SUSTAINING ONLINE COLLABORATION: SEVEN LESSONS FOR APPLICATION IN THE VOLKSWAGEN AUTOUNI

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Introduction

Team building is a challenge in face-to-face environments – and even more so when conducted at a distance. Volkswagen's (VW) AutoUni is tasked with not only building successful teams with corresponding results, but also nurturing, sustaining, and maximizing those teams over time and distance. AutoUni's key challenge of getting teams to sustainably share and create knowledge is coupled with that of creating a blended environment of online and face-to-face collaboration, while conquering the evolving knowledge management and learning frontier. AutoUni requires a strong framework as the foundation for its online education activities; with that in mind, this paper reviews the current research and best practices in e-learning and online collaboration and defines seven important lessons for sustaining collaborative efforts in an online environment.

Current Research and Best Practices

Meister [1] predicts that the skills of communication and collaboration will be of growing importance in the twenty-first century organization. Online collaboration can be an effective approach to cognitive and social learning through formation of a collective intelligence actively created from team members' ideas, associations, and structuring of information and the team processes themselves (Harasim [2]). The resulting virtual teams will make organizations more dynamic and able to respond more quickly to global demands, as well as expose employees to new ideas, cultures, and new ways of doing business (Jarvenpaa & Leidner [3]). With the growing trends of global expansion and international, virtual teams, the challenge becomes creating and sustaining collaborative efforts in an online environment – without losing the dynamics that make teams successful. The following seven lessons build on current e-learning industry research and best practices for forming and sustaining successful collaboration at a distance.

Lesson 1: Promote a learning culture where knowledge generation and sharing is openly desired.

First and foremost, it is integral that a learning culture – one which encourages and supports learning and open distribution of knowledge – is prevalent within an organization. Rosenberg [4] calls for an "environment and a culture that encourages knowledge generation and sharing, supports an atmosphere of learning from mistakes, and assures that what is learned is incorporated in the future activities, decisions, and initiatives of the firm" (p. 14). This learning culture must be promoted at all levels of the organization – starting at the top.

Leaders build visions of a learning culture and then work to implement them through their strategic plans and their example and support. Meister [1] found that the average CEO spends at least one day a month facilitating learning in his/her organization: being involved in workout sessions, presenting values and vision at new hire orientation sessions, and facilitating senior management training. Such involvement "promotes a culture of continuous learning and helps to transform the organization" (p. 50). Berge [5] also calls for the support of the top leaders in an organization, which is exhibited through their enthusiasm and hands-on involvement – and their willingness to provide financial support when and where needed. Without the support of top management and key leaders within the organization, enterprise-wide training initiatives are almost certain to fail. Identifying leaders who will cultivate and propagate a learning culture is essential; in some cases, it may even be necessary to show management examples of successful learning cultures, for example through case studies.

Culture building strategies include making management accountable for learning, initiating change at the enterprise level, making learning part of the job, making everyone a teacher, designing good courses, certifying learners, paying learners to learn, and making learning accessible and affordable (Rosenberg [4], pp. 185-189). Show-casing best practices within the organization can also encourage and cultivate a learning culture; blatant indoctrination of the learning culture can also be effective, for example though team workshops and management training. However, a culture of learning can only be created and sustained when top management leads by example. Leaders who strictly go through the motions and do not reflect the characteristics of a learning culture will not achieve the desired results in their organizations.

Lesson 2: Cultivate and capitalize on learning champions.

Learning champions are the next critical element that must exist within an organization in order for e-collaboration to succeed. Learning champions are the people who emulate the art of online collaboration by practicing it daily in a variety of forms – and by preaching its benefits to non and new practitioners. They are also the people who jump in when online collaboration attempts begin to struggle or falter. Learning champions should be at all levels of management, including the CEO.

Involving top leadership and management in the promotion of online collaborative activity has the greatest impact on the success of those activities, assures credibility, and ensures buy-in (Jones & Laffey [6]). The influence of champions through resource allocation and making rewards available also lends itself to successful collaborative efforts. Driscoll [7] recommends having a powerful and visible champion for online projects, a person who can "hold people accountable for deliverables, create working relationships between cross-functional groups, and make scarce resources available" (p. 229).

Numerous successful institutions have utilized learning champions within their organizations. The U.S. Army Intelligence Center implemented an adhoc task force called the *Tiger Team*, individuals who believed in the program and who represented requirements of key stakeholders (Ellsworth & Iorizzo [8]). SBC Communications, Inc. found that when top leadership believes in the program, better planning, teamwork, and support are the results (Friend & Hepple [9]). The support of key executives was critical to MCI WorldCom's e-learning program and also built up relationships within the organization (Treanor & Irwin [10]). Ford also utilized champions, additionally stressing the importance of ongoing care and maintenance of designated champions (Dessinger & Conley [11], p. 197).

Upper management support is not the only important factor in determining project success – the significance of grass roots support cannot be overlooked. To obtain this support, extensive internal public relations campaigns may be necessary, for example via the company newsletter and intranet sites, personal communications, and even an awards program. Sometimes the simplest, although most work-intensive, solution is through one-on-one interaction (see Covey's [12] practice of empathic listening); this solution can be particularly effective in rooting out and winning over the opposition. The involvement and influence of learning champions is a precursor to achieving this cross-organizational support.

Lesson 3: Build trust and relationships in teams.

Covey [12] calls trust "the highest form of human motivation"; where high levels of trust exist within an organization, communication and cooperation are high, and are accompanied by synergistic, win/win results (p. 178). Likewise, where trust is low, levels of communication, support, excitement, and cooperation are low (Jarvenpaa & Leidner [3]). Palloff & Pratt [13] have found that before participants can form connections with each other and offer honest and open feedback, a sense of safety and trust must exist.

The initial establishment of the team seems to be the most critical phase, and exchanging open and thoughtful messages at the start is important in ensuring a team's viability. Quality and predictability of online interactions – not necessarily the quantity – are also key to sustaining interaction. Participants should be timely with reports and provide thorough feedback to team members. Team member qualities like responsibility, dependability, independence, and self-sufficiency are essential;

trust-building activities, such as volunteering to complete tasks and social communication, seem to strengthen and unify teams (Jarvenpaa & Leidner [3]). Recognizing team needs and showing team members the personal and business benefits of team collaboration is also a motivating factor in sustaining collaboration, as participants need to have a sense of the added value that collaboration brings to their actual work (Jones & Laffey [6]; Birch [14]).

Online team members can be easily alienated and by personally meeting team members, an elevated sense of community can be achieved (Collison, Elbaum, Haavind, & Tinker [15]). If this isn't possible, another way to achieve a sense of community is by posting photos of team members. Collison etal. [15] recommends acknowledging team member emotions, since a potential breakdown of communication can occur when emotional undercurrents are ignored. By working through the emotions, teams more firmly establish trust levels and relationships. Birch [14] states that building relationships is an important skill when collaborating virtually, and to be effective, online collaborators need to be ready to clarify points rather than jump to conclusions.

Within an online environment it can be difficult to develop the kind of spontaneous team relationships that form over a cup of coffee or at the water cooler in face-to-face environments. To get around this, NCR provided its employees with the videoconferencing "wormhole" – an online socializing area, much like a corporate water cooler (Lipnack & Stamps [16]). The Teacher Learning Conference (TLC) also implemented an online socializing tool, called the "Water Cooler" discussion area, where team members could get to know each other, as well as provide assistance to other team members (Collison etal. [15], p. 85).

Trust-building activities such as problem-resolution activities (e.g., case studies, brainstorming) in an initial face-to-face or online environment can promote and nurture trust, producing positive results in establishing a foundation of trust within a team and a strong basis for future online collaboration. Once online, team members need to watch for warning signs of diminishing trust in online collaboration efforts, for example, abrupt reduction of posts or no posts at all, unanswered posts, posts displaying an "I-don't-care-you-decide" attitude, and lightly veiled anger and/or frustration in posts. Confronting and resolving issues can build trust as well as team member relationships. "Off-line" discussions, for example through follow-up telephone calls, can assist in resolving conflict and building trust.

Lesson 4: Make use of organizational and knowledge management tools and methodology to keep communication flowing.

Without effective communication, online collaborative efforts can become fragmented, leaving participants with feelings of isolation and confusion. For collaboration to be successful, there should be preparation, organization, and management of the collaborative process. Guidelines for improving communication when collaborating on online projects include the following: clearly state the project purpose, strategy, and expectations; clearly define responsibilities to avoid confusion and frustration; provide communication guidelines; communicate on a regular schedule; define goals and objectives – most importantly *shared* goals and objectives; define conflict-management and resolution processes, and address conflict immediately; formulate tasks briefly and clearly – and make sure team members understand them; use clear, concise, and straight-forward language; establish a moderator and timeframe for synchronous discussions; and provide a documented summary of all discussions (Burge & Roberts [17]; Richardson & Turner [18]; Jarvenpaa & Leidner [3]; Palloff & Pratt [13]).

Benchmarks for success of the online collaboration, as well as expectations and assumptions, should also be clearly identified and documented (Driscoll [7]). A chart with tasks to be completed – and how the tasks relate to each other – should be developed and shared with the team. Prompt communication about design, changes, deadlines, and other project-related issues must also be managed. Gamonal [19] advises using the best tools available, planning around peak availability of team members, grouping team members by geographical location where appropriate, showing sensitivity to different cultures, and using simple language with pictures/diagrams.

Making sure that team members have access to information – for example via a learning portal on the company intranet – is also integral to sustaining collaboration. Team members need access to just-enough and just-in-time information, and intelligent knowledge management is essential. NCR credits

its success in online collaboration to its "Global Realization Process," a comprehensive planning and project management system that tracked and measured teams' progress monthly, weekly, and daily (Lipnack & Stamps [16]). To keep their teams informed, UAW-DaimlerChrysler utilized online directories of team members and a project management Web site (Codde, Egidio, Boatwright, Zahn, & Czarnik [20]).

The author's collaborative team efforts within the Master of Distance Education (MDE) program at the University of Maryland University College have shown that choosing a leader at the onset of a project can help keep communication lines open and projects on track. With team input, the leader can identify action plans and prepare project time schedules; however, team members should have the freedom to decide which activities they will participate in, as assigning tasks without team input can be detrimental to team morale.

Lesson 5: Use face-to-face and online interactions appropriately.

Gamonal [19] recommends that online project teams meet face-to-face three to four times annually. Face-to-face interactions should be organized for new project kickoffs, brainstorming sessions, problem solving sessions, welcome sessions, and milestone celebrations. NCR's Roberson (in Lipnack & Stamps [16]) reiterates this, stating: "You still need all-hands meetings. With all this wonderful technology and shared information, they still don't replace the need to get together with the whole team in a particular site and communicate with them on what's going on, on what the direction is, and on the importance of their contributions" (p. 6). UAW-DaimlerChrysler also used occasional face-to-face meetings on an as-needed basis (Codde etal. [20]).

The author's professional and education experience supports Gamonal's findings, especially the importance of face-to-face interaction in the early phases of a project. Face-to-face interaction is also extremely beneficial, as well as motivating, when complex problems must be addressed and when projects lose direction.

Lesson 6: Provide the necessary infrastructure and technology to sustain online collaboration.

For online collaboration to flow smoothly, the necessary technological and organizational infrastructures must be in place. For example, there needs to be a strong relationship between IT and the training department, and there must comprehensive technical support for faculty and learners (Bates [21]). The software and hardware environment should make team members feel comfortable, thereby contributing to team members' sense of safety and security within the environment (Palloff & Pratt [13]). UAW-DaimlerChrysler addressed increased technology and Internet requirements in their strategic planning (Codde etal. [20]), while Ford's support infrastructure included a high-level oversight committee of senior management to help quickly resolve and overcome process and technical infrastructure problems (Dessinger & Conley [11]).

Interface design of the online collaboration tools needs to be simple and easy-to-use. When usability is compromised, team members spend more time trouble-shooting than on working on project activities. A confusing interface design can also create feelings of discomfort and confusion for team members, which can lead to reduced participation. Formal or informal project guidelines and processes can also create infrastructure within teams, as well as help team members feel more comfortable working in an online environment (i.e., rules are clarified from the start). It is also essential to choose a communication media that is accessible to all team members; using media not available to the entire team can lead to a sense of alienation and isolation in non-participating team members.

Ravitz's [22] model for building learning communities is based on an ISD process of management (creating the development team), front end analysis (selecting a theme, identifying resources), design (providing communications tools, identifying shared interests and teams), development (develop projects), implementation (producing work, sharing process information), evaluation (assessing published work, providing feedback, evaluating the system), and dissemination (sharing process information, outcomes, and useful products) (pp. 300-303). For each phase of the process, Ravitz proposes formative questions which serve as checkpoints to ensure that lines of communication remain open, such as: Is the team responsive and demonstrating shared understandings? Is there

sufficient interest? Are people sharing ideas and plans, and receiving feedback during development? Processes need to be reviewed and revised based on continuous feedback. SBC evaluates and improves its processes through mechanisms such as templates, standards, quality assurance processes, and process improvement teams, and applying common solutions across projects (Friend & Hepple [9]). It is beneficial to have someone within the team who measures the climate of the collaboration – is the online project moving in the right direction? Are there potential pitfalls? What is the general feeling of the group? This person keeps the project moving along if it begins to stagnate. While this role can be assumed by the leader, another team member may also take on the responsibility.

Lesson 7: Be flexible – and ready and willing to adapt to change.

Jones & Laffey [6] find that there must be continual learning and a willingness to adapt to change within a learning organization, and that online collaboration opens up a wide range of possibilities for implementing knowledge management. Ford employees Dessinger & Conley [11] write: "Change is ongoing in open systems, and change without change management will ultimately kill a system" (p. 197). The Réseau INTERACTION Network (RIN) credited its flexibility to adapt to changing needs as a key success factor (Larocque & Thomas [23]). DaimlerChrysler found that to gain a competitive advantage, their global workforce needed to be "knowledge driven, collaborative, and able to deal with an accelerating pace of change" (Codde etal. [20]).

What It Means for VW

AutoUni's motto that "knowledge is the key!" provides valuable insight into AutoUni's commitment to and support of a learning culture. Its practice of gaining new approaches to solutions and ideas based on scientific theory, its transdisciplinarity approach, its integration of technical, commercial, intellectual, and sociological aspects into its teaching, and its innovative organization, teaching, learning, and think tank strategies are all examples of how learning is valued in the organization. AutoUni's unique and innovative education structures, particularly the AutoUni^{QUE} platform, think tank, and qualification lab, and its usage of the latest in teaching and learning methods demonstrate AutoUni's readiness to manage change within its organization. By developing its own learning and knowledge platform to support its processes, AutoUni is also establishing the necessary infrastructure for organizing its collaborative efforts. AutoUni's research approach of shortening the distance between research and business will be instrumental in creating synergy and innovation in the workplace (Volkswagen AutoUni website [24]; Logassi & Gagnebin [25]). And by placing 250 million Euro into the AutoUni program, VW's senior management is firmly commiting itself to the importance of learning in its organization (Barthold [26]).

Summary

To sustain a collaborative environment where knowledge is continually shared and generated, fundamental elements of trust and organizational discipline must exist within online teams. Not only must this trust and discipline exist, but it must be cultivated and nurtured over time. A learning culture needs to pervade all levels of the organization, and a technological and procedural framework for supporting online collaboration must be established and continually evaluated for improvements. Champions can be the most significant factor in sustaining online collaboration over time, and they will need to be identified and supported within the organization. By heralding online collaboration, learning champions can ensure the continued propagation and distribution of knowledge and learning in virtual teams. Finally, an organization must be both willing and capable of adapting to external and internal forces of change. These combined lessons form a comprehensive set of guildeines that can be applied within a learning organization in order to ensure the organization's success in continued open communication and learning.

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