

Engaging Diversity

Report on sharing best practice in e-communities

Part 1: Knowledge creation and communities of practice

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Introduction

Engaging Diversity community of practice is being used to research the potential for the sharing good practice in diversity awareness training among training coordinators across Wales. Each of these coordinators / trainers has a wealth of knowledge based on personal experience; much of this knowledge remains tacit, though other members of the community would benefit if it were made explicit.

Tacit knowledge is what people know, usually from personal experience. It is the knowledge that has not been codified or documented by the company or organization. It is, in effect, the property of the person, and therefore part of that person's value to the company (in-so-far as that person is a 'knowledge asset'). Explicit knowledge, in contrast, is the information and understanding that has been documented or published to others. Explicit knowledge is a company asset.

Nonaka and Takeuchi, in their work *The Knowledge-creating Company*, provide a model for the way that knowledge within an organization is converted from tacit to explicit through a forces of socialisation, externalisation, combination and internalization (Figure 1).

- **Externalization** (tacit to explicit): applying personal knowledge to a new problem;
- **Combination** (explicit to explicit): bringing two pieces of information together in a new way;
- **Internalization** (explicit to tacit) learning by experience;
- **Socialization** (tacit to tacit) learning by sharing experiences.

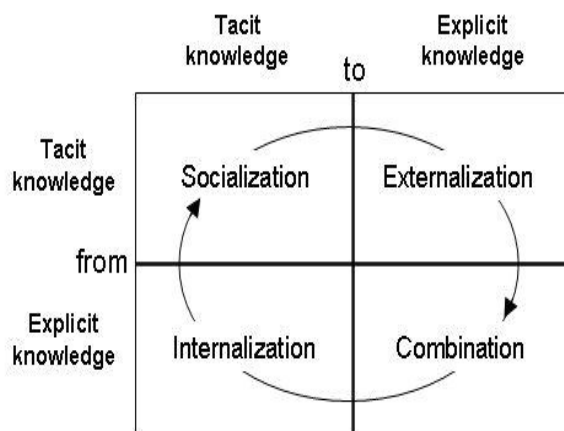


Figure 1: Knowledge creation cycle

This knowledge creation model defines a spiral in which both tacit and explicit knowledge interact to build up new ways of working or diffusing good practice across an organisation. Technology which facilitates the interactions (such as the virtual community provided in the Engaging Diversity project) will also facilitate organisational learning and growth.

The project is using the learningbusiness platform to provide a space for socialisation and externalisation – a virtual community of practice (CoP). Such a community is similar to an e-learning community; both make use of the same tools and the borders between them are not clearly defined. Learning communities, however, are built around a specific learning context (a course or module) while CoPs are work based communities that focus on organisational learning and are often more open-ended, thus encouraging the sort of spiral described by Nonaka and Takeuchi.

As Nonaka and Takeuchi argue, organisational learning is usually accomplished through peers, individuals with similar occupational backgrounds, goals and problems. They socialise to exchange knowledge, experiences, support and best practices. Such communities of practice often grow spontaneously, are inherently voluntarily and are often face-to-face rather than on-line. However, virtual e-communities with their ubiquitous nature can provide an ideal meeting space for such peers. Organisations that recognise the values of CoP might try to formalise and support them by providing such a space.

E-communities play a significant role in the project beyond the e-community for sharing best practice. Each participating organisation has their own e-community through which the learners access the modules. A further e-community is used as a learning environment for e-moderating training to the RCs charged with looking after their organisations' communities.

The first part attempts to define what a successful e-community is and describes some successful e-communities for learning purposes.

The second part of the report describes the e-communities which are used for the project. The system, and the tools and facilities the communities offer are described and their possible purposes are explained.

The third part of the report explores the current attitudes, perceptions, and experiences of the RCs towards e-communities and their use for enhancing the diversity awareness and other training.

The fourth part contrasts and compares the e-communities used by the project and the successful websites introduced in the third part. This discussion also considers the TC feedback described in the third part.

The Equal Project aims at delivering effective diversity training in Wales to a large number of people in a short period of time. E-learning has been chosen as the methodology for achieving these goals. The task of the University of Wales (UWB) research team is

to evaluate the effectiveness of this methodology, with particular consideration for the effects on the affective domain of the participants.

The training is delivered through a series of different modules that address these diversity subjects: race, disability, age, religion and beliefs, gender, Welsh language and sexual orientation. The modules are composed of a multimedia presentation mixing photographs, video, audio, voice-over narration and animations. These documentary-style multimedia presentations are delivered within a navigation frame and supported by an interactive "quiz" which learners must complete in order to finish the module. Completion of the quiz is required before a learner is recorded as completing the module; Training organisers in each organisation may set the pass mark to an appropriate point.

The modules are being delivered within the pilot project by eleven organisations which are considered partners within the project. Each organisation has committed to providing participants for the program and are piloting the materials and learning format as a way of providing government-required diversity awareness training to their staffs. Partner organisations include several councils across Wales as well as other publicly funded organisations.

One or more training coordinators (TCs) are responsible for delivery of the training within each organisation. The TCs are using the modules within a variety of training styles and technological implications to suit their individual organisational needs.

This report is one in a series reviewing and assessing the development and use of the diversity awareness modules. The series includes

- Existing Pedagogy and Learning Methods in E-learning
- IT Skills (initial and final reports)
- Diversity awareness modules (initial and final reports)
- Sharing best practice in e-communities (initial and final reports)
- Good practice in diversity awareness training (initial and final reports)

Each report relates to and expands on others in the series.

Successful Virtual Communities

This section examines the factors that support the creation of successful e-communities and introduces some successful e-communities.

Evaluating Virtual Communities of Practice

The simplest method of evaluating a community of practice's success is by counting:

- Number of community participants
- Time spent per community participant
- Growth in number of community participants
- Number of emails or discussion threads posted
- Number of goals or checkpoints met by the community
- Number participants using and returning to use the community
- Improved job/skills performance (as compared to individuals who don't participate in the community)
- Number of new ideas generated within the community (Allen et al 2003).

By counting the activities and milestones achieved in a community, it is relatively easy to assess the popularity and energy of a community. Activity metrics such as this, however, provide only a surface assessment; many of the longest running on-line communities may have no activity for weeks or months at a time. Frequency and level of activity is not a sure measure of such aspects of community as the level of friendliness, mood, community spirit, or trust. Performance Metrics measuring the intangible, qualitative aspects provide a deeper approach which goes directly to the purpose of the community and the goals of its members.

The Defence Acquisition University, part of the United States Department of Defence, provides a comprehensive list of both activity and performance metrics and qualitative metrics (Appendix 1). The evaluation model recommended by the DAU is based around an "early progress check-list to gauge how the community is progressing with regard to the activities taking place." This check-list investigates the progress of the community toward the organisational and community goals, how well the community is integrated into the organisation and into the working life of its members, and the perceptions of its users as to its value and quality. This approach is echoed by others (Allen et al 2003; Chi and Holsapple 2005).

Characteristics of Successful Virtual CoPs

The qualitative evaluation models advocated by the Defence Acquisition University and others is reflected in the research being conducted into what factors are most likely to be positively associated with successful, long-running communities. This section outlines current thinking on those factors.

A common Goal or Purpose

Pudelko and Henry (2003) claim that the preconditions for successful learning in a VCoP are:

- the need to have common, recognised, and shared needs
- the existence of common practice
- the goal to gain new or to improve existing competencies are

Allen et al (2003) found that clearly defined community goals and community objectives are considered to be an important factor for the success of the community.

Leadership and Moderation

In their study of intentionally-formed VCoP, Bourhis, Dube and Jacob (2005) found that communities which exceeded expectations had very involved leaders who were able to build political alliances, to foster trust and to encourage participation. Such leaders could even cancel the negative impact of other factors such as an obstructive environment, lack of community experience, and low levels of ICT skills. They also stress that leaders need the support of the organisations management for making operational decisions. The management of the organisations involved needs to give appropriate support to the community (Allen et al 2003).

Leadership in the form of clearly communicated rules, norms, and standards help reduce anxiety and uncertainty about what constitutes acceptable participation (Archdivili et al 2003). Such anxieties and uncertainties are found to be barriers which cause reluctance of participation (Hinton, 2003; Archdivili, 2003). CoPs must be open and closed at the same time (that is, maintain appropriate boundaries) (Starkey and Smith (cited by Campbell and Uys, 2007)). Mason identifies three core roles of the moderator as being organisational, social, and intellectual (Mason, 1991).

Maish (2000) cites the success of the legendary on-line community 'the Well' as an example of how leadership and skills of conference hosts and community leaders which can not only contribute to discussion, but also help resolve conflicts and break up fights, organise events and meetings, greet and introduce people, provoke discussion and encourage new perspectives. He explains that a mod-

erators job can be difficult and that it requires more than just initiating discussions.

A large part of the leaders tasks is involved in creating trust and relations between members and to encourage their participation .

Trust and Relations

Trust is a main success requirement. A knowledge-sharing community needs to develop two forms of trust to be successful: trust that other members will not misuse the posted information and trust in the reliability and objectivity of the information. This trust does not only rest on individual members but it can also be based on the organisation(s) that provide(s) the platform for the community and the rules, standards and norms it supplies (Ardichvili, Page, & Wentling 2003).

This is confirmed by Al-Alawi, Al-Marzooqi, & Mohammed (2007) who also stress, that trust between participants is a critical success factor for knowledge sharing in organisations. Pudelko and Henry (2003) claim that willingness to change through the contact with others is a precondition for successful learning in a CoP.

Trust is build by effective communication, by creating opportunities for members to demonstrate their trustworthiness and to build trust by creating common values and shared understanding through continued interaction (Campbell .and Uys (2007). The formation of trust is challenged in a distributed, on-line community; the members must learn to rely on mainly text-based communication, and many non-verbal cues (such as showing emotion or sympathy through facial expression and tone of voice) are lost.(Gibson and Manuel, 2003, cited by Campbell and Uys, 2007). The development of relationships within the community, and thence facilitation of the evolution of community, is the most difficult part of operating in a distributed environment (Hildreth et al ,cited by the National Research Council Canada, 2004).

Motivation and Rewards of Community Members

Ardichvili et al (2003) mention the importance of receiving rewards for contributing to the knowledge sharing community. They cite the suggestion by Osterloh and Frey that the motivators for sharing knowledge are more likely to be intrinsic rewards (including peer recognition, self esteem boosting, altruistic motives) than extrinsic rewards (monetary or administrative).

Feenberg (cited by Maish 2000) also believes that social cohesion of on-line conferences depends not only on extrinsic motives but also on intrinsic motives. He thinks that each community needs to determine what makes or empowers its members to participate so these motives can be understood and supported.

Hinton(2003) observes that knowledge visibility is important to staff and peers, and that therefore participating in the community offers recognition and rewards.

This is used by some communities who reward members for their active participation by giving them recognition in the form of 'ranks' such as 'pro' or 'aficionado' based on the level of their activity or by pronouncing very active or productive members as members of the week or month, star members etc. .

The need for rewards is confirmed by Al-Alawi et al (2007) but inconclusive as far as the preference between extrinsic or intrinsic rewards is concerned.

Participation

The most obvious and often used measurements of success are the levels of participation: how many members a community has and how active they are. According to Salmon (2000) there are three groups of users which show different characteristics. One third read and contribute, one third reads contributions, and one third neither read nor contribute. A community whose membership is skewed towards the first group is more likely to be vibrant and successful than one skewed towards the last group.

Cross et al (cited by Archdivili et al, 2003) make an important point: for a community to be vibrant there is a need for a demand of knowledge. A community needs its members to accept the community as a source of knowledge and by actively posting questions and search information.

Pudelko and Henry (2003) believe that both marginal and peripheral participation can contribute to learning. However, the active participation of members in a community helps them to realise that they share much common ground; this creates a sense of belonging and community identity and encourages active participation.

Encouragement for active participation is a prime objective for making a community successful, but passive participation also has value and should not be discouraged.

Availability of Time

Allen et al (2003) found that the allotment of sufficient time for community participation is an important factor in the success of the community.

Although this factor does not seem to get much attention from the existing literature, it was a recurring point in the interviews with the RCs, many of whom complained that it was not practical to participate because of a "lack of time". Participation was considered a "a waste of time" unless answers or quality information could be

found. The availability of allocated time is often related to organisational culture and the level of support the VCoP receives from the organisation.

Face-to-face Interaction

Face to face communication between participants is another positive variable for successful knowledge sharing. Maish (2000) believes that the phenomenal success of the long-standing community 'the Well', (a community pre-dating the World Wide Web by several years) would not have been possible without the physical interaction achieved at monthly parties. A case study by Hildreth et al (cited by the National Research Council Canada, 2004) confirms the importance of maintaining face-to-face contact for community building. Archdivili et al (2003) also found that knowledge sharing might be encouraged by occasional face-to-face contact between members. Face-to face meetings provide for building trust by allowing members to communicate more richly using non-verbal cues as well as language (Gibson and Manuel, 2003, cited by Campbell, 2007).

National and Organisational Culture

The organisational and national structure and culture will often reflect an individual's attitude to knowledge sharing (Al-Alawi et al, 2007). If the information flows freely within an organisation, and knowledge filters easily through the organisational levels, then the individual members are more likely to have positive attitudes towards knowledge sharing. Archdivili et al (2003) explains that a large proportion of participants credits an appropriate organisational culture

Campbell and Uys (2007) found that the impact of various cultures could have a strong negative impact on distributed communities, at least in the early life stages of the community. Not only did it make it more difficult to find shared experiences and attitudes between different locations, it also prevented the uptake of new technologies by some members of traditional cultures.

Providing valuable Information and Knowledge

Allen et al (2003) state that the quality of the information provided and the direct relevance and usability of the information for the community member's job are considered to be among the most important factors for the success of the community. This knowledge needs to be always up to date and accurate if it is to attract use of the community by members. The information should preferably be 'tacit knowledge', practical experienced based 'hands on' solutions which cannot be found in books, manuals, and journals (Hinton, 2003).

To much information that is possibly incorrect and needs verification can be a barrier for the use of knowledge sharing in CoPs (Ar-dichvil et al, 2003). Lacking confidence in the quality or importance of the information they wish to provide is a barrier to participation for many community members. This indicates how keenly aware they are about the quality of the information.

ICT and Technology

Al Alawi et al (2007) believes that ICT can enhance the success of knowledge sharing in organisations. Allen et al (2003) found that access to communication technologies is considered to be an important factor for the success of the community. According to them, the importance of the impact of technology on VCoPs cannot be understated since it is generally the only means of communication between community members.

However, Campbell and Uys (2007) explain in their case study that the uptake of technology had a strong correlation to the perceived purpose of the community and they perceived usefulness of that technology for achieving this purpose. For example: technology for communication is not used if there is nothing to communicate. They claim that technology can only support a distributed community if it is an accepted and transparent form of communication.

It is less important that the technology used be sophisticated and powerful than that it be easily integrated into the members work life (Hinton 2003). Hinton describes a set of thriving communities using e-mail as their main non-personal means of communication, because it was, despite its limitations, the system best suited to the target audience and the community purpose.

The National Research Council of Canada (2004) found that different types of VCoPs (business community, professional community, social community, government/organisational community) used different sets of technologies and functionality, but that the sub groups tended to use similar sets within the group. This indicates again that technology and functionality is closely related to the purpose of the community. For the professional communities, which correspond to the type of communities used by the Equality network, they found two factors that differentiated them from the other community types:

- availability of well developed and comprehensive search facility
- ability to submit or upload documents and articles into the repository/library

The use of 'blogging' tools seemed to lack popularity even though the facility was often available.

It seems that success does not depend on the availability of technology but on the activities that the technologies permit users to do. Technologies should not be considered on their own, but be perceived as a possible means for achieving the success factors above.

Examples of Successful Communities of Practice

Successful and vibrant e-communities can be found for all subject areas. However, successful e-communities have naturally been found for a long time in the subject area of computing. 'Techies' were among the first people able to create the necessary platforms, so it is no surprise that some of the first successful e-communities were build around computing. Many thriving communities share computing interests:

- web design (www.sitepoint.com)
- a programming language (<http://www.zend.com/forums/>)
- software development (<http://www.thescripts.com/forum/>)

These communities are typically focused solely around forums (as evidenced in the URLs). Membership is informal; visitors are welcome to browse the content of the forums to find support for their programming questions and problems. Subscribed members may post questions and responses. An informal code of conduct is normally enforced by members who feel free to “flame” those who ignore the codes and misuse the forum. The forums themselves are a primary source of coding knowledge and information, providing both general coding guides, solutions to specific problems, and discussions regarding good practice.

The moodle.org web site provides this same community support for programmers, but at the same time widens out its membership to include teachers, trainers and administrators. Moodle is a course management system which allows teachers or instructors to make learning content available over the Internet to students. It is an open source application that is freely available to everyone and is developed by a community of users. According to the Moodle support site, “Moodle has a large and diverse user community with over 200,000 registered users on this site alone, speaking over 75 languages in 175 countries” (www.moodle.org). Figure 2 shows the growth of the Moodle community in the past six years.

The staff of Moodle and its founder are very active in all the forums and they have support of a number of long term community members who are also very active. The Moodle.org community sponsors a number of face-to-face events each year, and the site supports local groups in promoting their own events to support the community development.

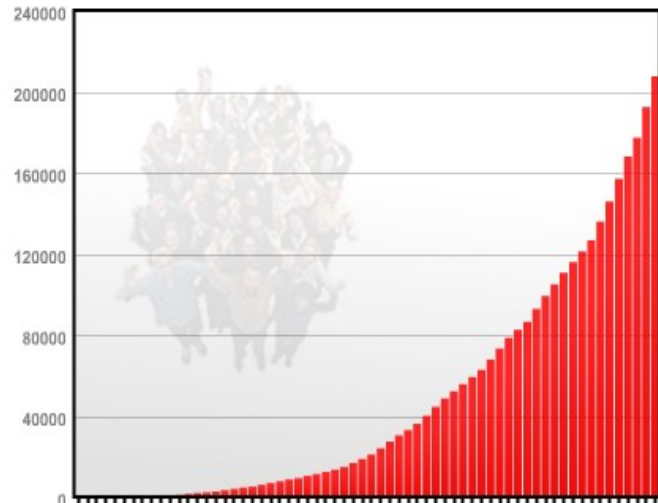


Figure 2: Registered Moodle users: 2001-2007 (source www.moodle.org)

The simplicity of forums and mailing lists has contributed to the diffusion of e-communities across other disciplines and professions. DICKNSON is an example of a virtual community of practice for academics and writers interested in the works of the poet Emily Dickinson. Since 1996 it has provided a forum for discussion of recent scholarship, announcements of events, and discussion of the work of the poet. Like many similar communities, it depends solely on mailing lists to keep its members in contact. All posts go to a moderator, who removes "'spam' (annoying useless junk); commercial messages (simple information about books in print is OK, though); and 'flames' (personal attacks on other posters)." Such mailing groups have in the past been hosted by institutions such as universities, but in recent years the commercial potential has been recognised, and Internet companies like Yahoo have begun providing the service.

One step beyond Yahoo Groups are community hosting sites. Dgroups ("Development through Dialogue"), for instance, is an on-line home for groups and communities interested in international development. It is not a community itself, but rather a host for communities. It provides a simple interface and basic tools for community building. Groups working in the area of international development register with the site and create their own communities (either open or closed to the public). The site provides fora, e-mailing tools, and a space for sharing documents and other resources. Dgroups currently claims to support 2216 groups containing 84051 members and 36075 resources.

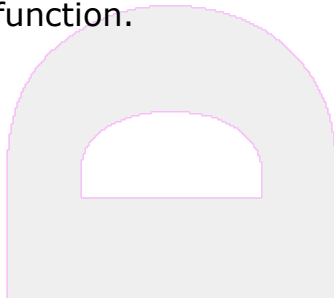
The Local Government Association's IDeA Knowledge web site provides an on-line home for communities of practice involved in local government. Like Dgroups, it provides a variety of tools for communities and support for creating, maintaining and moderating

the communities. The site currently hosts seventy communities, some privately accessible only to members of that community, others publicly available to all members of the site. Community facilities include forums, document libraries, document creation and a community calendar. Among the most active communities are

- Talent Management
- Daventry Bench-marking Group
- CoP Facilitators' CoP
- Kent Graduate Programme
- London Project and Programme Management Forum

The Engaging Diversity project makes use of thelearningbusiness platform for virtual communities of practice. Like Dgroups or or IDeA, thelearningbusiness is a service provided to communities that require an on-line space. Like those it supports socializing through forums and mailing lists, as well as a knowledge base of documents, links and files. In addition, it provides support for active collaboration through on-line conferencing and shared document development.

It differs also from other community sites in its ability to integrate activities between communities. Any member of thelearningbusiness may be enrolled in any number of communities. Each community is built around a shared theme or goal. The site includes learning communities built around a specific course or module, as well as communities of practice. When logged onto thelearningbusiness, members may remain in contact with members of all other communities, regardless of which community area they are currently visiting. The site provides an intersection point for members between all their communities, thereby putting members and communication (rather than just content) at the centre of the site's function.



Research Coordinators and E-Communities

Fourteen research coordinators from twelve of the partner organisations were interviewed to gain information about their experiences, opinions and perceptions regarding e-communities. The questions cover the following subjects:

- Previous experiences with e-communities
- Organisational use of e-communities
- E-communities for learning purposes
- Benefits and disadvantages of e-communities
- E-communities for diversity training

Previous and Current Use of E-Communities

E-communities and their use are new to most of the RCs. Only three out of 14 (22%) have had previous experiences with e-communities (Figure 3).

Only two of these RCs previous experiences were work related, one of them had only private experience of e-communities. Out of the two work experiences, one was positive and one was negative. The negative experience related to a non-vibrant public sector community while the positive experience related to a well-used and vibrant community of Open University tutors. The private experience of an e-community was also considered to be a positive experience. Previous experience seems to correlate strongly to positive and negative attitudes towards e-communities.

The lack of experience is reflected by the lack of use of e-communities in the participating communities. Only two of the organisations use e-communities for other purposes than the 'Engaging Diversity Project'. One organisation uses e-communities in a limited way, whereas the other organisation attempts to create an organisational community, but experiences low uptake because of the voluntary nature of the e-community.

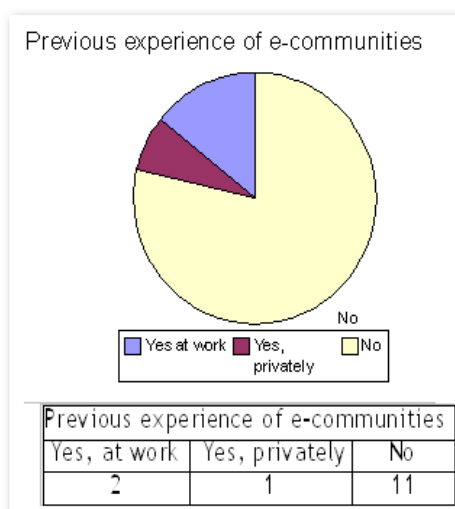


Figure 3: Previous experience of e-communities

E-Communities for Learning Purposes

The RCs were asked how they feel about the use of e-communities for the purpose of learning and training. The answers are listed in the table below.

Potentially very useful for learning, if...	12
Not well known or useful yet for learning	4
No opinion	2
Negative association because of chat rooms	1
Of similar practical value as face to face communities, networks	1

Despite their lack of experiences with e-communities, and despite not using e-communities, the majority of the RCs (86%) could see the potential of e-communities being very useful for learning purpose. For most of those surveyed, the potential carried a large "if", however; they felt that a community was only useful for learning if it had specific benefits to offer.

They were looking for knowledge, information, lively exchange, and examples of best practice – advice of what to do. They expressed the opinion that only a vibrant and well used community would be able to fulfil these requirements and considered stagnant communities as a waste of time and detrimental for learning or training. More than a quarter of the RCs feel that e-communities for learning purposes are not successful yet because they are too new as a concept or experience, and that people simply don't know how to use them.

Benefits and Disadvantages of E-Communities

The RCs were asked what they saw as the specific potential benefits and disadvantages of e-communities for their organisations. The majority of RCs lacked significant experience with e-communities. But most of them could see many possible benefits or disadvantages. Although the number of positive citations (38) outweighs the number of negative citations (24), they items have not been weighted for importance and it can not be assumed that the RCs consider the potential of e-communities to be more to the advantage of their organisation than to the disadvantage.

Benefits

The the possible benefits and their frequencies are listed in the table below:

Knowledge sharing	10
Sharing of best practice	5
Contact with ones peers/ people with a shared interest	5

A discussion forum for expressing feelings and opinions	3
Overcoming geographical distance	3
More diverse lines of communication	2
Reductions of travel time and cost	2
Time savings (if community is vibrant)	1
Ubiquitous (Any time and anywhere)	1
Unifying organisational culture	1
Closer relationships within organisation	1
Cross disciplinary exchange	1
Help in avoiding pitfalls	1
Improved morale through peer contact	1
Quick answers to urgent questions	1

The sharing of knowledge and information is the only advantage that is noted by a majority of the respondents (71%). The sharing of best practice and the opportunity to have contact with ones peers or with people with a shared interest are both next in popularity since they have been cited by more than a third of the RCs (36%). The large variety and range of potential advantages and benefits that have been noted suggest that the respondents familiarity with this innovation in their working life remains low; at the same time, it shows an open mindedness about the use of e-communities in their organisations and suggests a willingness to trial them. As before however, most of the RCs link these benefits directly to the vibrancy of the community. They believe that only vibrant and established communities can provide these benefits.

A clear majority (79%) of the RCs does not think that the benefits can be measured because of their essentially intangible nature. However suggestions have been made that some of the benefits could possibly be measuredly savings in travel time and travel costs or by general time savings. Another suggested way is the measuring of the attitudes of the participants .

Disadvantages

Although lower than the number of benefits, a number of disadvantages for the use e-communities concern the RCs.

Open to abuse/misuse	5
Possible distraction from face to facer communication	5
To time consuming	3
No disadvantages	2
Cost of moderation to avoid misuse	1
Depending on technology	1
Encourages abuse	1
Extra training required	1

No follow through	1
Only useful if vibrant	1
Open to misinformation	1
Open to misinformation	1
Voluntarily,there fore underused	1

The main concern for the RCs seems to be the perceived openness to misuse or abuse of e-communities. This is feared by 36 percent. The following related disadvantages have also been cited: the cost of moderation to avoid abuse, openness to misinformation and misperception and the encouragement of abuse. All these citations together suggest a widespread concern about the 'darker side' of e-communities and the subsequent need to 'police' or moderate them.

The possible distraction from face-to-face communications is considered a disadvantage by 36% of participants. Desk bound staff have seen a decline of face-to-face communications over the last few years because of the increased use of e-mail. It is now a nearly proverbial joke that people will e-mail each other instead of walking a few yards down the corridor. E-communities are seen as another avenue leading in this direction and possibly causing further decrease of direct human contact and communication.

The recurrent theme, that an e-community needs to be "vibrant" is now cited as a disadvantage, emphasizing the importance of this point again.

E-Communities for Diversity Training

On the whole, most RCs thought that using e-communities for diversity training specifically offered the same benefits and disadvantages as the use of e-communities in general. However some further detractions were found, which were felt to be specific to the diversity training:

- Diversity training is not very popular with most of the participants. A stagnant and boring community could intensify this lack of interest through creating further associations with boredom.
- Discussion forums and instant messaging lack the non-verbal communication channels which can convey much of the message. Therefore the communication lacks a lot of nuances and is open to misunderstandings (e.g. a remark which is clearly understood as a joke because of the messages carried by the tone of voice and the facial expression could easily be seen as an insult in a textual form). This could prove dangerous and counter productive with an emotionally loaded sub-

ject that holds and challenges as many sensitivities as diversity training does.

- Due to the nature of discussion forums, inappropriate contributions cannot always be challenged as immediately as needed.
- If an e-community offers anonymity it encourages stronger statements and it might encourage participants to express opinions which they would not dare to express in a non-anonymous or in a group situation. Whether this is a detraction or an enhancement of diversity training or the discussion is open to debate.

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Conclusions

The Community Platforms

The success and growth of virtual communities is not dependent on the technology and features of the the electronic platforms according to the literature, and this is confirmed by the examples of long-lasting, active communities that make use of only discussion forums. Technology can never be more than a vehicle for creating successful communities. Communication (the key to achievement of many success factors) can be achieved through relatively simple means.

However, increased functionality, especially when it is aimed at the competent user of ICT, can offer an enriched and enhanced experience that improves community building by offering more ways and opportunities for achieving critical success factors. In particular, enriched feature sets can move a community from being simply a social grouping into a collaborative work team where tacit knowledge is not only shared but also made explicit.

The Role of the Users

The users or community members are at the very centre of any community of practice. The members are driving and building the community through socialisation (or relationship building) and participation. The benefits members want from the community are understanding and sympathy for their own situation or problems and tacit knowledge, practical and hands-on solutions that are proven to work. Explicit knowledge, the kind of knowledge found in books and journals, is available from many other sources; the knowledge of what those sources are and which are most dependable, however, is something that only comes through experience or the sharing of experience.

A community of practice needs some clear common goals and objectives or a shared purpose, especially in the early phase before socialisation. This encourages initial participation and clarifies for users what they could contribute to the community and what they are likely to be able to obtain from the community.

Some of the barriers are on the opposite site of the spectrum; members often experience insecurities about the use of communities and are worried about the possible embarrassment of 'doing things wrong' or of delivering the wrong quality of contribution in front of their peers. One reason for this is that many people are still unfamiliar with the use of e-communities (as are the majority of the research coordinators). One RC mentioned that a face-to-face introduction of the communities could have been a good idea for

starting the communities or might be valuable for trying to revive them. This idea is supported by the literature which recognises the value of face-to-face meeting. Such introductions also serve for explaining how the community works and for determining the common goals.

Another barrier that emerged from the interviews is the existence of semi-formal or informal peer networks or communities. These networks seem to fulfil the above needs of the RCs already and they could see no reason why to use the VCoPs instead or in addition.

Moderation and Leadership

Leadership and moderation is perceived by the RCs as the most important success factor. After all, good community leadership and moderation can achieve or contribute to most of the other success factors. This leadership is of particular importance in the initial phase of the community, building and construction. If a community has not been successful initially, it is much more difficult to revive a stagnant community because the leader has to overcome the negative perceptions target users and members have formed previously have.

Knowledge building and sharing practice

Measures of success for communities of practice are notoriously difficult to model. It is far simpler to design a measure of failure: no activity, no active members, no resources. Measures for success then evaluate the distance the community is from failure: how much activity, how many active members, how many resources.

The model offered by Nonaka and Takeuchi provide a more positive measure for the virtual

communities being used within the Engaging Diversity project, a community with the express purpose of fostering the creation and sharing of knowledge within a specific discipline. The knowledge creation spiral (Illustration 1) models the activity involved in the creation of organisational knowledge:

- tacit (personal and unexpressed) knowledge becomes explicit (public and shared)

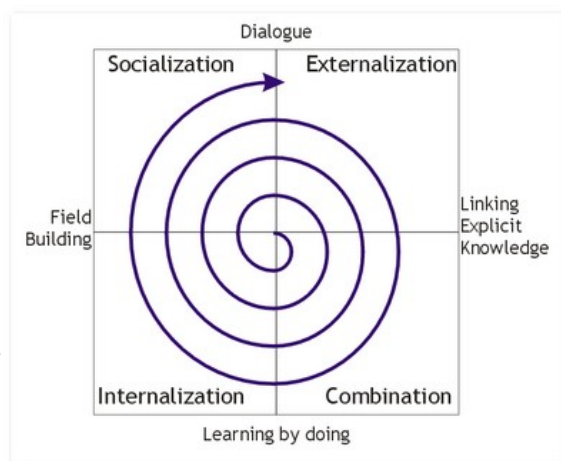


Illustration 1: Knowledge creation spiral (from Nonaka & Takeuchi 1995)

- explicit knowledge from different domains is combined to create new possibilities
- explicit knowledge is internalised and understood in new ways by organisational members.
- tacit knowledge is shared between organisational members through conversation and collaboration.

A successful virtual community of practice will support and encourage these processes. Allowing a place for community members to communicate and collaborate with ease will support socialisation, allowing members to express what they know, or think they knew, or even what they just believe. Further value can be found when that knowledge is recorded, made available to others who were not engaged in the original social event. If members of multiple communities are supported in seeing links between them, then new combinations will develop. By structuring these newly explicated areas of knowledge, it becomes possible for the members to access these resources, engage with them, and internalise them.

Members of a successful community of practice will engage with any or all of these activities. If they meet once in while and talk about work, then they will be engaging in the socialisation phase, as they will if they use on-line chat or forums. If the forum conversations or the ideas generated in the meetings are recorded, then some level of externalisation will have occurred.

In other words, a successful virtual community of practice is one that a) has not failed and that b) supports the knowledge creation cycle. The first of these can be measured by qualitative measures; the latter must be evaluated through discussions with the participants and (in many cases) with the organisation that sponsors the community for strategic reasons.



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Appendix 1: Evaluation Metrics used by University of Defence Acquisition

Community Metrics

How do communities measure their effectiveness? Metrics, both quantitative and qualitative, can assist community leaders in determining how effective the community is in reaching and providing value to the members. Communities are encouraged to use metrics not only to track their effectiveness, but also to indicate actions that will help to build and improve the community.

Activity Metrics (Quantitative)

ACC automatically tracks the following metrics by This Month/Last Month/This Year/Total:

- ACC Page Views;
- New ACC Accounts;
- New Topics;
- New Knowledge Objects;
- New Discussion Forums;
- Member Logins;
- Community Page Views;
- Number of Times Knowledge Object is Viewed;
- Most Viewed Knowledge Objects.

In addition, the metrics below will be tracked:

- Membership growth trends;
- Contribution growth trends;
- How often users interact (face-to-face meetings, virtual discussions, etc.).

Performance Metrics (Qualitative)

Performance metrics indicate the value of product to community members:

- Usability:
 - Unsolicited, through on-line CoP feedback tools.
- Testimonials and other user feedback (e.g., examples of specific mistakes or problems that were avoided or solved, time saved, etc.):
 - Unsolicited, through CoP feedback tools;
 - Solicited, through various mechanisms:
- AT&L Outreach and Communication push emails targeted at specific communities of the AT&L workforce;
- End-of-course survey item:
 - Classroom;
 - Distance Learning;
 - Continuous Learning.

- Conference surveys;
 - Phone calls;
 - In-person meetings;
 - Written forms;
 - Interviews;
 - Workshops;
 - Group meetings;
 - Focus groups of users (i.e., ask the users how the community has helped them).
- Community of Practice Early Progress Checklist (Appendix C);
 - Story Telling (e.g., anecdotes, insights, lessons learned, and actions).

Community of Practice Early Progress Checklist

1. Does the community have a common purpose? Is the purpose compelling to leadership, prospective members, and their functional managers?
2. Is the common purpose aligned with the Command/Enterprise strategy?
3. Is the right sponsorship in place, i.e., a respected leader who is willing to contribute to the community?
4. Does the Functional Sponsor(s) agree with the community's scope, purpose, and membership?
5. Are Core Group Members and the Community Leader enthusiastic, content experts, and able to develop the community?
6. Do members' Functional Managers agree that time away from the job is valuable?
7. Does the community have the right content experts to provide perspective and meaning to its membership?
8. Does the community have enough members to stay alive?
9. Are collaborative tools in place and easily accessible? Are members willing and able to use them?
10. Are needed resources available, e.g., meeting rooms, VTC, participation in conferences, travel dollars, conference fees, etc.?

From "Community of Practice Early Progress Checklist" in the NAVSEA Community of Practice Practitioner's Guide, Version 1.0A, May 2001.