



The Psychology of Effective Business Communications in Geographically Dispersed Teams

A Research Report by Pearn Kandola

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The Psychology of Effective Communications in Geographically Dispersed Teams

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Foreword

The [Economist Intelligence Unit's Foresight 2020 research](#) outlines five key trends for the next fifteen years. Of these, three trends – globalisation, atomisation, and knowledge management – will have significant impact on the structure, functioning and distribution of teams within and across businesses. As organisations become global, and cater to global markets the prevalence of multi-cultural and geographically dispersed teams will increase, especially as work gets broken down into ever more granular units to be managed and delivered by specialist teams or individuals linked by technology. At the same time many see the future value of their organisations becoming ever more closely linked to the knowledge they can leverage; knowledge which is frequently an amalgam of individual experience, behaviour and understanding.

With this in mind we at Cisco are interested in understanding how communications work in dispersed, multi-cultural and virtual teams. How does knowledge flow and how can individuals achieve the best balance between task-orientated and wider relationship-building communication? How can trust be built across geographic and cultural boundaries? Which communications technologies are most effective and what's the right mix of communications channels to use?

It is our belief that teams and individuals are most effective when they are presented with a range of communications options and clear information on which will be most effective at any given time. Knowing the communications preferences of your team members, and being able to see their status or 'presence' in advance of making contact can have a significant positive impact on the effectiveness of team working and knowledge sharing. Simple and instant access to a range of rich communications options that brings together text, voice and video allows individuals and groups to benefit from much of the additional information that co-located teams take for granted – without the hassle-factor of booking specialist facilities.

Research outlined in this report supports our view that rich, immediate and easy to use communications have a significant impact on the effectiveness and success of virtual teams – helping them to match, or indeed to surpass in certain circumstances, their more traditional face-to-face versions in effectiveness, creativity and productivity.

Executive Summary

This report has been commissioned from occupational psychologists Pearn Kandola by Cisco Systems to examine the dynamics of virtual, geographically-distributed teams and how the application of electronic communications in the workplace could impact the effectiveness and success of teams. Pearn Kandola has researched a variety of sources, including business journals such as the Harvard Business Review and the Academy of Management Journal, and academic sources such as the Journal of Applied Psychology and Communications Research to establish the current best thinking on the psychology of communications across virtual teams. The researchers have focused in particular on any evidence that may suggest the positive or negative impact that different communications technologies can have on the process and success of building virtual teams.

The report is broken down into key findings or headlines, explanations and implications, as well as top tips and dos and don'ts for business managers. The core focus of this first research project is to examine the implications of communications technology on relationship building in virtual teams.

Note: throughout this report, the term 'virtual' is used to refer to any form of non co-located working. This includes virtual or remote team working, multiple site organisations, remote or home working, and geographically distributed or dispersed working.

Relationship Building

Relationships, both personal and professional, are, needless to say, fundamental to successful team working. Much research has been conducted into the way in which virtual team members can build effective relationships with their colleagues and the advantages and disadvantages that the virtual status of their teams gives them. The research reveals that people are driven to build relationships with others regardless of the geographic dispersion or cultural mix of the teams they work in. With all types of teams trust is crucial and the speed with which it is built and the strength of resulting bonds has a major effect on the effectiveness of the team.

Much of the research compares computer mediated communication (CMC) with face-to-face (F2F) communication as an efficient and effective way of building relationships. What is clear is that effective use of technology can significantly shorten the time to effectiveness for virtual teams, but that care must be taken over the selection and deployment of different forms of CMC.

The key findings below are grouped into three main areas; trust and first impressions, cross-cultural issues and conflict.

Trust & First Impressions

- Research suggests that it takes a minimum of two weeks before CMC relationships are as socially grounded as F2F relationships.
- The use of richer media (voice and video communications in particular) does help when establishing and building relationships.

- The research also demonstrates that trust, a critical factor in influencing group effectiveness, is more readily generated in high-quality, media-rich forms of communication.
- Effective communication tools and a variety of communications channels help team members to avoid misinterpreting the actions of their colleagues.
- ‘Silence’ – or non-response to communication (email, voice mail, etc.) can be very damaging to virtual team effectiveness as it leads individuals to misattribute explanations for this silence.

Cross-cultural Issues

- Heterogeneous teams (teams comprising members from different cultures) do become more effective than their homogenous counterparts. But there is a time lag of approximately 17 weeks due to a lack of shared understanding of communication strategies in the early stages.
- Getting the right frequency and detail of communication is difficult. What is perceived as over-communication in some cultures can be perceived as under-communication in others.

Conflict

- Spontaneous and clear communication is key to reducing conflict in all teams. This is especially important in virtual teams where there may be more ambiguity about what colleagues are doing.
- And in helping virtual teams to establish their own identity which is critical for motivation and team cohesion.

Conclusion

The evidence from research suggests that today’s communication technology can play a powerful, positive role in assisting virtual team development and success in all of these areas. However, technology can also lead to misunderstanding, misattribution and conflict if it is not well used. Ultimately team members and team managers must use a range of communications techniques and technologies to ensure that messages are conveyed in the most transparent, timely and efficient manner. Any technologies that help individuals negotiate the complexities of virtual team working must be a boon.

As organisations become increasingly global in reach, distribution and constitution; as effective knowledge sharing becomes a main driver of value and success; and as more complex eco-systems of individuals and groups with specialist knowledge come together in virtual teams, the importance of effective communication cannot be over-estimated. Our research into the psychology and technology of communication strongly suggests that new ‘best practices’ need to be established to ensure that team and individual behaviours are modified to maximise the value of the communications technologies now available.

Building relationships

Relationships

This section examines relationship building, impression formation, and trust. Positive impressions are the foundations of relationships and trust grows out of positive relationships. The section also covers, Trust and First Impressions; Cross-Cultural Teams; and Conflict.

Relationships

People are driven to build relationships with others regardless of the mode of interaction

Research into relationship building has predominantly focused on comparisons between face-to-face communication (F2F) and computer-mediated communication (CMC). Early theories on virtual working (Culnan and Markus, 1987) suggested that in CMC **relational communication**ⁱ is difficult or impossible. However, reassessment and further studies suggest that rate of transfer is the critical difference between CMC and F2F communications – not overall capability. Relationships can be built across virtual teams – they just take longer.

Relational cues are normally conveyed nonverbally, the absence of nonverbal cues in email and instant messaging can therefore be a barrier to the expression of interpersonal dynamics. Similarly, social context cues, such as the nature of the social situation, the individuals' roles, and their status relative to one another, are also absent in CMC.

As a result, the risk is that CMC becomes anonymous, depersonalised and task oriented, with individuals focusing more on themselves. Lower cohesion and a low level of shared identity, both of which can impact on productivity and performance, can result.

The early theories on virtual relationship building were based on studies that had strict time limits which only allowed the very first stages of relationship building to be observed. They do provide accurate information on relationship building during first virtual meetings, i.e. where relationship building is initially very difficult and conversations tend to be task focused. However, they do not look at relationship building over time.

Time is in fact the key differentiating factor between F2F and CMC relationship building (Walther, 1992). Due to the limitations of CMC, the medium cannot convey all the task-related as well as social information in as little time as can multi-channel F2F communication. Communicators using any medium experience the same needs for uncertainty reduction and relationship building.

CMC users will actually adapt their linguistic and textual behaviours that might otherwise be nonverbal to the solicitation and presentation of socially revealing, relational behaviour. For example, they may be more explicit in what they are trying to convey or might use 'smileys' to convey emotion.

ⁱ Relational communication pertains to the reciprocal processes of how individuals regard one another and how they express that regard. Regard consists of individuals' affection, cohesion, formality and dominance towards each other as well as the balance between task orientation and social orientation.

The critical difference between F2F and CMC is rate of transfer, not capability.

Individuals using CMC can take up to four times as long to exchange the same number of messages as individuals communicating F2F (Weisband, 1992). However, improvements in CMC interpersonal relationships over time are consistent with the gradual acquisition of social information. Allowing for the extra time required with CMC, individuals can form equivalent relationships to those that communicate F2F. The time taken for CMC and F2F relationships to converge in this way is approximately two weeksⁱⁱ. Therefore, CMC relationships start as very task focused and depersonalised but with time become more socially oriented.

Implications

- When using non-verbal media, especially email and instant messaging there is a risk of difficulties in relationship building which can influence productivity and performance.
- Ease and frequency of communication can reduce the time taken for computer mediated relationships to converge with F2F relationships and the two week figure could be substantially reduced.
- Using a range of communication methods, e.g. voice technology and video-conferencing, can also speed up relationship building as both convey more social information than electronic text based communication.

Top Tips

- When planning projects that require teams to communicate virtually, allow extra time for relationship building. Specifically plan this stage into the project.
- Consider using media that convey more social information, e.g. telephones, videoconferences, to speed up relationship building.

People adapt to virtual media to enable relationship building

Nonverbal cues, when they are available, account for most of the social meaning for F2F exchanges. Specific estimates suggest that up to 63% of F2F communication is nonverbal (Burgoon, Buller, and Woodall, 1996).

However, when using CMC, these cues are no longer available. Research has investigated how users develop immediacyⁱⁱⁱ and affection during F2F communication and CMC (Walther, Loh, and Granka, 2005). When communicating F2F, individuals use a range of kinesic, vocalic and verbal cues to demonstrate immediacy and affection.

Kinesic cues are body movements and include direct body orientation, facial orientation, gaze, facial pleasantness, facial animation, smiling, facial concern, nodding, laughing, bodily involvement, and postural openness. In addition, rocking is associated with affection and body straightness is associated with immediacy.

ii Many of the research studies, which investigate the time factor in CMC use a basic task as part of the experimental design. Few of these tasks accurately represent the complexity of business scenarios. Also, the majority of these studies use student participants who are likely to have had only limited concern for the outcome of the tasks undertaken. Caution must therefore be taken when considering how the time factor may translate to a business environment.

iii Immediacy is a composite of involvement, affection, and warmth which is conceived as reflecting the emotional attitude of one individual toward another person.

Building relationships

Relationships continued

Vocalic cues are expressed by tone of voice and fluency. Those associated with both immediacy and affection included vocal happiness, warmth, pleasantness, laughing, receptivity and cooperativeness. Condescension is inversely related to immediacy.

Very little verbal behaviour (i.e. actual spoken words) is related to immediacy or affection when interacting F2F. Insults are negatively related to immediacy and offering personal information is positively associated.

The large predominance of nonverbal over verbal cues associated with these interpretations demonstrates that when people have nonverbal cues at their disposal, they rely on them to a great extent.

In CMC interactions, only verbal behaviours (i.e. composed text) are used as nonverbal information is not available. However, explicit statements of positive affection, expressing joy, offering personal information, and offering encouragement are verbal cues which signify immediacy and affection. Changing the subject, indirect disagreement and novel propositions also signify immediacy.

This demonstrates that people adapt their verbal behaviour to the medium by imbuing verbal messages with, and/or by interpreting from contextual and stylistic cues, information about individuals' characteristics, attitudes, and emotions. This allows for normal or enhanced relational communication to accrue. **Research shows that people will deploy whatever communication cue systems they have at their disposal to form impressions and develop relationships.**

Implications

- Virtual communication such as email and instant messaging should not have a negative impact on relationship building, providing that users can adapt their verbal communication appropriately.
- Richer media, such as audio- and web-conferencing technology, will allow vocalic cues to be used. This means that users will have to expend less energy adapting their verbal messages to incorporate nonverbal information.
- Still richer media, such as video-conferencing, will further lessen the extent to which users have to adapt their verbal communication. Video-conferencing enables individuals to use many kinesic, vocalic and verbal cues together.

Top Tips

- Provide information to CMC users on the important adaptations required for moving from F2F to verbal-only communication. Appropriate verbal behaviour will promote relationship building.
- Where possible, enable individuals to use richer media which allows for transfer of kinesic and vocalic cues. This will decrease the energy expended in adapting to verbal-only media and reduce the likelihood of errors that could arise when adapting.
- Note that some but not all kinesic cues will be picked up in video-conferencing. Many kinesic cues are very subtle and involve slight movements and may still be difficult to observe in this media.

Richer media reduces ambiguity and stereotyping

As a general rule, the more ambiguous the stimulus the more people's expectations guide their interpretation. Email is an inherently more ambiguous mode of communication than voice because of email's lack of vocalic and nonverbal cues.

As we all know, a great deal of communication depends not only on *what* is said but also *how* it is said. Vocalic cues such as inflection, pronunciation, vocal expression, fluency and tone are important clues to a speaker's meaning and personality. As a result, impressions can be more difficult to convey in text-based electronic forms of communication.

Meaning is much more obvious in verbal communication. The same message in an email may have different meanings when read in different tones and different inflection is used. A prime example is the use of sarcasm. This is very difficult to convey by email and can seem aggressive, challenging or insulting. However, when sarcasm is communicated verbally, vocalic cues demonstrate a light-hearted approach or joking.

When people are faced with ambiguous information, they use their prior knowledge and stereotypes to make sense of the information and to reduce the uncertainty and ambiguity. In CMC there is a lack of individuating cues (e.g. physical appearance, vocalic cues), which can render individuals relatively anonymous.

The major consequence of this is an increased reliance on the few remaining cues on which to form impressions of others such as the CMC message itself and stylistic cues, e.g. word choice, paralinguistic cues, typographic information. Under these conditions, individuals rely more on stereotypes and exaggerated representations of others (Epley and Kruger, 2005).

As more information is available during voice communication, individuals do not need to rely as heavily on stereotypes. The availability of more information encourages individuals to challenge the stereotypes they are likely to hold initially and to form more accurate judgements. Furthermore, as more information builds on existing impressions made following voice communication, increasingly better pictures of team members are developed. **As a rule, the richer the media, the more individuating information will be communicated and the reliance on stereotyping and exaggeration to reduce ambiguity will reduce.**

Table 1. Cues Available Through Different Media

Media	Text info	Vocalic Cues	Verbal Cues	Kinesic Cues
Instant messaging	✓	X	X	X
Email	✓	X	X	X
Web conferencing	✓	✓	✓	X
Telephone conferencing	X	✓	✓	X
Video-conferencing	X	✓	✓	✓

Building relationships

Relationships continued

Implications

- Richer media allows the transfer of more individuating information such as vocalic cues and physical appearance. This information acts to reduce the ambiguity of the communication.
- In such circumstances, individuals experience less uncertainty and are less inclined to rely on stereotypes and exaggerations as they have more individuating information with which to challenge their initial perceptions. Impressions of others are likely to be more accurate.
- When stereotyping occurs it carries with it a risk of prejudice and discrimination. Enabling individuals to use media which reduce the likelihood of stereotyping is a positive move in relation to equality diversity.

Top Tips

- Inform CMC users of the risks of stereotyping and exaggerating impressions and the potential impact of prejudice.
- Enable individuals to use richer media where possible so that more individuating information can be received.

Building relationships

Trust

Trust

Trust is the key differentiating factor between high and low performing virtual teams

Trust plays a critical role in influencing group effectiveness. Trust has been identified as the defining issue in understanding the effectiveness of virtual teams (Handy, 1995). If members of virtual teams are going to engage in cooperative activities they must trust each other or be able to monitor each other.

When members are working in different locations and interacting primarily by telephone or computer, most traditional forms of monitoring and control are not feasible (e.g. people cannot observe the amount of effort or overhear what team members say when they are interacting with others).

This 'behavioural invisibility' is likely to be associated with added risks such as neglecting others' interests and mis-anticipation of others' actions, which can undermine the development of trust.

Lack of trust among team members is problematic – it is typically associated with added costs that translate into decreased team effectiveness.

When members of a team do not trust each other, they are likely to expend additional time and effort monitoring one another, backing up or duplicating each other's work and documenting problems. Team members engaging in monitoring and defensive behaviour have fewer resources to devote to the primary team task, which can result in productivity losses.

Being able to detect and interpret behavioural clues that reveal intentions plays an important role in developing trust and cooperating. 'Telltale signs' such as facial expressions and voice tone reveal intentions and make cooperating possible as they provide information on trust, warmth, attentiveness and other interpersonal affections. When individuals are spatially dispersed the social information upon which interpersonal trust is based is less readily available.

As with relationship building, it takes CMC teams longer to develop trust than it takes F2F teams. Group development models state that in all groups, trust develops over time when communication becomes more mature and task-oriented. Specifically, trust develops when groups move beyond early stages of development in which members feel uncertain or anxious, and even argumentative and critical (see Figure 1, page 16).

In the context of virtual groups where the rate of social information exchange is attenuated, it takes longer for groups to move through stages of uncertainty and conflict to achieve trust. However, given time, virtual teams can achieve a similar level of trust to that achieved by F2F groups.

Implications

- When using virtual communication, especially email, instant messaging, or web conferencing there is a risk of difficulties in building trust, which can influence productivity and performance.

Building relationships

Trust continued

- Tailored communication allows individuals to be contacted more easily and, therefore, potentially more frequently. Ease and frequency of communication can reduce the time taken for mediated groups to build trust.
- Use of a range of communication methods, e.g. voice technology and video-conferencing, could also speed up trust building as both convey more social information that signifies trust than electronic text based communication.

Top Tips

- When planning projects that require teams to communicate virtually, allow extra time for building trust. Specifically plan this stage into the project.
- Consider using media that convey more social information, e.g. telephones, videoconferences, to speed up the building of trust.
- Communication applications which allow users to see if others are available or on-line (e.g. instant messaging, presence-based communications) can help to reduce opportunities for trust destroying misattributions.

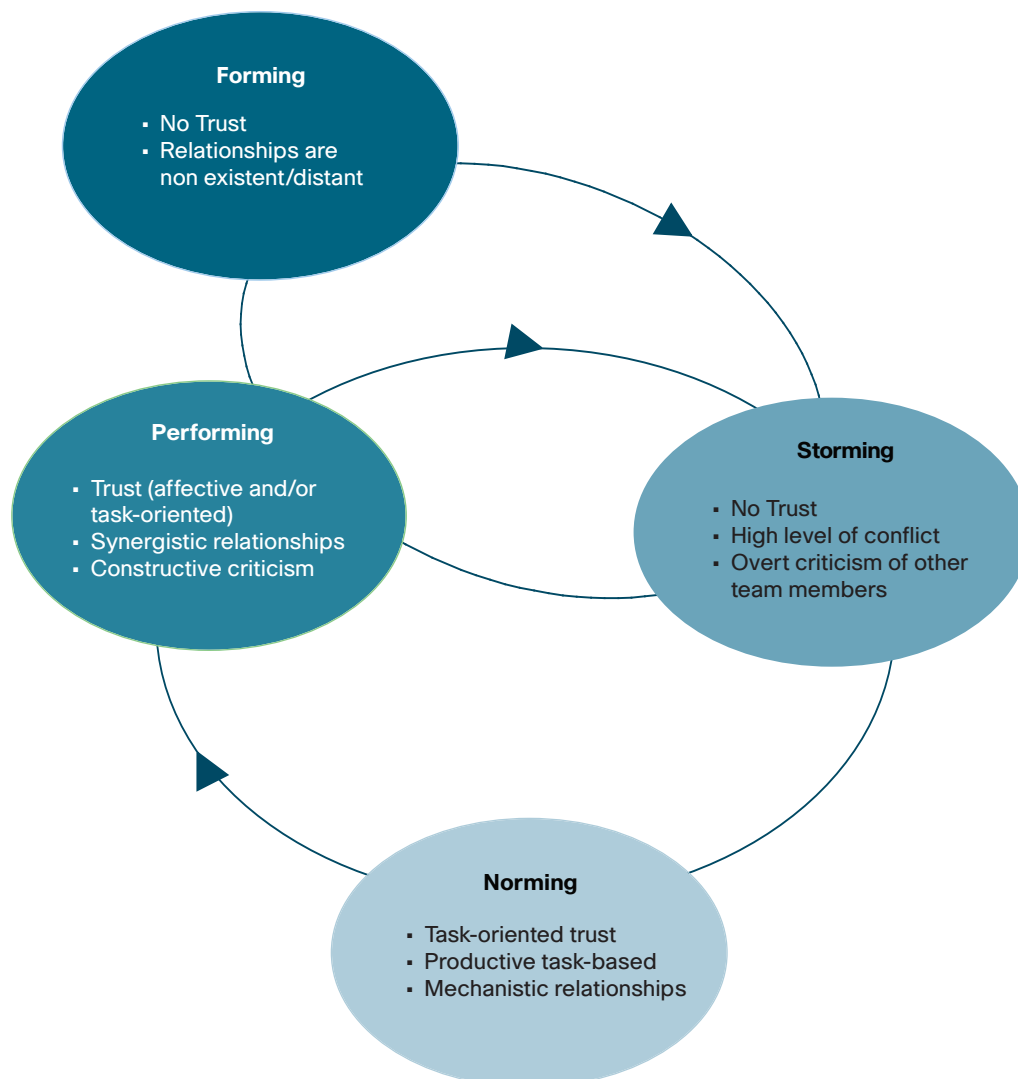


Figure 1. Group Development and the Development of Trust

Virtual teams develop 'swift trust'

Virtual teams are often assembled to carry out a specific project. As such, they are required to build trust swiftly at the outset. However, this trust can be fragile for many reasons. A lack of prior history of working together, as well as no F2F communication can create a sense of physical and psychological distance among team members. In such circumstances the *cognitive* element of trust is more appropriate than the *affective* element.

Cognitive trust refers to the calculative and rational characteristics of others, such as reliability, integrity, competence, and professionalism. Affective trust involves the emotional aspects and social skills of others, e.g. the care and concern for the welfare of others and an emotional connection.

Cognitive trust can be built much more quickly than can affective trust (Kanawattanachai and Yoo, 2005). When virtual projects are short lived or quick progress is required, there is often insufficient time to gather enough information about team members to fully assess their trustworthiness. However, to work effectively team members need to quickly establish trust to enable them to take risks and rely on their fellow team members. Assessing cognitive, work related attributes such as competence enables team members to quickly judge the potential trustworthiness of their team members.

In this way, it can be beneficial for virtual groups to be more task-oriented than F2F groups. Cognitive information is classified as task oriented information as it is directly related to the task at hand. For example, if team colleagues consistently respond to specific requests for information or assistance with helpful and timely input then the team will begin to generate cognitive trust. In fact, virtual groups often prefer task-orientated communication. The frequency of individuals' task-related messages in CMC is directly related to the degree to which other team members like that person. Such indicators of relationship building reinforce the task-oriented nature of building cognitive trust.

By its nature, cognitive trust can be fragile – one missed deadline or failure to respond can shatter the team's faith in an individual. Also, it is the affective element of trust that more heavily influences factors such as performance and the well being of teams. Teams with higher levels of affective trust have more continuous and frequent communication, and communicate more social information which allows closer relationships to be formed. However, with time virtual teams can build affective trust.

Building relationships

Trust continued

Implications

- Tailored, convenient and accurate communication can facilitate the rapid development of cognitive trust as team members can quickly and easily reach each other to exchange cognitive information.
- Tailored communication provides the opportunity for more frequent communication. Affective trust is built through repeated communication over time and may be achieved more quickly with easy-to-use, rich media communication such as voice and desktop video conferencing.

Top Tips

- Managers can facilitate cognitive trust building at the outset by sharing 'CV information' amongst team members which includes details of their accomplishments, competence, experience and integrity.
- Managers can use socialisation strategies to facilitate the development of affective trust in virtual teams. This may consist of online coffee/chat rooms, social videoconferences or social conference calls.
- Managers must consider the maintenance of trust once it has developed. Socialisation strategies can help maintain affective trust but may not be enough alone. Managers should familiarise themselves with conflict resolution strategies to enable them to deal with disagreements quickly before they impact on trust.

Responding is vital when communicating virtually

As a rule, communication involves a feedback loop between the sender and the recipient. It is very important for effective communication that the sender receives a confirmation that the recipient has correctly interpreted the information (Tavcar, Zavbi, Verlinden, and Duhovnik, 2005).

In F2F conversation, confirmation is often achieved through ‘back-channelling’. Back-channel feedback includes head nods, brief verbalisations such as “yeah” and “m-hmm,” smiles, etc. These are nonverbal and brief verbal cues that signify understanding and agreement. However, when an individual writes an instant message or email, an actual reply is needed in order to know that the intent of the message was achieved. In a virtual context, this reply needs to be clear and explicit.

Not replying to virtual messages (text based messages or voice messages) causes silence. It can be disruptive and damaging to trust and team cohesion when people are expected to be available to communicate but instead they remain silent. Team members’ silence can disrupt the flow of work and jeopardise others’ performance, especially when there is a high task interdependency among team members (Panteli and Fineman, 2005), i.e. where team members are heavily reliant on comment from others to achieve their objectives.

Silence in emails, instant messaging or voice messaging leaves a communications vacuum. The lack of verbal and nonverbal cues in virtual communication means that virtual silence cannot be checked out by observing someone’s eyes or body language, or by seeking clarification by gesture.

Individuals often misinterpret the meaning of their team members’ silence. Physical dispersion and dependence on communications technology add sources of uncertainty about the meaning of silence beyond those experienced by groups that meet F2F. Team members may fall silent because they agree, because they disagree, because they are physically absent or because of technology failures.

A lapse in communication is one of the main factors that can erode trust in virtual teams. Also, when members do not respond their colleagues are left puzzled, confused and frustrated. This can lead to conflict. The lack of personal ‘presence’ and nonverbal cues in virtual communication means that there is a dependence on prompt, often instant exchanges to reinforce the weak bonds between team members.

There is also a strong need to explain silence. This can be achieved by signalling unavailability or by explaining why an expected response will be delayed (e.g. by an individual informing others that he/she is “thinking about it”).

Building relationships

Trust continued

Implications

- Information on individuals' preferred communication media can build confidence that messages will be received.
- If individuals can check the availability of others before communicating with them the likelihood of real time conversations and instant responses is increased. Availability information also lets individuals know whether to expect an instant response or whether they may have to wait.
- Receipt and reading of text based virtual messages can be signified without any effort on the behalf of the receiver (i.e. through delivery reports and read receipts).
- The option to engage in real time voice calls or video-conferencing enables back-channelling feedback to be used to signal agreement and understanding without the need for explicit vocal comprehension.

Top Tips

- Do not ignore emails or think "ok" to yourself but not communicate this to the sender. Respond in a reasonable period of time.
- To this end, establish and communicate protocols to all team members so that they are working to a shared set of norms. Include protocol about how quickly the team are expected to respond to virtual communications, and how to select the best communication media
- Reinforce best practice of overtly acknowledging receipt and comprehension of others' communications. This will avoid the problems caused by unexplained silence.

Encourage the team members to be explicit about what they are thinking and doing. Given the lack of nonverbal back-channelling in much virtual communication, it is difficult to conclude if assent is communicated or whether team members disagree unless they specifically state this.

Availability of a range of communication media can prevent attribution errors

Geographic dispersion in teams leads to disruptions in attributional^{iv} patterns. Team members remain unaware of the situational and contextual factors that impact other team members, leading to misunderstandings and inappropriate attributions for behaviours that appear situationally-based and normal to local individuals, but personality-based and disruptive to remote individuals (Cramton, 2001). For example, a server problem may prevent individuals in location A from emailing through a portion of the project as agreed. To these individuals, there is a clear situational factor which accounts for them not sending the work. However, individuals in location B may perceive that the location A individuals are lazy and have not completed the work.

Attribution errors such as this can be disruptive to team working and damaging to relationships and trust.

Implications

- Individuals that have the facility and are encouraged to contact others via a range of different methods will likely be better informed of situational problems. Damaging misattributions will therefore be minimised.

Top Tips

- Managers should ensure that a procedure is in place to inform virtual team members of situational problems using the most convenient communication method for each.

^{iv} An attribution is a psychological term which refers to how individuals interpret and explain the behaviour of others. Individuals notoriously interpret their own actions as being caused by internal factors, such as personality, when the actions are positive; and to situational factors when they are negative. The reverse is true when interpreting the behaviour of others.

Building relationships

Cross-cultural issues in virtual teams

Cross-cultural issues in virtual teams

Multi-cultural work teams become more effective than homogeneous teams, but they take longer to reach peak effectiveness.

Research suggests it takes 17 weeks for culturally diverse teams to begin outperforming homogeneous teams. The lag of 17 weeks occurs because increased diversity, be it demographic diversity or cultural diversity, increases potential conflict scenarios and also initially decreases communication ease.

In the early stages, diverse groups do not share an understanding of appropriate communication strategies. This leads to communication difficulties and a delay whilst team members establish their own communication strategies, taking approximately 17 weeks to do so. After this point, they outperform their homogenous counterparts as the team diversity becomes a benefit and they approach the task in hand from different perspectives.

Implications

- Team managers should consider the length the team will be established for before considering how to manage team cohesiveness effectively.
- Stereotypes in virtual teams can take longer to overcome because of the lack of additional relationships that interpersonal contact provides to inform and challenge stereotypes.

Top Tips

- Quick establishment of communications protocols can shorten the time to effectiveness.
- Availability of multiple communications choices can help to accommodate the preferences of diverse and dispersed team members.
- Spontaneous, ad-hoc and rich communications that convey a wider range of social information can help overcome stereotypes and help build trust more quickly.
- For short-term teams, ensure that the first meeting(s) are F2F in order that relationships can be quickly established.

Perceptions of appropriate level of communication vary across different cultures

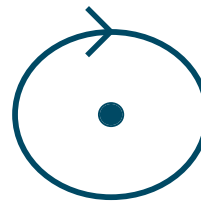
The amount of communication that is deemed to be appropriate within work contexts varies according to the cultural norms of each country. Cultures vary according to the amount of context that communicators have in each situation.

HIGH-CONTEXT CULTURES

Most Asian cultures including Japan and China.

Information lies in the context and does not need to be verbalised. Talk goes around the point.

South America, Africa and most of the Middle East. Plus to a lesser extent France, Spain and Greece.



LOW-CONTEXT CULTURES

Primarily the USA and most of Europe

The topic is handled straightforwardly



CONTENT

INFORMATION

Figure 2. High and Low Context Cultures

In “high-context cultures” (e.g. most Asian, African, South American and many Middle-Eastern cultures) feelings and thoughts are not explicitly expressed and communications receivers must ‘read between the lines’ in order to interpret messages. This is not difficult between two members of high-context backgrounds because, in high-context cultures, most communication takes place within a context of extensive information networks resulting from close personal relationships.

In low context cultures (North America, Germany, Switzerland for instance), where personal and business relationships are more separated, communication needs to be more explicit. Feelings and thoughts are explicitly expressed (Mead, 1990), and much less previous knowledge is assumed. The difficulty comes when virtual teams include those with high and low context cultural backgrounds.

Building relationships

Cross-cultural issues in virtual teams continued

A key difference in these two groups can be seen in the behaviours of different cultures in collaborative situations. Those from high-context cultural backgrounds, such as Japan for example, will prefer to keep their reactions to themselves and those close to them – called their “private self”. This is because taking this approach reduces the unpredictability of potentially emotional encounters and disagreements. However, team members from the USA for example, tend to be open with their thoughts, reactions, and opinions in both verbal and physical communication forms. These differences could be exacerbated when communicating in non-face-to-face situations.

Implications

- Communication problems can occur in multi-cultural teams because people from high-context cultures expect others to understand unarticulated moods, subtle gestures and environmental cues – however people from low-context cultures do not automatically look for these clues and in CMC situations simply may not have this information available to them.
- Also, people from high context cultures, often perceive those from low context cultures as too talkative, obvious and taking time for redundant communications. Conversely, those from low-context cultures perceive others from high-context cultures to be non-disclosing, sneaky and mysterious.
- However, finding the right balance can be difficult, as providing too much information can cause people to feel that they are being patronised, whilst too little can result in people feeling left out or that information is being withheld, sometimes as a power abuse.
- Context also affects information flow – in high-context cultures, information is likely to spread rapidly and freely because of the constant close contact and communication is often informal in nature.

Top Tips

- As each multinational team is initiated the team manager should ask each team member what information he or she would find helpful to share. They should also build in time to discuss reactions to available options and decisions made by the group.
- Information and developments that everyone should be aware of need to be explicitly shared throughout the team – for example through a chat room environment, or if it is fact-based information only, through email.
- In order to overcome difficulties in different styles of feedback and involvement, informal opinion-sharing chats should be established using an informal communication mechanism, such as instant messaging, whereby one person involved in the instant messaging is charged with reporting back to the team leader the opinions of the remaining team members.

Having different communication media is important for overcoming cultural misunderstandings

Communication can be seen as comprising 5 key stages:

- 1 Encoding – the sender constructs the message to be sent
- 2 Sending – sender transmits the message
- 3 Receiving – the receiver acquires the message
- 4 Decoding – receiver interprets the message
- 5 Feedback – receiver responds to the interpreted message

Communication differences within multicultural teams are most apparent during the first two phases of constructing the message and choosing the communication medium. This is likely to be most evident when team members are working virtually. This is because our cultural values affect what we perceive to be the correct thing to do when we think about how we are going to phrase what we need to communicate, as well as the method we use to communicate (Earley and Gibson, 2002).

Two further divisions of cultural characteristics are helpful in looking at this issue – Individualist/Collectivist and Power Distance. Individualism-collectivism has to do with whether a person's behaviour is defined by personal choices and achievements or by the character of the collective groups to which one is more or less permanently attached. Individualistic cultures include USA, Netherlands, Australia and Canada, while Collectivist cultures include Ecuador, Panama, Colombia, and Venezuela.

Power distance relates to the amount of respect and deference between those in superior and subordinate positions. High power distance cultures include Malaysia, Mexico, India and Africa; low power distance cultures include USA and Scandinavia.

Stage 1 – Encoding

During the first stage of communication, the encoding stage, the sender needs to decide how direct they are going to be.

In 'Collectivist' cultures, such as Chinese, Japanese and Indonesian cultures, maintenance of team harmony and ensuring that individuals do not feel uncomfortable or embarrassed is key to maintaining successful group dynamics. In these cultures implicit language should be used. This type of language delivers the message required using positive tones to ensure the receiver is less likely to be upset by the message and to minimise the chance of conflict. Communication in these cultures is also more likely to include the use of qualifying words such as 'maybe' and 'perhaps' and is less likely to contain negative responses to other members of their own team.

Conversely, team members from 'Individualistic' cultures, such as the US, the UK and the Netherlands, are more likely to use explicit language – communicating a message directly, even if the message is negative.

Building relationships

Cross-cultural issues in virtual teams continued

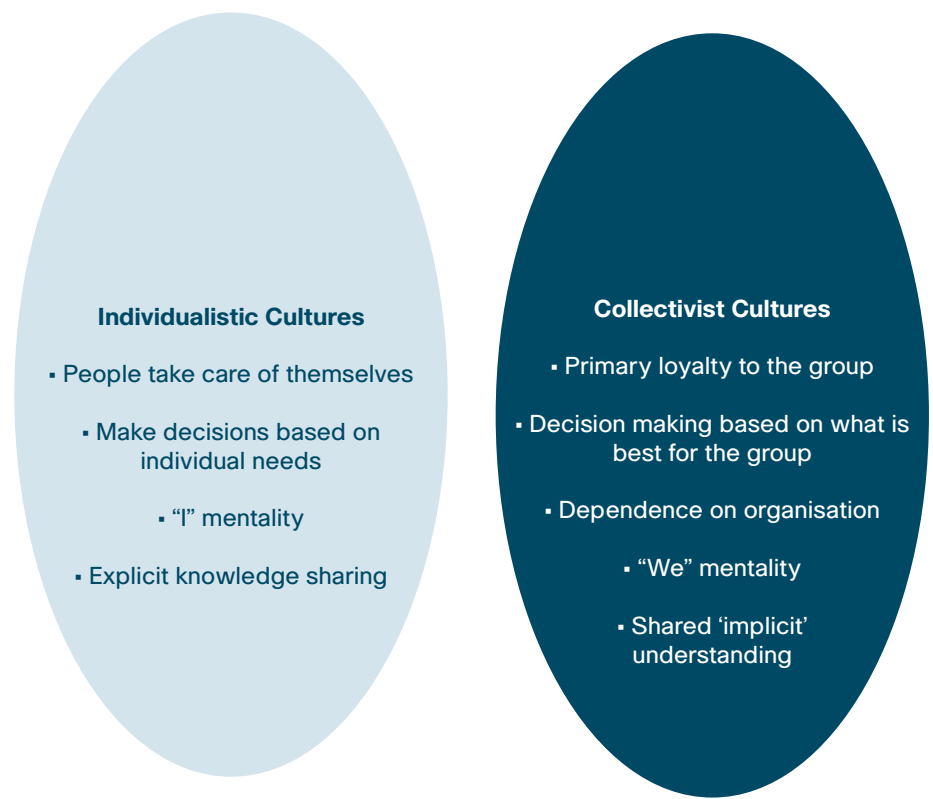


Figure 3. Characteristics of Individualistic and Collectivist Cultures

Stage 2 – Sending

During the second stage, senders need to decide which communication medium they will use to transmit the message. Team members from high power distance cultures (where people expect hierarchical differences to be explicit and acted upon, and where these differences guide who is, and who is not, expected to engage in certain activities such as group leadership or responding to questions), are more likely to use formal communication channels that are planned and regulated by their employers. They are unlikely to feel comfortable using other more ad-hoc forms of communication.

Team members from low power distance cultures, where the hierarchical structures are flatter and less overtly observed, are more likely to use informal routes regardless of the official methods endorsed or supplied by their employing organisation.

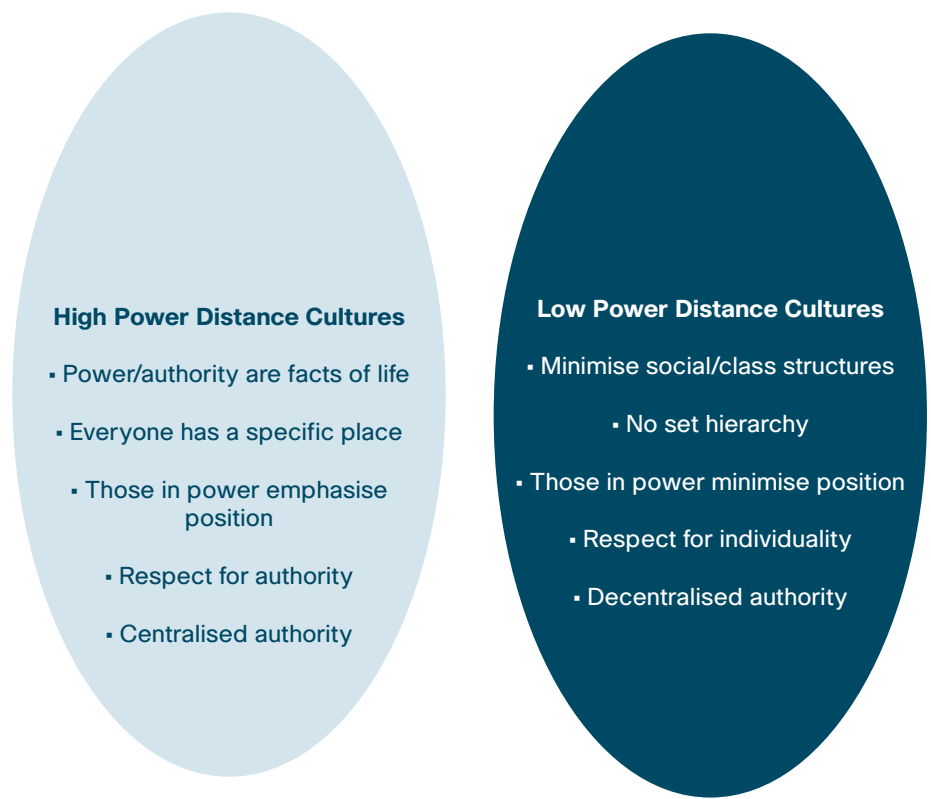


Figure 4. High and Low Power Distance Cultures

Communications technology could play a role in avoiding some of the pitfalls of cross-cultural working. For example, if one party is unable to send anyone to a face-to-face meeting that matches the seniority of their counterpart then it may be more appropriate to arrange a videoconference which the senior people from both teams, and both sides of the team, are able to join.

Individuals also need to be aware of the implications of their choice of communications medium. For example, a welcome call from a team member in the US (low power distance) to a new senior team member from Mexico (high-power distance) may be inappropriate. In instances such as these the informal and unscheduled nature of a telephone call may be judged to pay insufficient respect to the person from the high power-distance culture.

Building relationships

Cross-cultural issues in virtual teams continued

Stage 3 – 5

Research suggests a strong focus on communication stages 3-5 is common among the most successful multicultural groups and that this also promotes intercultural effectiveness.

Critically, in stage 3, demonstrating strong listening skills is key. In practice, this means that multicultural team members need to listen actively and specifically listen for ideas.

In stage 4, team members should participate in 'framing' – that is empathising with the perspective of the communicator when interpreting and analysing messages.

Finally, in stage 5, team members should 'follow-up' the message received by accurately repeating the communicator's message, in order to check and give assurance of correct message interpretation and to increase trust. This behaviour is associated with intercultural competence.

Implications

- Conflict within the team is likely to be exacerbated if team members do not understand the appropriate lexicons or language choices to make when feeding back, for example on another team member's ideas.
- It is also clear that some messages may be sent using media that are inappropriate to the situation in hand.
- Understanding the levels of formality regarding different types of communication therefore is also important.

Top Tips

Intercultural difficulties during the first two stages of communication can be overcome by the following methods:

- Provide a communication mediator to assist in delivering messages between teams or between team members from different cultural backgrounds. This person should be distanced from day-to-day tasks and undertake this role as a distinct function, for example, by hosting a chat room and mediating the messages that come through.
- Set guidelines for the team concerning when different types of communication should be used – e.g. face-to-face / video-conference at early stages of the work, when it is important to pay respect to the hierarchy of the members involved; email when communicating something factual.
- Overtly agree, and thereby endorse, informal methods of communication such as instant messaging, in order that team members can share their opinions in an informal fashion, before formal communications and decisions need to be made.

Conflict

Effective communication can act to reduce the impact of some factors that cause conflict

Virtual teams experience significantly more conflict than do F2F teams as their distant members struggle to come to terms with different perspectives, unshared information and tensions between distant subgroups.

Conflict tends to be more prolific in virtual teams because team members are less likely to have a history of working together. This, coupled with the impersonal nature of virtual communication, means that such teams have much weaker interpersonal bonds than do F2F teams.

Distant team members are prone to misjudging the reasons for others' behaviour and this causes misunderstandings and conflict (Cramton, 2002).

Individuals struggle to fully understand the situational factors that impact their distant colleagues. As a result, they attribute causes of unexpected occurrences (such as work not being delivered on time) to personal factors (e.g. their colleague is lazy and has not completed the work) rather than other factors beyond their control (see note 4 on page 21).

Furthermore, virtual teams can experience difficulties in distributing information (Hinds and Bailey, 2003). This may be due to a technological error or a direct intention to exclude others. The result is that confusion arises, work can be duplicated and misunderstandings occur.

Team members also differ in the weight that they attach to information that they receive from others. Despite the importance senders attach to various messages, team members often assign different priorities to topics. As a result, some topics never receive the attention that the sender desired and can even be overlooked. This leads to frustration and misunderstandings.

Conflict in virtual teams is also more difficult to identify and takes longer to resolve. Therefore, the impact that it has can be greater than in F2F teams.

Implications

- As described in the Relationships section, a communication system that provides opportunities to build interpersonal bonds faster will enhance relationship building. This minimises the window of opportunity for conflict to arise because of weak interpersonal bonds. As discussed, using richer media such as video-conferencing can facilitate relationship building to levels comparative with F2F teams relatively quickly.
- A communication system which enables individuals to easily contact others, and be aware of their ability to receive messages, via various communications channels will help all parties to understand situational issues and reduce the likelihood of inaccurate attributions.

Building relationships

Conflict continued

Top Tips

- Encourage team members to communicate frequently and by richer media particularly during the start of virtual projects. This will facilitate the construction of stronger interpersonal bonds.
- Also see top tips for relationship and trust building in the Relationships section.

Effective communication can reduce conflict by facilitating the development of a shared identity and context

A shared identity helps virtual teams to bridge the distance between the team members by creating a psychological tie among them. A strong shared identity is linked to reduced conflict; particularly interpersonal conflict (Hinds and Mortensen, 2005).

In the absence of a shared identity, team members may not see themselves as a cohesive unit, may have less faith in the behaviours and intentions of other members, and may be less likely to talk through issues that arise.

However, when individuals perceive similarities between themselves and members of a group they are likely to identify with that group.

Individuals form a shared identity through becoming more familiar with their colleagues. For example, individuals seek to develop an understanding of whether their team members share similar goals and values to themselves, whether they have similar interests, or similar likes and dislikes. In work groups, a shared identity can be based on sharing a common goal relating to task achievement. When individuals perceive similarities between themselves and members of a group they are likely to identify with that group.

Teams also need a shared context and virtual teams typically experience difficulty establishing a shared context (Hinds and Mortensen, 2005). Different contexts may derive from different work and geographical environments, different technologies, and different cultures. Occupying different physical contexts makes it more difficult to make and interpret references to objects of interest and to co-orient in a particular context. For example, people often need to 'see for themselves' in order to fully understand a problem. When working virtually this option may be more difficult to achieve.

In the absence of a shared context, team members will have difficulty developing mutual understanding. When team members have different understandings of a task, task conflict is likely to result. Moreover, when team members' understanding of the issue differs, conflict is difficult to resolve.

Team members who lack a sense of a shared identity or context as a result of distance are also likely to adhere to different norms. Different sites are likely to have different behavioural norms that affect team members' expectations of one another. Team members who do not share the same social setting may have different perceptions about what type of behaviour is appropriate, consequently holding one another to different standards. Site-specific cultures and expectations act as a significant source of misunderstandings between distant sites which can result in conflict.

Implications

- Shared identity can be supported by communications that allow participants to discover the similarities between themselves and their virtual team colleagues.
- The key to developing a shared context is frequent and explicit communication. Richer, easier and more frequent communication will enhance the environment for developing a shared context.

Top Tips

- **Managers should encourage virtual socialisation between members of different sites to encourage familiarity to be developed and contextual information to be exchanged.**
- Team members must not make assumptions regarding the working practices of different sites. They should be encouraged to ask questions to gain an accurate understanding.
- Wherever possible, working practices between sites should be the same. This will reduce the potential for misunderstandings to occur because of differences in working processes.

Spontaneous communication reduces conflict

Spontaneous communication refers to informal, unplanned interactions that occur among team members. These interactions build bonds between distant colleagues and enable information to flow more fluidly between sites. In fact, informal communication can compensate for a loss of meaning introduced by the use of mediating technologies (Kiesler and Cumings, 2002).

For F2F teams, direct contact powerfully affects people's feelings about one another. Proximity increases the amount of casual interaction that occurs amongst team members. When people are co-located, the number of casual encounters increases and these opportunities promote familiarity as team members learn about the personalities, concerns and work processes of others. Familiarity is associated with reduced conflict (Hinds and Bailey, 2003).

Furthermore, friendship is easier to establish when people casually encounter one another and interact spontaneously. Interestingly, when team members are friends, conflict is likely to be more prevalent. However, friendship groups are better able to manage conflict successfully. Because friendship is built on trust, expressing affective conflict is perceived as safer and more acceptable. Friendship teams are able to harness conflict to improve performance.

Spontaneous communication plays a central role in mitigating conflict in virtual teams because it provides team members with opportunities to learn informally about what others are doing, enabling them to identify and resolve issues before they escalate.

Building relationships

Conflict continued

As noted above, virtual conflicts are usually more difficult to identify and fester longer than conflicts in F2F teams. However, with spontaneous communication, conflicts may be identified more rapidly and therefore dealt with before they escalate.

Spontaneous communication has a direct effect on a team's ability to establish and maintain shared identity. This type of communication builds social ties, increases awareness of others' moods and states and strengthens interpersonal bonds between distant workers. Often, even task-related casual conversation turns to personal topics and provides a way in which team members can get to know one another better.

Spontaneous communication also contributes to a shared context in virtual teams. In co-located teams, a large amount of information is shared without the need for explicit communication as people can see what others are working on, watch colleagues struggle on a task, notice when team members come and go, overhear activities in the background and monitor progress unobtrusively.

Members of virtual teams do not have access to this type of information. Spontaneous communication can help overcome this limitation of virtual work. With planned, formal communication, people often feel constrained to pre-specified topics and timeframes. In contrast, spontaneous communication is more flexible and allows more open, uninhibited conversations about topics that are salient at a particular point in time. Casual encounters increase the convenience and enjoyment of communication and therefore the likelihood that it will occur. As people interact informally and spontaneously, more information (particularly contextual information) is shared.

Implications

- A communication system that combines text, vocal and video communications with features such as conferencing, chat rooms, instant messaging will support and enrich spontaneous communication. Furthermore, if information is available of others' availability, this will ensure that a colleague can be reached first time.
- The option to quickly and easily use a number of communications media supports spontaneity. Easily reaching individuals at time and point of need helps ad-hoc communication and minimises the potential for conflict.

Top Tips

- Team members and managers must ensure that spontaneous communication does not lead to too much communication which can be detrimental to team working.
- As different people are likely to have different tolerance levels for overload, team members should be encouraged to provide feedback to one another regarding the level of communication that is optimal for them.

Best Practice: Communication etiquette and media choice

The type of technology used by virtual teams is an important input as media richness has been found to positively impact team effectiveness, efficiency, amount of communication, the relationships among team members, team commitment, and teams' abilities to plan, exchange ideas, and to reach consensus.

The addition of video-conferencing results in significant improvements to the quality of a team's decisions and the use of richer media also results in increased levels of performance and trust (Martins, Gilson, and Maynard, 2004).

Choice of media should be determined by the communication capabilities, i.e. immediacy of feedback, symbol variety, parallelism, rehearsability and reprocessability (Maruping and Agarwal, 2004).

Immediacy of feedback relates to the synchronicity of the medium (i.e. how quickly someone is able to respond). **Symbol variety** relates to the availability of multiple cues that are supported by the medium. **Parallelism** captures the possibility that some media permit multiple simultaneous conversations. **Rehearsability** represents the ease with which communications can be rehearsed and edited prior to their transmittal. Finally, **reprocessability** concerns the ability of the medium to maintain a history or memory of the communication that has occurred.

Different media have different levels of communication capabilities. Examples of different media are outlined below:

Video-conferencing

- High immediacy of feedback as all communications are conducted in real time.
- High symbol variety as the visual nature of the medium means that multiple cues are available (e.g. nonverbal cues, vocalic cues, verbal cues).
- Parallelism is enabled as communication is allowed with multiple participants simultaneously.
- Ability to rehearse communication is low because communication occurs in real time.
- It is also difficult to maintain a record of all communications, making it low on reprocessability.

Email

- Low immediacy of feedback as communication is asynchronous and depends on respondents regularly checking and responding to their emails.
- Low symbol variety as no nonverbal, vocalic or verbal cues can be transmitted.
- Parallelism is enabled to an extent as emails can be sent to multiple distribution lists.
- Ability to rehearse communication is high because communication does not occur in real time and drafts can be edited.
- It is easy to maintain a record of all communications, making it high on reprocessability.

Best Practice: Communication etiquette and media choice

Table 2: Communication capabilities of different media


	Immediacy	Symbol Variety	Parallelism	Rehearsability	Reprocessability
Email	Low	Low	Enabled	High	High
Instant messaging	High	Low	Enabled	High	Low
SMS text messaging	Low – Medium	Low	Enabled	High	Medium
Telephone conference	High	Medium	Enabled	Low	Low – High (if recorded)
Web conference (with audio)	High	Medium	Enabled	Medium – High	Medium
Video conference	High	High	Enabled	Low	Low – High (if recorded)
Unified communications	High	High	Enabled	Varies, low to high	Medium – High

The nature of the task is an important factor in determining which communication media are best suited to the task's requirements. For example, during the first stages of a project, when relationship building is key, the use of richer media is important because of its high symbol variety and high immediacy of feedback. Conversely, when communication is more task-related, such as sharing guidelines and documents, leaner communication such as email is preferable due to its high rehearsability and high reprocessability.

Our review has demonstrated the importance of matching communications technologies to the cultural, organisational and behavioural expectations and demands of virtual teams. Although multimedia communications technologies are now more widely available – virtual teams need guidance on best practice to use them effectively and in a cohesive manner.

Summary of Best Practices

- Plan extra time for relationship and trust building in virtual teams.
- Use richer media in initial stages of a project to speed up relationship building.
- Facilitate cognitive trust building at the outset by sharing information about each team member's accomplishments, experience, competence and integrity.
- Facilitate development of affective trust using socialisation strategies such as virtual coffee breaks / online chat rooms, social conferencing via video or telephone.
- Be aware of the negative effects of 'silence' – explain expected delays in response, communicate your availability / unavailability to team members.
- Provide guidelines and establish protocols for communicating within multi-cultural teams.
- Agree protocols with the team on response times and message acknowledgement.

- 
- Encourage team members to be explicit in communicating what they are thinking and doing.
 - The use of a communication mediator and informal discussion forums can help to overcome intercultural communication difficulties.
 - Help teams to develop a shared identity and shared context by encouraging socialising and the use of spontaneous communications, but ensure team members are able to establish their optimal level of communication and signal availability to avoid over-communication and interruption.
 - Give the team access to a range of communications media and guidelines to help them select the most appropriate media to meet the objectives and tasks at hand.

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