not the technology itself is important in maintaining focus.

Grouputer's participants' interface has no menus to distract attention. The facilitator's interface is designed for focus on achieving the objective rather than on navigating the technology. All prepared content is ordered in presentation sequence and is activated for display to all participants by a simple double click.

Focus is also maintained by reducing distractions and domination by the "loudest" voice when in discussion or brainstorming mode. Unlike voice only remote meetings, structured text input gives all participants a "voice". Even the quiet people are able to get their ideas on the agenda.

Optional tools within the technology provide a timed, structured process for dealing with each discussion item and foster the creation of high quality ideas with group buy-in.

Common Language

A common language can be thought of as a set of symbols which are mutually understood by all participants, such as body language and speech.

In e-Collaboration meetings the common language is derived through use of voice, data and video. To date most e-Collaboration meetings are conducted without video. Initially, the absence of seeing each other face-to-face seems strange, but diminishes as participants engage in further shared experiences.

Cultural barriers, such as language, do not pose problems, provided there is a common language. Results from e-Collaboration meetings across international boundaries have been extremely positive, especially where participants share gender or spoken language limitations, but have strong texting skills. Text communication ability has enhanced collaboration significantly and resulted in better, faster outcomes.

Knowledge in the area of the Objective

Group members need some knowledge in the area of the objective. This may be knowledge similar to other participants or quite dissimilar knowledge.

In highly creative decision making meetings existing knowledge passes through several stages of idea generation, dissemination, concatenation and elaboration which can result in an exponential increase in quality and the creation of new, superior knowledge.

Interaction

Interaction, that is active engagement with the group, is possibly the most important ingredient required for successful e-Collaboration. Interaction includes participants expressing different opinions, negotiating outcomes, agreeing and disagreeing with each other.

Web conferencing tools focus on the delivery of one-to-many events, for example, PowerPoint presentations, application and document sharing where one person "broadcasts" to participants. While these activities are very useful, undue emphasis on them has obscured the benefits of group interaction, an essential feature of e-Collaboration technology.

Grouputer's GDSS tools in Discuss support interaction in a number of ways:

- Parallel processing, allowing participants to all "talk" at once while investigating and building on each other's ideas
- Group focus on one discussion topic at-a-time allowing idea synergy and new knowledge creation
- Individual processing in asynchronous meetings allowing participants to stay with an idea or train of thought as long as it engages them
- Options for anonymity for less inhibited generation of ideas
- Structured "drill-down" on selected topics to elaborate on ideas and address specific issues

- Rapid group selection of "good" ideas for further exploration
- Group satisfaction with the level of participation
- Increased buy-in to results and commitments
- Synchronous and asynchronous flexibility to match schedules and time zones

These eight essential ingredients for efficient and effective e-Collaboration are applicable to most activities undertaken in meetings over the Internet, including brainstorming, problem solving, planning and the implementation of the myriad of business process methodologies, such as Six Sigma, New Product Development, Project Management, Strategic Planning and many more.

If you would like to learn more about Grouputer or request an online demonstration, please email enquiries@grouputer.com or visit our website www.grouputer.com