CHAPTER 4

RESULTS AND DISCUSSION

Overview

Logistics and Demographics

The defined duration for the study was from July 1st to December 31st 2004. This finite duration of 6 months was specified as a cut-off period for the collection of hard data in the form of SMS transactions. However, several isolated but related transactions that occurred outside of this 6 month duration were also included in this study. These were obtained from documentation in the form of the author's personal notes, collected either prior to the 6 month duration, or in the case of follow-up information, recorded subsequent to the duration.

This collection of data, or Transaction Transcript Documentation (TTD), recorded in the form of logbook entries and kept in chronological order, was analysed and categorized as follows (Table 4 - 1):

Category	Date	Observation	Description
Prior IR benchmarking	Mid 2001	Earliest date of author's experience using SMS	1 year introductory period using SMS medium of communication
	Jul 2002	Documented isolated transcripts with significant IL + OL	Samples of documented earlier "SMS plants" (prior to study duration)
	Jan 2003		
	Apr 2003		
Follow up IR benchmarking	Jan 2004	Documented follow up transcripts with significant IL + OL	Samples of documented follow up from previous "SMS plants" (during study duration)

Start documentation SMS	19 06 03	Earliest date of Transaction Transcript Documentation (TTD)	TTD of received SMS only documented in logbook
Novelty effect end	27 06 03	Earliest date of consistent TTD	TTD of all received & sent SMS documented in logbook
Start Documentation hybrid mode	09 07 03	Document outcome follow up phone call & voice message	TTD of all received & sent SMS, together with notes & proof of supplementary relevant communication
Preliminary Observation		19 06 03 – 09 07 03	20 days duration to reach saturation point (where system of TTD is clearly established)
Mature Observation		10 07 03 – 31 12 04	174 days of TTD collection
End Documentation	31 12 04 Midnight	Last date sent TTD	End official conscious effort to instigate SMS communication

Table 4 - 1: Significant Dates in Study

Technology as a Medium of Delivery vs. Cognitive Tool

In addition to the TTD as listed above, corroborating records in the form of mobile handphone service bills were also analyzed to obtain additional descriptive data that could be used to benchmark the findings. The analysis of the bills is as follows (Table 4 - 2):

Description	**Distribution**							
	Jul	Aug	Sept	Oct	Nov	Dec	**Total**	Jan
Local/Trunk (Mobile) Calls	RM 20.60	RM 21.00	RM 31.80	RM 32.40	RM 14.70	RM 100.90	**RM 221.40**	RM 38.40
Roaming Calls					RM 0.46	RM 2.68	**RM 3.14**	RM 0.70
Data Calls & Services	RM 103.95	RM 60.30	RM 194.50	RM 182.10	RM 106.15	RM 132.60	**RM 779.60**	RM 74.00
Total Usage Charges	**RM 124.55**	**RM 81.30**	**RM 226.30**	**RM 214.50**	**RM 121.31**	**RM 236.18**	**RM 1,004.14**	**RM 113.10**

Domestic SMS sent	693	399	1132	1420	604	803	**5051**	515
International SMS sent	0	3	72	51	68	63	**257**	20
Total SMS sent via MAXIS	**693**	**402**	**1204**	**1471**	**672**	**866**	**5308**	**535**
# days in foreign country	0	14	0	0	10	10	**34**	0
Estimate SMS sent via foreign providers	0	420	0	0	300	300	**1020**	0
Estimate Total SMS sent	**693**	**822**	**1204**	**1471**	**972**	**1166**	**6328**	**535**
NOTE: Bills reflect duration from 25th of prior month to 24th of month as listed. However, for purposes of this study, the figures as listed are taken as inclusive within the stated month for simplification.								
Estimate Total SMS received*	693	822	1204	1471	972	1166	**6328**	535
Estimate Total TTD	**1,386**	**1,644**	**2,408**	**2,942**	**1,944**	**2,332**	**12,656**	**1,070**
***NOTE:** Actual numbers may vary. A negligible number of transactions sent had no response, and vice versa, a few received were not responded to. However, for purposes of this study, the figures received are assumed the same as sent for simplification.*								

Table 4 - 2: Analysis of Overall Cost and Quantities

The data was then checked against the list of "events" relative to the distribution of the TTD and service provider bills. This list of "events" comprised all major jobs or occurrences that had given rise to the Task Executions (TE) being studied. Some examples of the "events" (Table 4 - 3):

Event type	Example of event	Description subsequent TE
Local event	MoU signing ceremony involving support staff, management and external parties	Participants need to coordinate, plan, and execute documents, logistics, ceremony, PR, liaison, protocol, budget, staffing etc, etc
Outstation event	Seminar talk at venue outside of KL involving support staff, management, external parties, and public audience and travelling via public or arranged transport	Same as above – PLUS: Participants handicapped by distance (no direct access to support staff or resources)
International event	Exhibition at venue outside of Malaysia involving support staff, management, external parties, and public audience and travelling via commercial air carrier	Same as above – PLUS: Participants handicapped by limited mode of communication (predominantly SMS only due restrictive venue & budget) – PLUS Participants working in isolation (limited IR support)

Table 4 - 3: Sample of Events that prompted Task Execution (TE)

Thus, as there were differences in the severity of subsequent TE involved in the various events, in order to provide a common denominator for overall comparison, a superficial simple multiplier "value" was imposed on the total number of events each month, relevant to the different levels of event-difficulty. A local event was valued at one (1.0), an outstation event at 50% more (1.5) and an international event at double (2.0). This provided a generic total value that generally represented the total number of TE that would have occurred each month. In addition, a similar value system was calculated for each public holiday that occurred and leave days taken in the same month. These values were relevant in making general analysis when comparing the total number of SMS transactions a month (Table 4 - 4).

Description	Distribution							
	Jul	Aug	Sept	Oct	Nov	Dec	**Total**	Jan
# local events	5	3	9	4	1	1	**23**	2
# outstation events	1	0	0	2	0	1	**4**	0
# international events	1	2	0	0	1	1	**5**	0
Value TE multiplier	**10**	**9**	**9**	**8**	**4**	**6**	**46**	**2**
# public holidays	0	1	1	2	3	2	**9**	3
# leave days taken*	0	-1	-1	-2	5.5	-1	**0.5**	n/a
Value off days	**0**	**0**	**0**	**0**	**8.5**	**1**	**9.5**	**n/a**
***NOTE*:** *Negative number indicates working days that fell on Public Holidays.*								

Table 4 - 4: Analysis of Events Distribution

Preliminary Observation 19 06 03 – 09 07 03	20 days duration to reach saturation point (where system of TTD is clearly established)

Description	July
EstimateTotal TTD	1386
Value TE multiplier	10
Value off days	0

Table 4 - 5: Analysis of Novelty Effect

Follow up IR benchmarking Jan 2004	Samples of transcripts with significant IL + OL follow up from previous "SMS plants" (during study duration)

Description	Jan
EstimateTotal TTD	1070
Value TE multiplier	2
Value off days	n/a

Table 4 - 6: Analysis of Cooling-off Period

Overview Analysis

A novelty effect period was observed for all the participants, even on the part of the researcher (myself). During this period, I tested several different modes of recording the SMS transactions and it was only after 20 days of continuous use, equivalent to approximately 760 SMS transactions, that I was able to establish a consistent system of TTD.

This was rather unfortunate, as the month of July had the most number of events, thus, the most variety and quantity of TE (Table 4 - 5). However, due to the inconsistent nature of the TTD in the majority part of this period, hard and fast analysis could not be attained from the TTD in this month. And for the month of January 2004 (Table 4 - 6), although content from SMS transactions documented in this duration is used in the analysis, the overall statistics are not, as the TTD is not included in the specified 6 month duration. Therefore, the actual duration of TTD studied spanned only from July 10th to December 31st, a period of 174 days.

Description	Distribution							
	Jul	Aug	Sept	Oct	Nov	Dec	Total	Jan
Total est SMS sent	n/a	1,644	2,408	2,942	1,944	2,332	12,656	n/a
Value TE multiplier	n/a	9	9	8	4	6	46	n/a
Value off days	n/a	0	0	0	8.5	1	9.5	n/a

Table 4 - 7: Analysis of Quantities and Consistencies relative to Off-days

Comparison between the estimated total SMS transactions sent with the total values of TE and days off (Table 4 - 7) revealed no obvious patterns, except a dip in total numbers for the month of November, the only month where leave days were actually taken. This could be attributed to the fact that SMS dialogs for TE persisted throughout the 6 month duration regardless of public holidays. In other words, TE via SMS is not affected by holidays but was significantly reduced when effected by leave days.

Description	Distribution							
	Jul	Aug	Sept	Oct	Nov	Dec	**Total**	Jan
#days foreign country	n/a	14	0	0	10	10	**34**	n/a
# international events	n/a	2	0	0	1	1	**5**	n/a
Domestic SMS sent	n/a	399	1132	1420	604	803	**5051**	n/a
Estimate SMS sent	0	420	0	0	300	300	**1020**	0
via foreign providers		Information unreliable						
Total est SMS sent	n/a	822	1204	1471	972	1166	**6328**	n/a

Table 4 - 8: Analysis of Quantities and Consistencies relative to Physical Venue of SMS sender

The months of August, November and December recorded fewer TTD, which correlates to the fact that several days had been spent outside of the country (Table 4 - 8). However, due to the fact that there was no consistency in the availability of SMS service providers in the various different foreign countries,

statistical data of these categories are unreliable, and therefore were not looked at in the analysis.

In summary, the analysis of TTD revolved mostly around the micro-analysis of actual SMS dialogs, rather than on the macro duration-dependent patterns. The analysis focused on the content of the individual transactions, as well as the nature of complete dialogs, in a qualitative manner, rather than quantitative.

Separation of data according to Research Questions

The questions (Figure 4 - 1) that this research sought to investigate involved two variables that could be directly affected by SMS communication, namely interpersonal relationships (IR) and task execution (TE):

RQ 1	How does the use of SMS communication affect interpersonal relationships (IR) on the job?
RQ 2	How does the use of SMS communication affect task execution (TE) of a job?
RQ 3	How does the nature of interpersonal relationships (IR) affect task execution (TE) of a job?

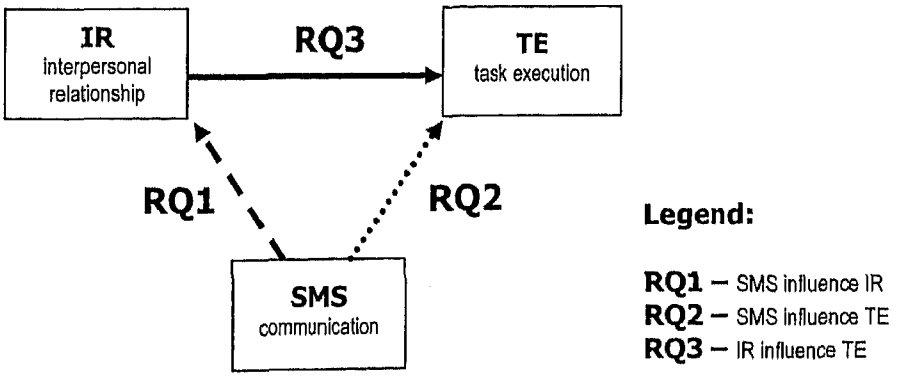


Figure 4 - 1: Simplified Diagram of Research Questions (RQ)

The context of the Research Questions to be studied was intended to be strictly relevant to "on-job training", or rather, learning while performing tasks on the job. However, as the nature of the variables IR and TE are somewhat subjective, it was discovered during the preliminary data collection (novelty effect period), that the data needed an additional layer of interpretation prior to content analysis.

Refer: 23 11 03 / 01:31
TQ very much for your greetings & I too ucapkan SELAMAT H RAYA IDILFITRI MZ BATIN, semoga panjang umur, murah rezeki & bahagia selalu. Ps(2).

Refer: 22 10 03 / 07:39
Thank u very much for remembering. Have a good day yourself.

Refer: 22 01 04 / 20:40
Same to you. Only ten times more! Thanks for remembering.

The ambiguous nature of SMS content made it extremely difficult to separate what constituted on-job learning versus "merely" personal communication. It was not possible to identify SMS transcripts containing "pure" Instructional Learning (IL) and/or Osmosis Learning (OL) from those which had "no learning content".

In fact, it was discovered that OL could involve learning IR skills, such as learning that rapport can be improved by a simple gesture of Seasons Greetings. Or, that remembering a boss's birthday and sending a personal greeting as a sign of respect can give a long lasting impression that would come in handy for a future task dialog with the boss. Such a skill, once learned, can be used to intentionally "plant" goodwill. In other

> words, a person can learn to use IR to influence TE. Thus, theoretically, all SMS transactions contain OL, even if there is no apparent IL. All 12,656 SMS transactions in the TTD could be "counted" as proof of "learning".

But 12,656 transactions posed an arduous and potentially impossible task. The solution was to apply simple but strict coding to the TTD to ensure that analysis of the TTD was consistent and devoid of arbitrary interpretation. All SMS transactions were coded and counted as part of the overall TTD. None were discarded. Those that did not contain obvious or literal "instructions", for example, those that were merely social dialogs, were still documented as part of the TTD, but recorded as effort by participants to improve IR. Thus, in the coding, the TE intent was listed as investment or "planting" to gain rapport. This additional layer of analysis allowed the TTD content to be generally identified to respond to the 3 general Research Questions.

Scope and Focus

During the 6 month duration, it was discovered that many sub-questions arose from the original 3 Research Questions. These could be identified and classified only as and when data was collected. The myriad of issues that arose from these sub-questions exposed the many permutations of connections between the three variables - SMS, IR and TE. Despite being able to group the raw data, or TTD, into general pools of topics

that respond to the Research Questions, a system of correlation needed to be established to make sense of the data being analysed.

As all three Research Questions are interrelated, and as all three involve multiple sub-categories, an overall "map" of the three Research Questions and sub-questions was established based on the overall TTD observations.

As a note of caution, the "map" as created in this analysis, is representative of the issues arising only from the case study at hand. It is not known if more or different issues may have arisen if the context or participants had been different.

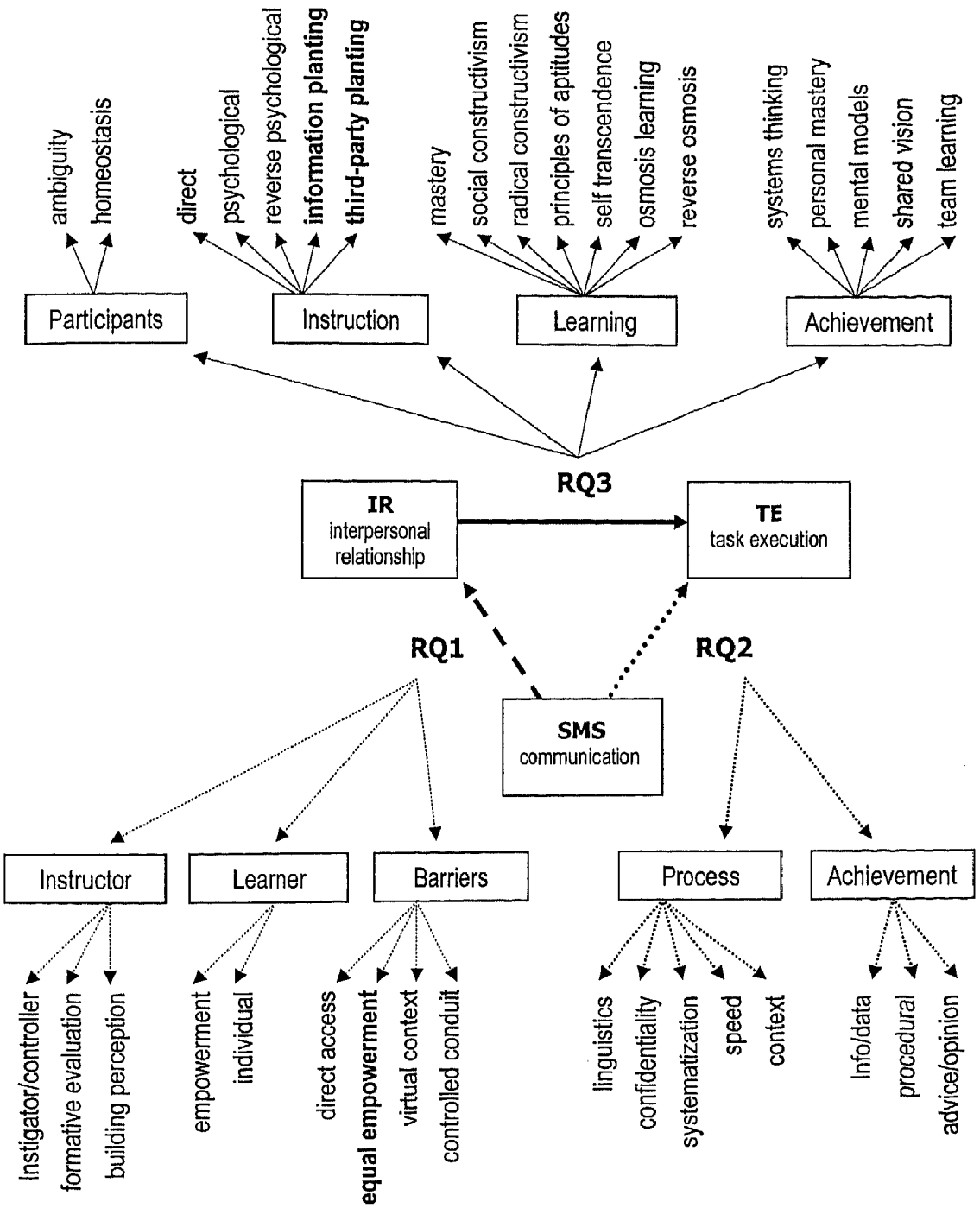


Figure 4 - 2: Map of Research Questions & Sub-Questions Arising

From this "map", three specific interrelated topics were identified for detailed analysis in this study, one representing each Research Question:

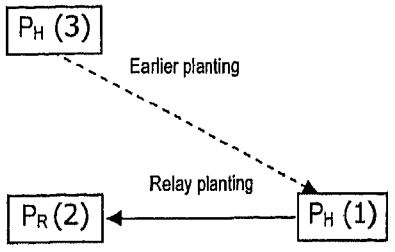
RQ 1	SMS effect on IR How does SMS communication empower its users to break barriers that affect interpersonal relationships on the job?
RQ 2	SMS effect on TE How does the employment of SMS communication in the process of task execution alter the linguistics used on a job?
RQ 3	IR effect on TE How can instruction for task execution be manipulated through information or third-party planting by SMS-enhanced interpersonal relationships?

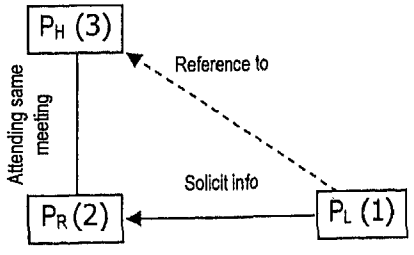
The analysis of the Transaction Transcript Documentation (TTD) is presented in the following sub-chapter, and the results of investigation into the three research questions are discussed in sequence in the subsequent sections. A summary analysis of bias controls is also included to provide a critical overview, or post-mortem, of the study as it progressed throughout to the end.

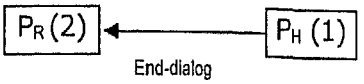
Analysis of Transaction Transcript Documentation (TTD)

Example Transactions

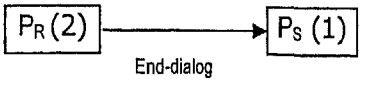
The Transaction Transcript Documentation (TTD) included in this paper comprises excerpts of transactions and dialogs that explicitly exemplify the topics discussed and are arranged in chronological order. Refer Chapter 3 subsection TTD Analysis Format for details on interpreting tabulation format shown. Formats with the extended tabulated analysis exemplify specific findings as discussed in detail in subsequent subchapters RQ1, 2, and 3.

Sociogram Analysis:  Logistics Analysis: P_R(2) & P_H(1) in dialog in July P_H(1) refer to P_H(3) (plant) P_R(2) reminded of P_H(1) plant frm April P_R(2) experience OL	Sample transaction: *U can be a great asset to P_H(3)'s game plans if u piped in2 his vision & give him support in all th roles given 2 u.*	P_H(1) – P_R(2) April 03 (earlier plant)	Participants: • P_H(1) & P_H(3) = teamwork • P_L (2) = learner • P_H(1) = planted by P_H(3) earlier Transaction length: 117 characters Total dialog: 1 SMS (plant = different dialog)

Sociogram Analysis:  Logistics Analysis: P_R(2) & P_H(3) are in mtg room P_L(1) = outside & need info frm inside P_L(1) SMS to P_R(2) P_R(2) respond w action to P_H(3) P_L(1) achieve TE	Sample transaction: *If P_H(3) is there can u ask hr about kuching ad.*	P_L(1) – P_R(2) 23 06 03 16:09	Participants: • P_L(1) = teamwork with P_R(2) • P_H(3) = superior to both • P_R(2) = 3rd party plant Transaction length: 49 characters Total dialog: 3 SMS

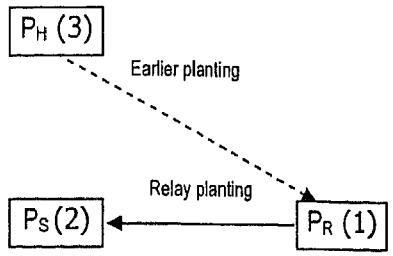


P_R (2) SMS report to P_H(1) P_H(2) acknowledge receipt & end dialog	Sample transaction: *TQ n c u tom*	P_H(1)-P_R(2) 29 06 03 23:06	Participants: • P_H(1) & P_R(2) = work as team • P_H(1) = wanted to end dialog Transaction length: curt 12ch Total dialog: 2 SMS



P_S (2) SMS report to P_R(1) P_R(2) acknowledge receipt & end dialog	Sample transaction: *Gd 4 u. Drvg nw*	P_H(1)-P_R(2) 17 07 03 08:50	Participants: • P_S(1) & P_R(2) = work as team • P_R(1) = wanted to end dialog Transaction length: curt 15ch Total dialog: 2 SMS

descriptor	observation	analysis
transaction speed	Fast; immediate reply	Learner undrstnd instructor's intent
transaction length	Curt; generally short	efficient SMS; not need elaboration
dialogue length	as short as 2-transactions: inform & end-dialog	Intent to end dialog successful
linguistics	Fully short form	Mutual level prior knowldg language
confidentiality	Not necessary; Content matter-of-fact	Not important for instructor's intent
time of day	Rushing to work - preoccupied but still SMS; or late at night – private time but still important	Learner prompted; good IR & sense of responsibility
venue sender	Mobile – in transit; or private – at home	borderless=powerful rapport builder
communication	pure SMS	efficient SMS; not need support
dialogue intent / TE	to acknowledge learner but end dialog politely	Assurance for IR but firm upperhand



$P_H(3)$ earlier dialog $P_R(1)$
$P_R(1)$ SMS reminder to $P_S(2)$
$P_S(2)$ carry out instruction

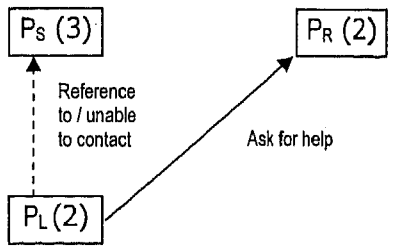
Sample transaction:

Checked my email. Not rec proposal copy yet. Did u send. Need ASAP. $P_H(3)$ askg me already. Pls email 2moro a.m. TQ.

$P_R(1)$ – $P_S(2)$
25 07 03
23:30

Participants:
- $P_R(1)$ = teamwork with $P_S(2)$
- $P_H(3)$ = superior to both

Transaction length:
115 characters
Total dialog:
1 SMS (no reply – but responded via action)



$P_L(1)$ solicit help frm $P_R(2)$
$P_L(1)$ reference to $P_S(3)$
$P_R(2)$ respond SMS & action

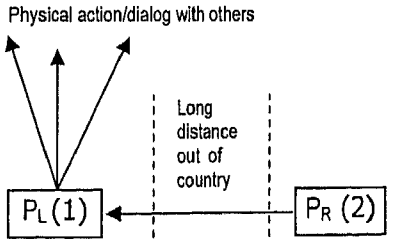
Sample transaction:

$P_R(2)$. $P_L(1)$ here. We hav a prob 4 the tshirts 4 kuching. Mktg no stock. And registry r the only one to have them but need $P_H(3)$'s signature. He's in China. Can u c wat u can do on ur side?

$P_L(1)$ – $P_R(2)$
01 08 03
16:56

Participants:
- $P_L(1)$ = teamwork with $P_R(2)$
- $P_H(3)$ = superior to $P_L(1)$
- $P_R(2)$ = same authority as $P_S(3)$

Transaction length:
192 characters
Total dialog:
4 SMS



$P_L(1)$ ask Q 2 $P_R(2)$
$P_R(2)$ give direct instruction to $P_L(1)$
$P_L(1)$ respond Q with info & more Q
Dialog continues back & forth

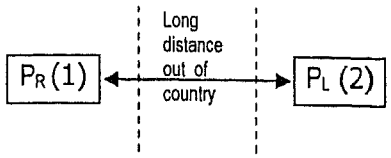
Sample transaction:

Don't ask y. Jus do. I bz nw. No time 2 explain. Get $P_S(3)$ 2 book hotel in case. Start Sunday til 8 aug.

$P_L(1)$ – $P_R(2)$
01 08 03
18:47

Participants:
- $P_L(1)$ = teamwork with $P_R(2)$
- $P_L(1)$ = out of country (long distance) cheaper comm by SMS

Transaction length:
108 characters
Total dialog:
>30 SMS spanning 2 days



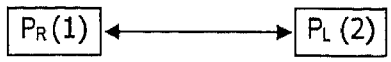
$P_R(1)$ closed dialog w $P_L(2)$
$P_L(2)$ = planted & experience OL

Sample transaction:
TQ. Wat wud we do without u? TQ so much.

$P_R(1)$ – $P_L(2)$
02 08 04
19:40

Participants:
- $P_L(1)$ = teamwork with $P_R(2)$
- $P_R(2)$ = long distance

Transaction length:
39 characters
Total dialog:
3 SMS follow up to earlier dialog



$P_R(1)$ closed dialog w $P_L(2)$
$P_L(2)$ = planted & experience OL

Sample transaction:
And so did u, I hear. Gd. Thanks. Nice 2 wrk w dependable ppl..

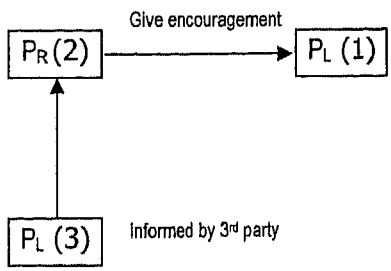
$P_R(1)$ – $P_L(2)$
02 08 04
20:15

Participants:
- $P_L(1)$ = teamwork with $P_R(2)$
- $P_L(1)$ not attend event that $P_R(2)$ involved

Am v glad 2 b working w u 2. Thx $P_R(1)$. Hav a gd wkend, u deserv a real nice rest! Take care.

$P_R(1)$ – $P_L(2)$
02 08 04
20:21

Transaction length:
Short/medium <100 characters
Total dialog:
4 SMS



$P_R(2)$ receive info frm $P_L(3)$
$P_R(2)$ dialog w $P_L(1)$
$P_L(1)$ planted for future response
$P_L(2)$ = planted & experience OL

Sample transaction:
I hear from a little bird that I hav been blessed by god w an ANGEL who did MIRACLES... (contd)... I luv u SO much! TQ. Wat wud I do without u?

$P_H(1)$ – $P_R(2)$
02 08 03
20:33

Participants:
- $P_L(1)$ = teamwork with $P_R(2)$
- $P_L(1)$ not attend event that $P_R(2)$ involved

Thank you so much. That's really very encouraging! Will try to do my best in ... (contd)... thanks again.

$P_R(2)$ - $P_H(1)$
02 08 03
21:05

Transaction length:
Short/medium <100 characters
Total dialog:
6 SMS

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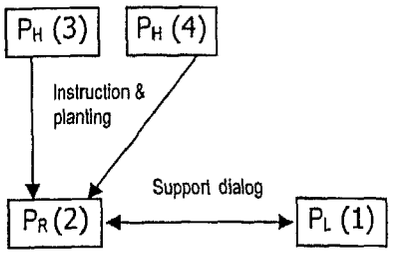
<td rowspan="2"> 
</td>
<td>Sample transaction:
Been harassed by bosses by SMS past 2 days. Brain messd up... (contd)....</td>
<td>PH(1) – PR(2)
08 08 03
22:19</td>
<td rowspan="2">Participants:
• PL(1) = close IR with PR (2)
• PH (3) & (4) = superior to both PL(1) & PR (2)</td>
</tr>
<tr>
<td>Not ok. Very messd up. PH(3) & (4) both GOT ME. I been planted & harvested even b4 I cud hav time 2 grow.</td>
<td>PH(1) – PR(2)
08 08 03
22:37</td>
</tr>
<tr>
<td>PR (2) instructed & planted by PH(3)
PR (2) solicit support frm PH(1)
PL (1) member check for PR(2)</td>
<td>I din knw but I reckon u shldnt let bosses sms get 2 u.. Easier said than done, I knw but dat's price 2 pay 4 being able 2 read between lines, yes?</td>
<td>PR(2) - PH(1)
08 08 03
23:29</td>
<td>Transaction length:
Long & essay
Total dialog:
>30 SMS spanning >8 hours (over night) non-stop</td>
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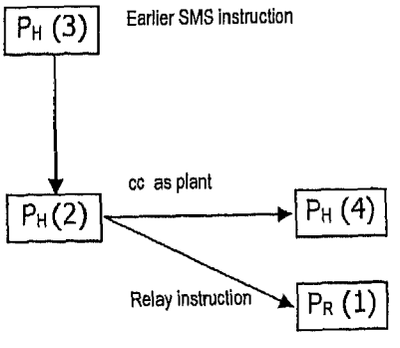
<td rowspan="2"> 
</td>
<td>Sample transaction:
Get me report on ..(contd)... SMS frm PH(3). PR(1) can u get full report on ... for PH(3). Thks. cc PH(4).</td>
<td>PH(2) – PR(1)
12 08 03
18:27</td>
<td>Participants:
• PH(2) = teamwork with PR (1)
• PH (3) = superior to both PH(2) & PR(1)
• PH (4) = superior to PR(1) but same rank PH(2)
• PH (4) = plant</td>
</tr>
<tr>
<td>PH (2) receive earlier SMS frm PH(3)
PH (2) relay to PR(1)+ cc to PH(4)
PR (1) respond SMS to PH (2) + action
PR (1) SMS confirmation completion TE to PH (3) cc PH(2) PH(4)</td>
<td>Report emailed 2 PH(3). cc PH(2) PH(4).</td>
<td>PR(1) – PH(3)
13 08 03
14:56</td>
<td>Transaction length:
Short & Medium
Total dialog:
5 SMS closed dialog + 4 cc SMS to othrs spanning 2days</td>
</tr>
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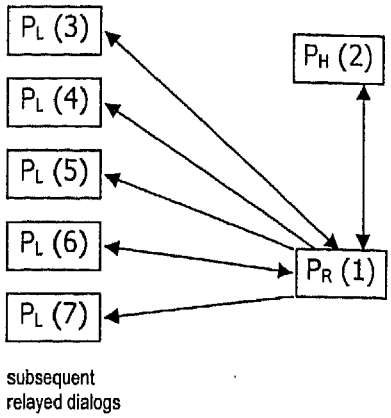


$P_R(2)$ received instruction frm $P_H(3)$
$P_R(2)$ relay to subordinates
$P_L(3)$ & (6) reply SMS; othrs not, but action response to instruction

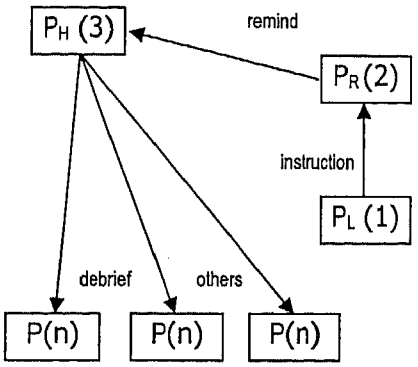
Sample transaction:

$P_H(2)$ sms me 6:45am. Ask 2 report progress... (contd)... I m 2 debrief $P_H(2)$ 2pm 2day on yr progress. Pls pas me copy of amended stuff b4 then. M unavailable til 1pm. Wil c u aftr. Pls pas word around. URGENT. TQ

$P_R(2)$ – $P_L(3\text{-}7)$
23 08 03
07:05

Participants:
- $P_L(3\text{-}7)$ = subordinates to $P_R(1)$
- $P_H(2)$ = superior to all

Transaction length:
Long > 100ch
Total dialog:
>20 SMS



$P_L(1)$ send SMS to $P_R(2)$
$P_R(2)$ check email from $P_L(1)$
$P_R(2)$ remind $P_H(3)$
$P_H(3)$ brief others

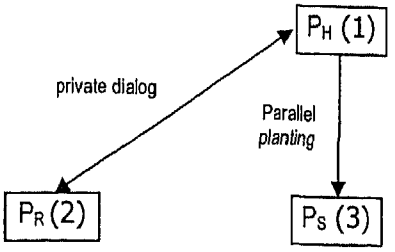
Sample transaction:

$P_R(2)$, email u action plan 4 (...) yesterday. Please go thru pls remind $P_H(3)$ of staf briefing for the visit at 10.30am.

$P_L(1)$ – $P_R(2)$
02 09 03
09:52

Participants:
- $P_L(1)$ = junior to $P_R(2)$
- $P_H(3)$ = superior to both $P_L(1)$ & $P_R(2)$
- $P_L(1)$ responsible for event hosted by $P_H(3)$ & $P_R(2)$

Transaction length:
118 characters
Total dialog:
1 SMS + email



Sample transaction:		Participants:
I apologize if I disapointd u 2day. I wil try 2 play the role u expect of me better in future.	$P_R(2)$ - $P_H(1)$ 25 08 03 21:13	• $P_H(2)$ = superior to $P_R(1)$ & $P_S(3)$ • $P_S(3)$ = same as $P_R(1)$ • $P_S(3)$ = NOT active participant in dialog (receive initial cc only) • $P_R(1)$ close IR with $P_H(2)$ • $P_R(1)$ estranged IR with $P_s(3)$
(they).. failed me badly. I didn't expect being let down again. I am now convinced we have to be more regulated. To $P_R(1)$ $P_S(3)$	$P_H(1)$–$P_R(2)$ 25 08 03 21:24	
Permit me to make observation. Reciprocal of "order" is "obey". But reciprocal of "instruction" is "learn to carry out". Key word: LEARN. That is what we lack. We obey orders. Bt not yet learn from instruction. We must learn. This we lack.	$P_R(2)$ - $P_H(1)$ 25 08 03 21:39	
How do we teach? Is there where the answer is? We must find the answer soon.	$P_H(1)$–$P_R(2)$ 25 08 03 21:47	

(continued part 1 of 3)

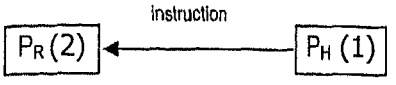
	YOU taught me to SEE. From there I learned to learn. Now I m stil learning, from MANY sources. We must giv instruction HOW TO LEARN. Not just what to do. Takes more time & energy. But WORTH IT. Sometimes we r impatient. Easier 2 giv "orders" than "instruction". That's when result is meaningless. $P_H(1)$, u must teach the others to SEE this too.	$P_R(2)$ - $P_H(1)$ 25 08 03 21:56	
	Some don't give "instruction"... only "orders"...	$P_R(2)$ - $P_H(1)$ 25 08 03 21:57	
	You can help by organizing a step by step training program that we can carry out. And who should be conducting the training.	$P_H(1)$ – $P_R(2)$ 25 08 03 22:13	

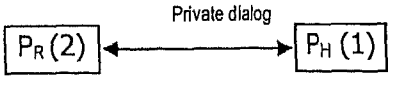
(continued part 2 of 3)

(continued part 2 of 3)

	Am doing one next week actually. But with staf. Honestly, it is management that must be trained HOW to giv "instructions". Many of us just "delegate". It is not easy 4 any1 2 realiz it is OURSELF who must learn. I know, took u few years 2 make me c. I want 2 help my peers c 2. But need yr help in leading the path.	$P_R(2)$ - $P_H(1)$ 25 08 03 22:15	
	I agree its people in management who need training. Can u tell me how best to do it given players we have.	$P_H(1)$ – $P_R(2)$ 27 08 03 08:23	
$P_R(2)$ start dialog w $P_H(1)$ $P_H(1)$ reply & cc to $P_S(3)$ $P_R(2)$ use $P_H(1)$ as plant to reach P_S (3) $P_R(2)$ swap role as instructor to P_H (1) $P_H(1)$ swap role as learner to $P_R(2)$ $P_R(2)$ gave instruction to $P_H(1)$ $P_H(1)$ not reply SMS but respond via action towards $P_R(2)$ & $P_S(3)$ as per "instruction" received	*D best thing u did 4 me was pairing me w som1 who has opposite strength 2 mine & enuf age/seniority diff 2 ensure both players play specific role. This technique of paired mentor-mentee has worked since Socrates. U succeeded creating chemistry once. Y don't u repeat it? Explicitly pair us all & giv ea 1 yr fatherly talk BEFORE u announce d pairing.*	$P_R(2)$ - $P_H(1)$ 27 08 03 08:24	Transaction length: Long & essay Total dialog: 8 SMS initial dialog 2 SMS resumed dialog after gap 2 days (reflection time)

(end dialog part 3 of 3)

	Sample transaction: *Can u pls prepare for (...) mtg at 230 today.*	$P_H(1)$ – $P_R(2)$ 02 09 03 12:46	Participants: • $P_H(1)$ = superior to $P_R(2)$ • $P_H(1)$ not know where $P_R(2)$ location; both currently busy w different tasks
$P_R(2)$ receive instruction frm $P_H(3)$ $P_R(2)$ reply SMS follow up face2face	*Almost done in mktg. Wil com c u.*	$P_R(2)$ - $P_H(1)$ 02 09 03 13:14	Transaction length: Short <50ch Total dialog: 2 SMS + face2face

	Sample transaction: *Lets quietly exchange notes on the negative ones.*	$P_H(1)$ – $P_R(2)$ 02 09 03 22:04	Participants: • $P_H(1)$ = superior to $P_R(2)$
$P_R(2)$ attend event $P_H(1)$ did not $P_R(2)$ report observations to $P_H(1)$ $P_H(1)$ instruct $P_R(2)$ to be spy			Transaction length: 48 characters Total dialog: 6 SMS

<table>
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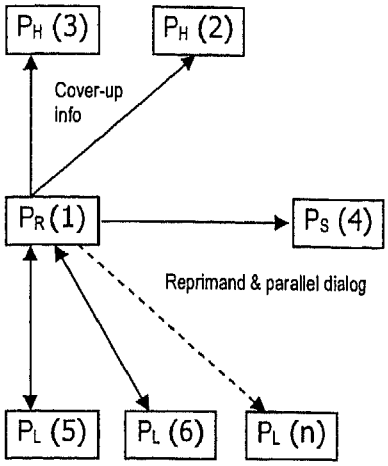
<td rowspan="2"> 
</td>
<td>Sample transaction:
PH(2), PH(3), (event) success. (persons) very positive... (contd)....wil debrief details in report Gd try run 4 (nxt event). Much 2 prep... (contd).. wil wrk w team 2 prep.</td>
<td>PR(1) – PH(2)&(3) + cc PS(4) + PL(5-11)
03 09 03
14:00</td>
<td rowspan="2">Participants:
• PH(2) & (3) = superior to all
• PR(1) = team member w others</td>
</tr>
<tr>
<td>Sent that SMS 2 PH(2)+PH(3). But I want 2 talk 2 u all as TEAM later. Just u all & me. Prep as bad. Teamwrk was nil. Many things 2 learn. Many areas 2 improv. Must wrk as TEAM... ALL of us. I m here as a team member. I hope u all open your hearts to LEARN. Hope 2 c u later. PR(1)</td>
<td>PR(1)– PS(4) + PL(5-11)
03 09 03
14:01</td>
</tr>
<tr>
<td>PR(1) send cover-up SMS to PH(2)+(3) cc to others
PR(1) send separate reprimand to others but NOT cc to PH(2)+(3)
PS(4) not respond
PR(1) + juniors engage in multiple parallel dialogs</td>
<td>PR(1), we r open to discussion n want to improve team comm.. Situation is a repeat of communication prob I guess rite? Meeting wit PH(2) quite not so positive tis morning. Got a lot of work ahead. Will need ur expertse advice.</td>
<td>PL(5) - PR(1)
03 09 03
14:13</td>
<td>Transaction length:
Long
Total dialog:
>20 SMS multiple dialogs</td>
</tr>
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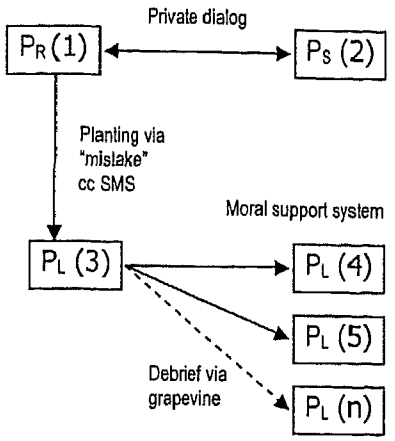
<td> 
</td>
<td>Sample transaction:
...(cont).. in adtn 2 yrself overseeing logistics, pls allocate 1 othr team membr who CAN b contactd/rely on. Important we move FORWARD in our teamwork. Not just get job don. Objctv: IMPROVE content. IMPROV logistics. The former is MY job. The latter is YOURS.</td>
<td>PR(1)-PL(2)
08 09 03
07:56</td>
<td rowspan="2">Participants:
• PR(1) = same level PS(2)
• PR(1) & PS(2) = superior to others
• PL(3) = good IR w others</td>
</tr>
<tr>
<td>Complex multiple parallel dialogs at various levels; different topics each dialog, but related TE and team IR.</td>
<td>Ok. Wil let u know after my meeting wt them. Wil not compromise on excuses anymore.</td>
<td>PL(2)-PR(1)
08 09 03
08:04</td>
</tr>
<tr>
<td>Example Dialog #1:
PR (1) dialog w PS(2)
Direct instruction how & what to do
Reference to juniors
PR (1) purposely send "mistake" cc SMS to PL(3) as "plant"
PL(3) disseminate info to others</td>
<td rowspan="2">PS (2), u must b CLEAR in yr mind: (juniors) r doing FINE. It is YOU & ME who must improve. Do NOT go in2 mtg & scold them. It is BAD mgmt that caused watevr (juniors) do/did. Fault is OURS. NOT theirs.</td>
<td>PR(2)–PS(2)
08 09 03
08:25
PR(2)–PL(3)
08 09 03
08:28</td>
<td>Transaction length:
long
Total dialog:
4 SMS</td>
</tr>
<tr>
<td>Example Dialog #2:
PL (1) ask Q 2 PR(2)
PR (2) give direct instruction to PL(1)
PL(1) respond Q with info & more Q
Dialog continues back & forth</td>
<td></td>
<td>Transaction length:
108 characters
Total dialog:
>30 SMS spanning 2 days</td>
</tr>
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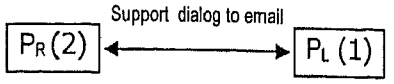
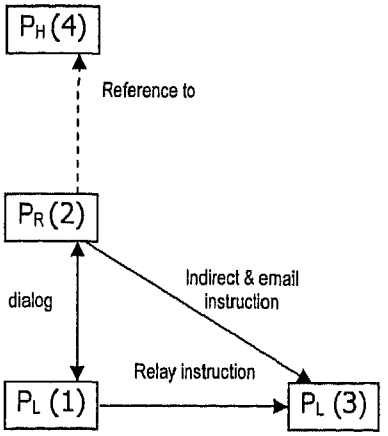
	Sample transaction: *Did u get my email*	$P_R(2)$ - $P_L(1)$ 08 09 03 10:46	Participants: • $P_L(2)$ = team member $P_R(1)$
$P_R(2)$ email to $P_L(1)$ did not $P_R(2)$ SMS to $P_L(1)$ $P_L(1)$ reply SMS & check email $P_L(1)$ respond 2 email instructions	*Yes. Thank u.*	$P_L(1)$ - $P_R(2)$ 08 09 03 10:47	Transaction length: Short < 20ch Total dialog: 2 SMS + email

	Sample transaction: *Hey beautiful (muahaha) when you free for me to meet you*	$P_L(1)$ – $P_R(2)$ 08 09 03 13:44	Participants: • $P_R(2)$ = superior to $P_L(1)$ + $P_L(3)$ • $P_L(3)$ does not own handphone • $P_R(2)$ = not same venue as $P_L(1)$ + $P_L(3)$ • $P_H(4)$ = superior to all
	SMS or email me wat u hav 1st. Makes communication faster & more time efectiv. Avoids lengthy mtgs dat lead nowhere. Ok? TQ. Not dat I don't want 2 meet u…	$P_R(2)$ - $P_L(1)$ 08 09 03 13:53	
	Emailed u as promised. Also to $P_L(3)$. As she no hdph pls tel her I emailed. TQ	$P_R(2)$ - $P_L(1)$ 08 09 03 18:05	
$P_L(1)$ solicit help frm $P_R(2)$ $P_R(2)$ request email details $P_L(1)$ email to $P_R(2)$ $P_R(2)$ email & SMS response to $P_L(1)$ plus cc to $P_L(3)$ $P_L(1)$ follow up w $P_L(3)$	*Yes boss*	$P_L(1)$ – $P_R(2)$ 08 09 03 18:12	Transaction length: Short - long Total dialog: 5 SMS + 2 email

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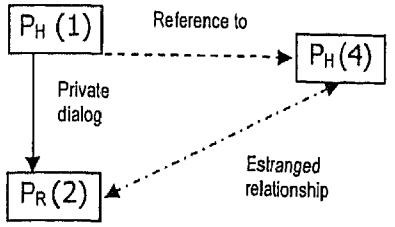
<td rowspan="2"> 
</td>
<td>Sample transaction:
Thank you</td>
<td>PR(2) - PH(1)
12 09 03
14:50</td>
<td rowspan="2">Participants:
• PH(1) = superior to PR(2)</td>
</tr>
<tr>
<td>There seems to be a minor tumor waiting to be removed. Once done, PH(3) will be your strongest supporter.</td>
<td>PH(1) – PR(2)
12 09 03
15:01</td>
</tr>
<tr>
<td>PH(1) instruct mtg w PR(2) face2face
To solve IR betwn PR(2) & PH(3)
Others present at mtg
Some issues not discussed openly
follow up SMS dialog PR(2) & PH(1)</td>
<td>Sincerely seeking suitable treatment 2 diagnosis. A little tough as already weakened by disease. But spirit & hope high 101% effort... (cont).... WILL do beter. I promise.</td>
<td>PR(2) - PH(1)
12 09 03
15:03</td>
<td>Transaction length:
Curt - long
Total dialog:
3 SMS after mtg face2face</td>
</tr>
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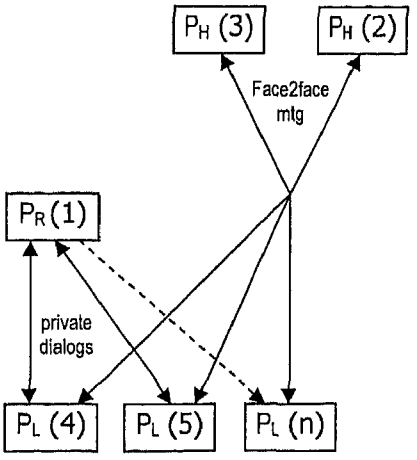
<td rowspan="3"> 
</td>
<td>Sample transaction:
Pls tel me if mtg takes place, ok?</td>
<td>PR(1) - PL(4)
12 09 03
16:15</td>
<td rowspan="3">Participants:
• PH(2) & (3) = superior to all
• PR(1) = team member w others</td>
</tr>
<tr>
<td>TQ. Thx to u 4 the guidance n suport</td>
<td>PL(4) – PR(1)
12 09 03
16:29</td>
</tr>
<tr>
<td>No. YOU did it ALL. I'm not even there... I'm so proud of u all. Gd luck.</td>
<td>PR(1) - PL(4)
12 09 03
16:30</td>
</tr>
<tr>
<td>PR(1) not attend face2face mtg
All others attend
PR(1) + juniors engage in multiple dialogs while mtg is on</td>
<td>Meetin is on, not too bad</td>
<td>PL(5) – PR(1)
12 09 03
17:49</td>
<td>Transaction length:
Short <100ch
Total dialog:
>10 SMS multiple dialogs</td>
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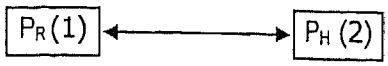
<td rowspan="2"> 
</td>
<td>Sample transaction:
Update (issue#1): ...(contd)..
Update (issue#2): ...(contd)..</td>
<td>PR(1) – PH(2)
06 10 04
21:10</td>
<td>Participants:
• PH(2) = superior to PR(1)
• PH(2) on vacation</td>
</tr>
<tr>
<td>Tks for update. Will try to catch up on wed.</td>
<td>PH(2) – PR(1)
06 10 04
21:12</td>
<td rowspan="2"></td>
</tr>
<tr>
<td>PR(1) dialog w PH(2)
PR(1) update PH(2) w info</td>
<td>Ok. U hav gd rest. Just thot beter update u b4 u return. C u. :-)</td>
<td>PR(1) – PH(2)
06 10 04
21:15</td>
<td>Transaction length:
Short-long
Total dialog:
3 SMS</td>
</tr>
</table>

descriptor	observation	analysis
transaction speed	Very fast; as short as 3 min intervals	Learner & instructor expecting dialog
transaction length	Varied range; initial report (info providing/ seeking apprvl) =long; end-dialog cue=short	Learner prompted SMS requires investment effort; Instructor acknowledgement can be short
dialogue length	Short; 3-5 SMS; just enough for intent delivery	Length dialog not necessarily determine success of intent
linguistics	shortform; symbol smiley face	Mutual level prior knowldg language; positive reinforcement for intent
confidentiality	Often cc to others; learner cc= respect to superiors; instructor cc= plant positive image of learner to superiors	Powerful tool for building reputation; can be used by both learner & instructor for multiple intent
time of day	at end of the day; late p.m. private time	SMS provides overall summary of the day's TE; rapport = good work relationship & positive IR
venue sender	Varied; local & international	penetrate privacy=powerful IR tool
communication	pure SMS	efficient SMS; not need support
dialogue intent / TE	Learner giving daily report update to instructor who is away on vacation; instructor acknowledging effort & providing positive reinforcement	SMS communication allows for undisrupted TE despite context or situation

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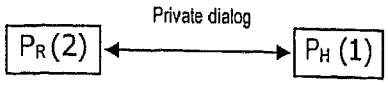
<td> 
</td>
<td>Sample transaction:
Pls don't b sad. Its not personal. It's a better way 2 protect outcomes.</td>
<td>PH(1)–PR(2)
01 10 03
10:25</td>
<td>Participants:
• PH(1) = superior to PR(2)
• PH(1) not close IR w PR(2) but need to work as team</td>
</tr>
<tr>
<td rowspan="2">PH(1) instruct mtg w PR(2) face2face
Emotions tense
Some issues not discussed openly follow up SMS dialog PR(2) & PH(1)
PR(2) plant PH(1) w positive promises
PH(1) respond PR(2) w advice</td>
<td>I try so hard but no matter how well the output, the outcome is always misunderstood. I m nt as capable as u all want me 2 b. But I do hope I wil b givn the chance 2 learn.</td>
<td>PR(2)-PH(1)
01 10 03
10:48</td>
<td rowspan="2">Transaction length:
Short <100ch
Total dialog:
3 SMS after mtg face2face</td>
</tr>
<tr>
<td>U r 2 sensitiv. Working together is the whole objective.</td>
<td>PH(1)–PR(2)
01 10 03
11:48</td>
</tr>
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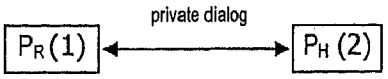
<td> 
</td>
<td rowspan="2">Sample transaction:
Tak larat la PR(1)... Timun di celah durian. PH(3) suruh ke timur, PH(4)suruh ke barat, PH(5) suruh ke utara. MANA pergi pun, SEMUA salah. Sigh... Tapi timun tetap timun. I m glad u r doing wel. It's lonely</td>
<td rowspan="2">PR(1)–PH(2)
09 10 04
21:40</td>
<td>Participants:
• PH(2) & PR(1) = good IR
• PH(2) = ex-staff (superior) w good IR w other superiors</td>
</tr>
<tr>
<td>PR(1) confiding in PH(2) in B.M. (response to earlier SMS in B.M.)
refer to other superiors
Planting for future effect
Confiding for empathy</td>
<td>Transaction length:
Long
Total dialog:
3 SMS</td>
</tr>
</table>

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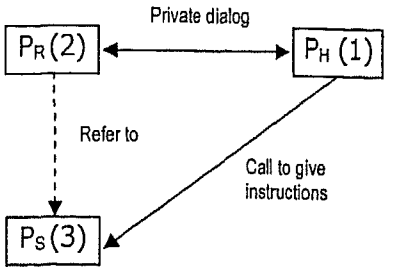
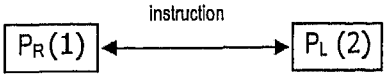
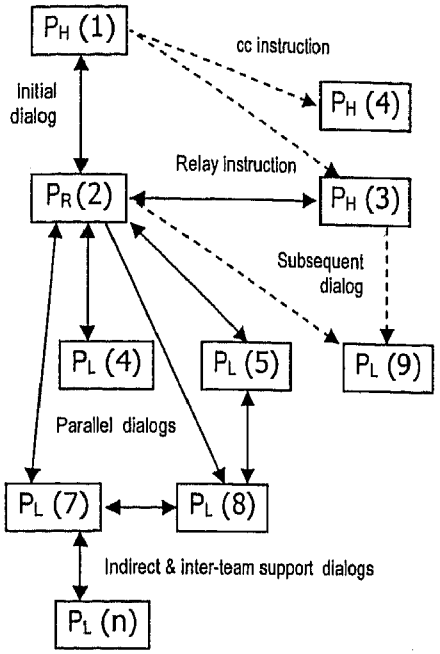
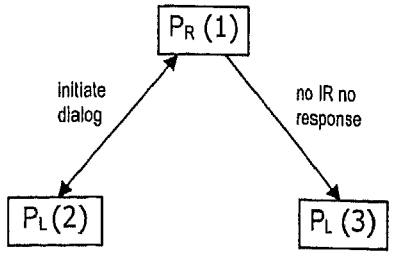
<td rowspan="3"> 
</td>
<td>Sample transaction:
May I speak freely. I m afraid if I keep quiet, I may add 2 problem.</td>
<td>PR(2)-PH(1)
09 10 03
18:35</td>
<td rowspan="3">Participants:
• PH(1) = superior to PR(2)
• PH(1) face problem w PS(3)
• PS(3) = obedient to PH(1)
• PH(1) & PR(2) in process building IR</td>
</tr>
<tr>
<td>Sure</td>
<td>PH(1)–PR(2)
09 10 03
18:38</td>
</tr>
<tr>
<td>Don't worry PR(2). I w handle it</td>
<td>PH(1)–PR(2)
09 10 03
19:44</td>
</tr>
<tr>
<td rowspan="2">PR(2) solicit help frm PH(1)
PH(1) reply SMS to PR(2) allow to call
PR(2) call PH(1) & verbal dialog
PH(1) call PS(3) to solve issue
PR(2) & PH(1) continue private dialog</td>
<td>TQ. But, I don't get it... Where did I go wrong?</td>
<td>PR(2)-PH(1)
09 10 03
19:45</td>
<td rowspan="2">Transaction length:
Short <70ch
Total dialog:
5 SMS + phonecalls</td>
</tr>
<tr>
<td>U didnt</td>
<td>PH(1)–PR(2)
09 10 03
19:47</td>
</tr>
</table>

<table>
<tr>
<td rowspan="2"> 
</td>
<td rowspan="2">Sample transaction:
Ok u ambik plus hway sampai tol senawang then u just go straight sampai t junction. Turn right to kpilah n straight lagi. U wil go thru a bengkang bengkok road (careful) sampai pekan kpilah. T junction lagi n turn rite. Terus n da kolej is on ur left. Hepi driving n b really careful wit da road ok?</td>
<td rowspan="2">PL(2)-PR(1)
10 10 04
20:15</td>
<td>Participants:
• PL(2) & PR(1) = no previous IR at all (dialog due to assigned mutual task)
• PR(1) & PL(2) both driving on highway</td>
</tr>
<tr>
<td>PR(1) dialog w PH(2) in B.M. (response to earlier SMS in B.M.) procedural directions</td>
<td>Transaction length:
Long >300ch
Total dialog:
3 SMS</td>
</tr>
</table>

<table>
<tr>
<td rowspan="3"> 
</td>
<td>Sample transaction:
I would like to rushup a bunting in Arabic. What would you suggest we have on it?.</td>
<td>PH(1) – PR(2)
10 10 03
21:55</td>
<td rowspan="3">Participants:
• PH(1) = superior to all others
• PH(1) & PR(2) = close IR
• PH(1) & PH(3) = formal work IR
• PH(3) = formal work IR w juniors
• PR(2) = good IR w juniors</td>
</tr>
<tr>
<td>PR(2), Please do in Arabic> (...text..)> for a bunting for (event). Kindly liaise w PH(3) n PH(4). Very urgent.</td>
<td>PH(1) – PR(2) + PH(3)&(4)
10 10 03
21:55</td>
</tr>
<tr>
<td>I got it. Trylah. Give me / PL(9) design & translation</td>
<td>PH(3) – PR(2)
10 10 03
22:19</td>
</tr>
<tr>
<td>PH(1) sent SMS instruction/solicit opinion to PR(2) late night
PR(2) & PH(1) engage SMS dialog
PR(2) relay instruction to PH(3) & solicit help frm PL(4-7)
PH(1) cc SMS to PH(3)&(4) to endorse relayed instruction (planting)
PR(2) & PL(5-7) engage separate parallel dialogs
PR(2) SMS PH(1) when task done
cc same SMS to PH(3) & PL(6) for info</td>
<td>Done. Translation Arabic (...text..) wil b emailed in half hour. Wil hav it printd & sent 2 PH(3) 1st thing a.m.</td>
<td>PR(2)- PH(1) +PH(3) +PL(6)
10 10 03
23:58</td>
<td>Transaction length:
Medium 130ch
Total dialog:
>20 SMS multiple parallel SMS & phone dialogs</td>
</tr>
</table>

<table>
<tr>
<td> 
</td>
<td>Sample transaction:
I need yr help. Need u 2 help me translate ... (contd).... Can u help 2moro?</td>
<td>PR(1)–PL(2)&(3)
10 10 03
22:55</td>
<td>Participants:
• PR(1) superior to PL(2)&(3)
• PR(1) has work-based pre-IR w PL(2) but not w PL(3)</td>
</tr>
<tr>
<td>PR(1) solicit help frm PL(2)&(3)
PL(2) respond via SMS
PL(3) not respond</td>
<td>May I know who is that?</td>
<td>PL(2)-PR(1)
10 10 03
22:58</td>
<td>Transaction length:
Short<100ch
Total dialog:
7 SMS</td>
</tr>
</table>

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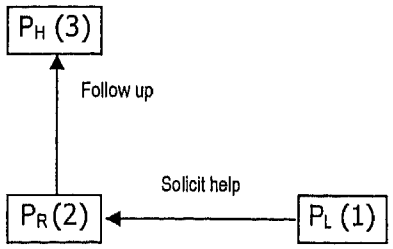
<tr>
<td> 
</td>
<td>Sample transaction:
PH(3) in very bad mood. N at one PH(3)'s having the briefing (...contd). Can u pls contact PH(3) n... (contd).</td>
<td>PL(1)–PR(2)
13 10 03
12:27</td>
<td>Participants:
• PH(3) superior to PR(2) & PL(1)
• PL (1)=intimidated by PH(3)
• PR(2) & PL(1) = good IR</td>
</tr>
<tr>
<td>PL(1) SMS for help frm PR(2)
PR(2) respond SMS to PH(3)
PR(2) SMS to PL(1) for assurance</td>
<td>SMS already. Wil handle it.</td>
<td>PR(2)-PL(1)
13 10 03
12:41</td>
<td>Transaction length:
Short-medium
Total dialog:
3 SMS</td>
</tr>
</table>

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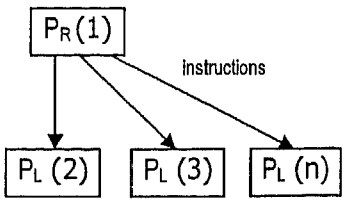
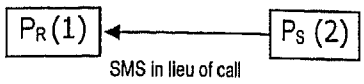
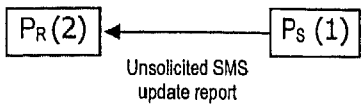
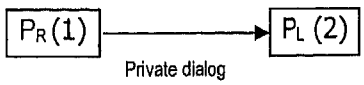
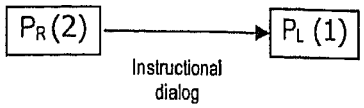
<tr>
<td> 
</td>
<td rowspan="2">Sample transaction:
STAR paper pg 14. Cut out & use 4 ..(task). Cal them. TQ</td>
<td rowspan="2">PR(1)-PL(2-6)
13 10 03
20:44</td>
<td>Participants:
• PH(3) superior to PR(2) & PL(1)
• PL (1)=intimidated by PH(3)
• PR(2) & PL(1) = good IR</td>
</tr>
<tr>
<td>PL(2-6) need info to do task
PR(1) SMS info/instructions to PL(2-6)</td>
<td>Transaction length:
Short 56ch
Total dialog:
1 SMS</td>
</tr>
</table>

	Sample transaction: *Sorry cant call back no credit*	$P_R(1)$-$P_S(2)$ 14 10 03 10:51	Participants: • $P_R(1)$ & $P_S(2)$ = work as team • $P_S(2)$ no access to phone
$P_R(1)$ called $P_S(2)$ Call cut off frm bad reception $P_S(2)$ SMS to $P_R(1)$			Transaction length: Short 56ch Total dialog: 1 SMS + phone calls

	Sample transaction: *Update: $P_H(3)$ wans report on (topic), cx wif $P_H(4)$ – says no nd 2 do. Haf mtg wif u & $P_H(5)$ 1st. Secured last minute event... (contd). Nd assistance, spoke 2 $P_H(4)$. Emailed 2 u. Wil inform $P_L(6)$. Informed $P_S(7)$... (contd) Preping ur trip 2 (venue).*	$P_R(1)$-$P_S(2)$ 14 10 03 18:25	Participants: • $P_R(1)$ & P_S (2) = work as team & built close IR for > 6months
$P_S(2)$ SMS updated report to $P_R(1)$			Transaction length: Long >400ch Total dialog: 1 SMS

	Sample transaction: *Hav u bn sms-ing $P_H(3)$?*	$P_R(1)$-$P_L(2)$ 15 10 03 00:05	Participants: • $P_R(1)$ & $P_L(2)$ = work as team & close IR • $P_L(2)$ = work in isolation & in bad books of $P_H(3)$ • $P_H(3)$ = superior to $P_R(1)$ & $P_L(2)$
$P_R(1)$ & $P_L(2)$ both resting in bed in own homes $P_R(1)$ solicit work-base dialog $P_L(2)$ open up for IR building dialog	*$P_R(1)$, can cal? Nid advis urgent*	$P_L(2)$-$P_R(1)$ 15 10 03 00:31	Transaction length: Short <20ch Total dialog: 7 SMS & phone call



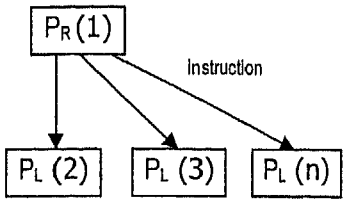
PR(2) send inquiry to PL(1)
PL(1) SMS reply

Sample transaction:
ETA?

PR(1)-PL(2)
09 11 03
12:30

Participants:
- PL(1) & PR(2) = work as team
- PR(2) waiting for PL(1) to arrive

Transaction length:
curt 4ch
Total dialog:
2 SMS



PL(2-6) need info to do task
PR(1) SMS info/instructions to PL(2-6)

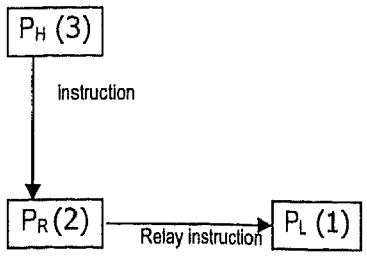
Sample transaction:
Leavg KLIA 4 jkt.
Hp in jkt:
+6281311093887

PR(1)-PL(2-6)
10 11 03
08:20

Participants:
- PR(2) & PL (2-n) = work as team

Transaction length:
Short 36ch
Total dialog:
1 SMS

descriptor	observation	analysis
transaction speed	Varied; depends on dialog content	depends instructor's intent & IR
transaction length	Curt; as short as 1ch sometimes (symbol)	efficient SMS; just enough for intent
dialogue length	As short as 1 SMS	efficient SMS; just enough for intent
linguistics	Specialized context short form used; proper noun or jargon	Requires prior knowledge or building literacy skills in specific areas
confidentiality	Totally none; cc to multiple for maximum information dissemination	SMS can be used as mass communication tool
time of day	Varied; as and when necessary	Powerful tool as learner can receive information as and when necessary throughout the day
venue sender	Varied; local & international	Despite geographic boundaries=powerful TE tool
communication	pure SMS	efficient SMS; not need support
dialogue intent / TE	Instruction =solicit/give information	Powerful tool when applied to participants with mutual prior knowledge/ scope of work



$P_H(3)$ SMS instruction to $P_R(2)$
$P_R(2)$ forward SMS to $P_L(1)$

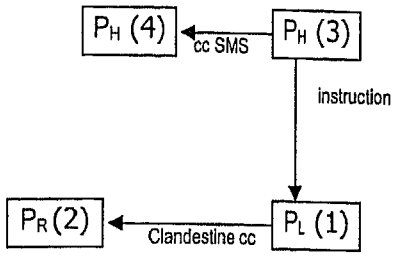
Sample transaction:
JUST got approval. Confirm roller doors

$P_R(2)$-$P_L(1)$
12 11 03
15:20

Participants:
- $P_L(1)$ & $P_R(2)$ = work as team
- $P_H(3)$ SMS to $P_R(2)$
- $P_R(2)$ relay to $P_L(1)$
- $P_L(1)$ = very weak in English

Transaction length:
Short 44ch
Total dialog:
2 SMS

descriptor	observation	analysis
transaction speed	Varied; inconsistent; depends on approval (instruction) received from superior	Although SMS can facilitate two-tier instruction, it does not guarantee speed of outcome
transaction length	Generally short; <100ch; straight to point only	SMS efficient; Intended instruction requires simple behavioural response
dialogue length	Short; 3-5 SMS; just enough for intent delivery	Length dialog not necessarily determine success of intent
linguistics	No short form at all; usage of all caps to emphasis issue	SMS to learner with lower language skills requires extra investment to ensure no miscommunication
confidentiality	Sometimes cc to other team members as 3rd party "plant"	SMS can be used to increase chance for learner to obtain TE intent from additional alternative sources
time of day	Varied; inconsistent; depends on timing of instruction received from superior	Powerful tool as learner can receive information as and when necessary throughout the day
venue sender	Varied; local & international	Despite geographic boundaries=powerful TE tool
communication	pure SMS	efficient SMS; not need support
dialogue intent / TE	Instructor acts as mediator & translator between superior & learner (whom have absolutely no IR) to relay instructions at the learner's pace & ability	Powerful tool as any combination of persons can be mediated via SMS



$P_H(3)$ SMS instruction to $P_L(1)$ + $P_H(4)$
$P_L(1)$ forward SMS to $P_R(2)$

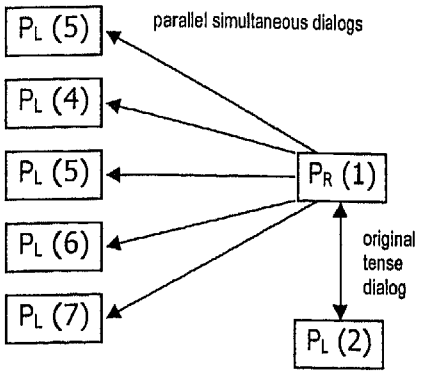
Sample transaction:
4 ur info: c me tmw 1st thg. I m nt at all plsd abt (event) mtg 2day cc $P_H(4)$

$P_L(1)$-$P_R(2)$
18 11 03
20:51

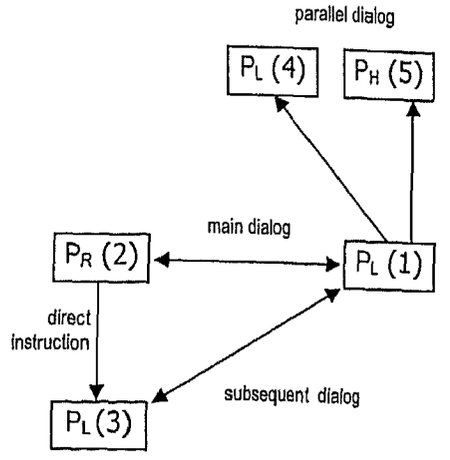
Participants:
- $P_L(1)$ & $P_R(2)$ = very close IR & work as team
- $P_H(3)$ SMS to $P_L(1)$ but not to $P_R(2)$
- $P_R(2)$ want to ensure $P_R(2)$ aware/prepared

Transaction length:
Short 77ch
Total dialog:
1 SMS + verbal

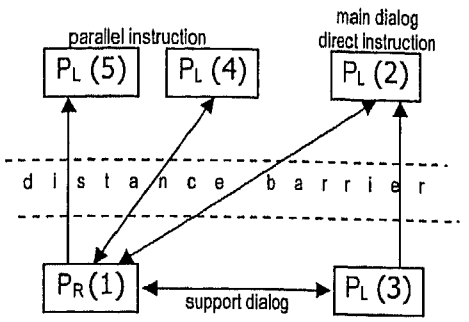
descriptor	observation	analysis
transaction speed	Varied; depends on IR & prompting	Relaying sensitive issue instructions requires close IR
transaction length	Depends on original SMS instrctn; often length = identical to original; sometimes with added info to clarify content	detailed info; scaffolding provided by learner for instructor – reverse roles
dialogue length	medium; open-ended dialog	invitation future dialog; build IR
linguistics	shortform; coded; to increase confidentiality	Ambiguous short forms which allow reading between the lines often used to relay sensitive issue instructions
confidentiality	1-to-1; contains P&C info; but relayed to trusted team member for awareness/support	Relay of P&C SMS =increase trust
time of day	night; range 7-11pm	rapport personal/close IR
venue sender	Varied; local & international	penetrate privacy=powerful IR tool
communication	pure SMS	efficient SMS; not need support
dialogue intent / TE	provide info frm 3rd party to increase IR; or request decipher plant frm 3rd party	conclusive= Relay of P&C SMS = powerful "secret weapon"

<table>
<tr>
<td> 
</td>
<td>Sample transaction:
PL(2), arguing in front of public & walking off in a huff is unprofesional. I sugest u calm down so that the team can work out a best solution. (contd)... Pls focus on objectv.. (contd)....</td>
<td>PR(1)–PL(2) cc PH(3)+ PL(4,5,6,7)
051203
10:15</td>
<td>Participants:
• 7 parties various level rank
• PL(2) = having IR problem effectg TE
• PR(1)= superior to PL(2) but unable to build gd IR</td>
</tr>
<tr>
<td>PR(1) face to face argument with PL(2)
PR(1) sends SMS advice PL(2)
cc to PH(3) & all team members
PL(2) responds SMS to PR(1)
PL(4) responds by calling PL(2)</td>
<td>I calm n thinkin now wic is mos importan. (contd)...</td>
<td>PL(2)–PR(1)
051203
10:23</td>
<td>Total dialog:
5 SMS + separate parallel dialogs (verbal hp & SMS)</td>
</tr>
</table>

descriptor	observation	analysis
transaction speed	Very fast; within 2-5 min frequency	Urgent, important, tense
transaction length	Long/essay; try to give advice OL	Objectives initial dialog not met; require external parallel planting
dialogue length	Short, abrupt, non-closure ending	
linguistics	Analogies, colloquialism	Informal, OL > IL
confidentiality	Parallel dialog to team members for benchmarking & reinforcement	3rd party planting
time of day	Office hours	Official TE / IL
venue sender	Original dialog=same venue but unable to have face-to-face due to tension Parallel dialogs=distant venue	Defy barrier of mutiny, distance, personality clash
communication	SMS+verbal	Frustration & severity lead to necessity verbal
dialogue intent / TE	SMS enables communication despite tense situation	Result in OL although original intent was IL

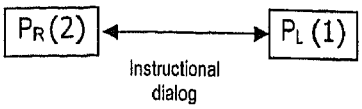
<table>
<tr>
<td rowspan="2"> 
</td>
<td>Sample transaction:
Work as team. Not as captain telling crew wat to do. Every boat has only 1 captain. Ours = PR(6) Let captain lead. Crew's duty= to warn captain of storm, NOT = 2 takeover dirctn.</td>
<td>PR(2)–PL(1)
061203
00:25</td>
<td rowspan="2">Participants:
• 5 parties various level rank
• PL(1) = having IR problem effectg TE
• PR(2)= superior to PL(1) but unable to build gd IR
• PL(3)= gd IR w PL(1)</td>
</tr>
<tr>
<td>4 ur info, PL(1) is SMSing PL(4) PH(5) etc. now. Perhaps u SHUD return his cal.</td>
<td>PR(2)–PL(3)
061203
00:20</td>
</tr>
<tr>
<td>PL(1) sends simultaneous SMS to all
PR(2) sends SMS advice PL(1)
PR(2) sends instructional SMS to PL(3)
PL(1) responds SMS to PR(2)
PL(3) responds by calling PL(1)</td>
<td>Reminder wel said. Team take direction only from PH(5) n non other. D crew knws wat hv to don, n kip remindin each othr to excel n nt to b deter by side agenda. cc PH(5)</td>
<td>PR(2)–PL(1)
061203
00:48</td>
<td>Total dialog:
4 SMS + folowup separate verbal (different dialog)</td>
</tr>
</table>

descriptor	observation	analysis
transaction speed	Very fast; within 2-5 min frequency	Urgent, important, tense
transaction length	Long/essay; try to give advice OL	Objectives initial dialog not met; require external parallel planting
dialogue length	Short, abrupt, non-closure ending	
linguistics	Analogies, colloquialism	Informal, OL > IL
confidentiality	Parallel dialog same issue to several parties	3rd party planting
time of day	late-night	Reflection, metacognition
venue sender	In bed, private time, distance	Defy barrier of mutiny, distance, personality clash
communication	SMS+verbal	Frustration & severity lead to necessity verbal
dialogue intent / TE	rapport between parties for planting & member checking; Instil unconscious internalization	Result in OL although original intent was IL

<table>
<tr>
<td> 
</td>
<td>Sample transaction:
PL(2) , Y hav u nt revertd on wat u wr suposd 2 do? PL(3) & i r in trouble bcoz of dat. Pls folow thru ASAP & rport. If u nt clear wat 2 do, pls check w PL (3). PL(3) = yr mngr. cc PL(4), PL(5)</td>
<td>PR(1)–PL(2,3,4,5)
101203
13:00</td>
<td>Participants:
• 5 parties various level rank
• teamwork</td>
</tr>
<tr>
<td rowspan="2">PR(1) sends simultaneous SMS to all
PL(2) sends email report to PR(1)
PR(1) sends instructional SMS to PL(2)
PR(1) sends SMS to PL(3) & PL(4)
PL(2) responds to PR(1)

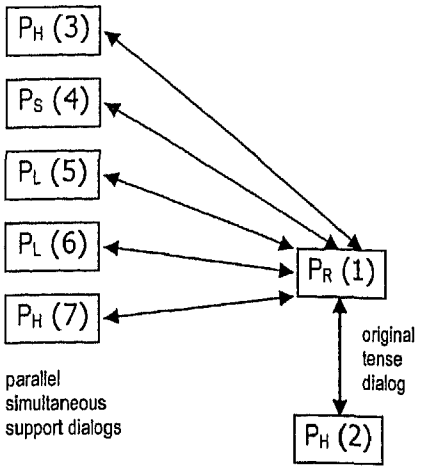
NOTE:
PR(1) PL(3) = in same vicinity
PL(2) PL(4) PL(5) = in separate vicinity</td>
<td>PL(4) , did u get A 2 Q frm PL(3)? PL(2), is isue solvd?</td>
<td>PR(1)–PL(2,3,4)
101203
18:38</td>
<td rowspan="2">Total dialog:
7 SMS + email</td>
</tr>
<tr>
<td>Yes its solved. (contd)....</td>
<td>PL(2)–PR(1)
101203
17:31</td>
</tr>
</table>

descriptor	observation	analysis
transaction speed	Span 4 hours	Consistent due to importance
transaction length	Variable	Long SMS=procedural IL Short SMS=order+obey
dialogue length	7 SMS total	Efficient; 5 participants working together only 7 SMS to achieve TE; symbiosis
linguistics	Short form, formal	Get job done fast
confidentiality	Parallel dialog same issue to several parties	Teamwork
time of day	office hours & formal tone	Formal TE / IL only
venue sender	Distance barrier	SMS overcome logistics
communication	Hybrid w email	Details & official documents via email
dialogue intent / TE	Clear cut response to instruction; Maximizing pre-existing rapport between parties; Instill teamwork & member checking between team members	Direct instruction; not much OL



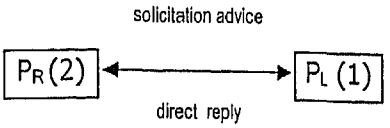
$P_R(2)$ send instruction to $P_L(1)$ $P_L(1)$ SMS assurance to $P_R(2)$	Sample transaction: *Alright :)*	$P_L(1)$-$P_R(2)$ 11 12 03 08:09	Participants: • $P_L(1)$ & $P_R(2)$ = work as team • $P_L(1)$ = wanted to give assurance to $P_R(2)$ Transaction length: curt 20ch Total dialog: 2 SMS

descriptor	observation	analysis
transaction speed	consistent; fast response; 10-30min wait	learner expects SMS; strong IR
transaction length	As short as 3-ch; usually 50-100ch	efficient SMS; not need elaboration
dialogue length	Short; 3-5 SMS; just enough for intent delivery	Length dialog not necessarily determine success of intent
linguistics	shortform; symbol smiley face	Mutual level prior knowldg language
confidentiality	Not necessary; Content matter-of-fact	Not important for instructor's intent
time of day	Varied; incl early a.m. & late p.m. private time	rapport personal/close IR
venue sender	Varied; local & international	penetrate privacy=powerful IR tool
communication	pure SMS	efficient SMS; not need support
dialogue intent / TE	To convey positive emotion of instructor	Successful; universally understood simple composite symbol :-)

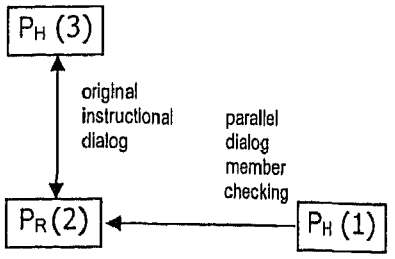


Sample transaction:		Participants:
I suggest u calm down. I hv no idea what happened (contd)...	$P_H(2)$–$P_R(1)$ 131203 17:49	• Multiple parties of various ranks • $P_H(2)$ & $P_R(1)$ *involved in* extremely tense SMS & verbal prior dialog = very bad IR • Other participants =good IR w $P_R(1)$
Take it easy. Whatever it is that happened, lets not let it get out of hand. I will talk to you on Monday..	$P_H(3)$–$P_R(1)$ 131203 17:42	
Take it easy. We always back each other. You take it easy	$P_S(4)$–$P_R(1)$ 131203 22:53	
Im sure u did the right thing. And I know the team will b quite upset w this news	$P_L(5)$–$P_R(1)$ 131203 20:27	
Heard wat happened.. (contd) .. We r with u, take care	$P_L(6)$–$P_R(1)$ 141203 14:37 & 15:02	
Don't know cerita la. Just heard.. (contd)...	$P_H(7)$–$P_R(1)$ 231203 11:40	Total dialog: >25 SMS various parties spanning 9 days (simultaneous different dialogs)

$P_R(1)$ hp argument with $P_H(2)$
$P_H(2)$ sends SMS advice to $P_R(1)$
$P_R(1)$ SMS to $P_H(3)$ $P_S(4)$ $P_L(5)$
$P_H(3)$ $P_S(4)$ $P_L(5)$ respond to $P_R(1)$
$P_H(7)$ $P_L(6)$ *respond to grapevine*

<table>
<tr>
<td rowspan="2"> 
</td>
<td>Sample transaction:
Hallo. Need a favor from ya. Need (contd)... pls pls pls</td>
<td>PL(1)–PR(2)
161203
18:59</td>
<td rowspan="2">Participants:
• same dept
• lower hierarchy solicit from higher
• 2pax closed dialog</td>
</tr>
<tr>
<td>(contd).. im here if u nd my help (contd)... u knw hw 2 find me if u nd me (contd)</td>
<td>PR(2)–PL(1)
161203
19:50</td>
</tr>
<tr>
<td>PL(1) sends SMS to PR(2)
PR(2) replies
Dialog continues</td>
<td>Okaye. Noted. U know I always ask u 4 advice wat. Hehe. Be prepared then. Im gona keep bugging u. (contd)...</td>
<td>PL(1)–PR(2)
161203
20:04</td>
<td>Total dialog:
6 SMS</td>
</tr>
</table>

descriptor	observation	analysis
transaction speed	consistent; fast response; 10-30min wait	learner expects SMS; strong IR
transaction length	as long as 400-characters; elaborate detail	detailed info; scaffolding
dialogue length	medium; open-ended dialog	invitation future dialog; build IR
linguistics	shortform; colloquial; informal	rapport informal; strong IR
confidentiality	1-to-1; contains P&C info	SMS privacy=increase trust
time of day	night; range 7-11pm; span > 4hrs	rapport personal/close IR
venue sender	local; at home	penetrate privacy=powerful IR tool
communication	pure SMS	efficient SMS; not need support
dialogue intent / TE	solicit info for TE; provide moral support	conclusive=build IR trust expectation



$P_R(2)$ earlier verbal dialog with $P_H(3)$
$P_R(2)$ sent earlier SMS to $P_H(1)$
$P_{HS}(1)$ sends this SMS to $P_R(2)$ for moral support to build IR

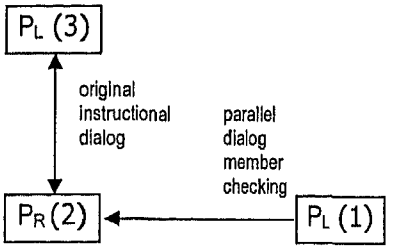
Sample transaction:

(contd)... IF U need 2 talk call me. Just remember The truth will surface and the bad will lose. You take care

$P_H(1)$–$P_R(2)$
211203
07:22

Participants:
- 3 parties
- $P_H(1)$ = good IR w $P_R(2)$
- $P_H(3)$ = not good IR w $P_R(2)$

Total dialog:
3 SMS



$P_R(2)$ received earlier SMS from $P_L(3)$
$P_R(2)$ sent earlier SMS to $P_L(1)$
$P_L(1)$ sends this SMS to $P_R(2)$ plus series of other SMS as member checking clarification

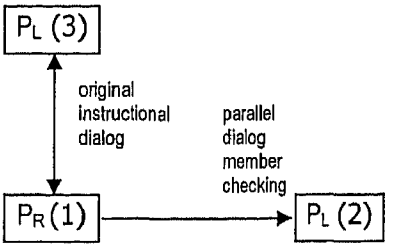
Sample transaction:

Well, I m jus an outsider giving membr checkn dat u may sometimes need in any xperiment, u normally haf dat. (contd)...

$P_L(1)$–$P_R(2)$
211203
23:29

Participants:
- $P_L(1)$ = good IR w $P_R(2)$
- $P_L(1)$ = CWR
- $P_R(2)$ = unclear state of mind

Total dialog:
6 SMS



$P_R(1)$ received earlier SMS from $P_L(3)$
$P_R(1)$ sends this SMS to $P_L(2)$
$P_L(2)$ later replies opinion

Sample transaction:

He impressed me. SMSed me jus nw 2 infrm me status softcopy. 4 once, he folowd thru WITHOUT remindr. Tel me, wud YOU hav don same? & if yes, y? 2 impres? Or 4 fear? Or wud u ACTUALY hav learnd 2 b eficient (by nw)?

$P_R(1)$-$P_L(2)$
221203
20:30

Participants:
- $P_L(2)$ = good IR w $P_R(1)$
- $P_L(2)$ = CWR
- $P_R(1)$ = $P_L(2)$ provoking to retrospect

Total dialog:
2 SMS + verbal

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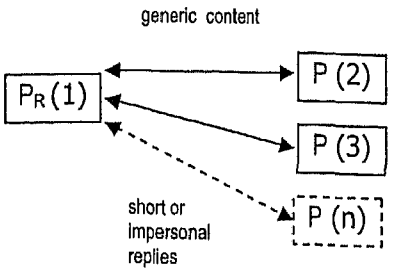
<tr>
<td rowspan="2"> 
</td>
<td>Sample transaction:

TQ. Merry Xmas 2 u 2. I don't recogniz this numbr. Who's this?</td>
<td>P(2) – PR(1)
251203
09:22</td>
<td rowspan="2">Participants:
• variety depts
• all levels hierarchy
• 57pax open dialog</td>
</tr>
<tr>
<td>Selamat raya 2 u 2. who's this?</td>
<td>PR(1) – P(3)
251103
16:37</td>
</tr>
<tr>
<td>PR (2) sent generic SMS to P(1) and whole list of acquaintances
PR(2) receives responses</td>
<td>TQ</td>
<td>P(2) – PR(1)
251203
09:57</td>
<td>Total dialog:
57 SMS sent
18 SMS responses</td>
</tr>
</table>

descriptor	observation	analysis
transaction speed	erratic; inconsistent	learner not expecting SMS; weak IR
transaction length	as short as 2-characters	efficient SMS; not need elaboration
dialogue length	as short as 1-transaction unreplied	success rate SMS not guaranteed
linguistics	shortform; colloquial; generic; purchased	rapport impersonal; sometimes none
confidentiality	none; multiple forwarded SMS	Automation; mass quantities; simultaneous; efficient; convenient
time of day	normal; range 9am-9pm	rapport impersonal/formal/polite
venue sender	local & international	borderless=powerful rapport builder
communication	pure SMS	efficient SMS; not need support
dialogue intent / TE	festive season greeting; build rapport	repeated over time=investment IR

RQ1 – SMS effect on IR
How does SMS communication empower its users to break barriers that affect Interpersonal Relationships (IR) on the job?

Area of Focus

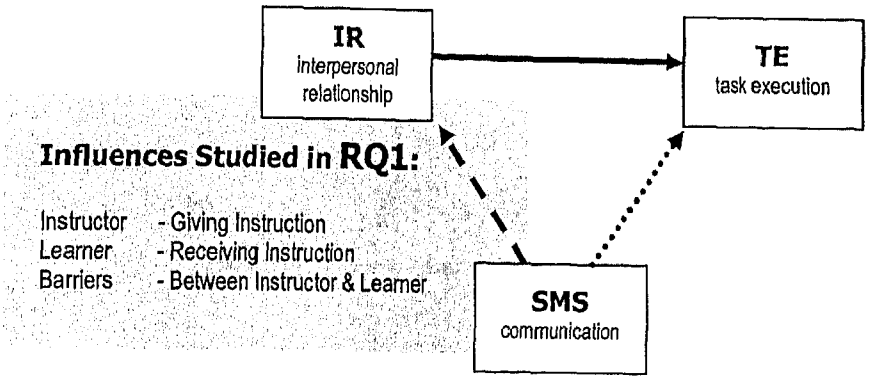


Figure 4RQ1 - 1: SMS influence on Interpersonal Relationships (IR)

This research question (Figure 4RQ1 - 1) focused on the effects SMS communication has on interpersonal relationships (IR) between people who work together. The use of SMS was found to have stark effects on both parties involved, the learner who receives instructions, and the instructor who gives it, by breaking the barriers of IR that often stand in the way.

The instructor's role is amplified by the direct access SMS communication enables. The instructor can control or instigate his learners at any time, location or situation. He can initiate rapport or build perceptions in ways that other communicative mediums have never been able to. From this, he is able to make ongoing formative evaluations based on the instantaneous SMS feedback received from his learners. On the other hand, a learner becomes more empowered from

using SMS. As communication through SMS is generally on a one-to-one basis, the learner is guaranteed learning "time and space" as an individual. He is able to pace, receive instructions and control his own learning. In other words, both learner and instructor become equally empowered. They are able to control the "conduits" of learning through the virtual context of SMS communication.

The observations recorded in the following section exemplify, analyse and discuss these findings. The summary of findings is illustrated at the end of this section (Figure 4RQ1 - 3 to Figure 4RQ1 - 5).

Case study scenario

The participants in this case study were already very familiar with the advantages of SMS communication on the job. Short of a handful of die-hard rebels, everyone in the establishment owns and uses their handphone for both personal and official use. The use of SMS for on-job communication was commonplace throughout the duration of the study.

To ensure an accurate analysis, this section of the study required additional data pertaining pre-existing IR between the participants involved, if any. This was necessary to provide a relative "ground zero" benchmarking scale that was used to identify and evaluate the "influences" being studied (refer **Error! Reference source not found.**).

This background information was obtained from my own prior knowledge. And in order to minimize bias, the information was member-checked against

second opinions from neutral third parties for triangulated confirmation.

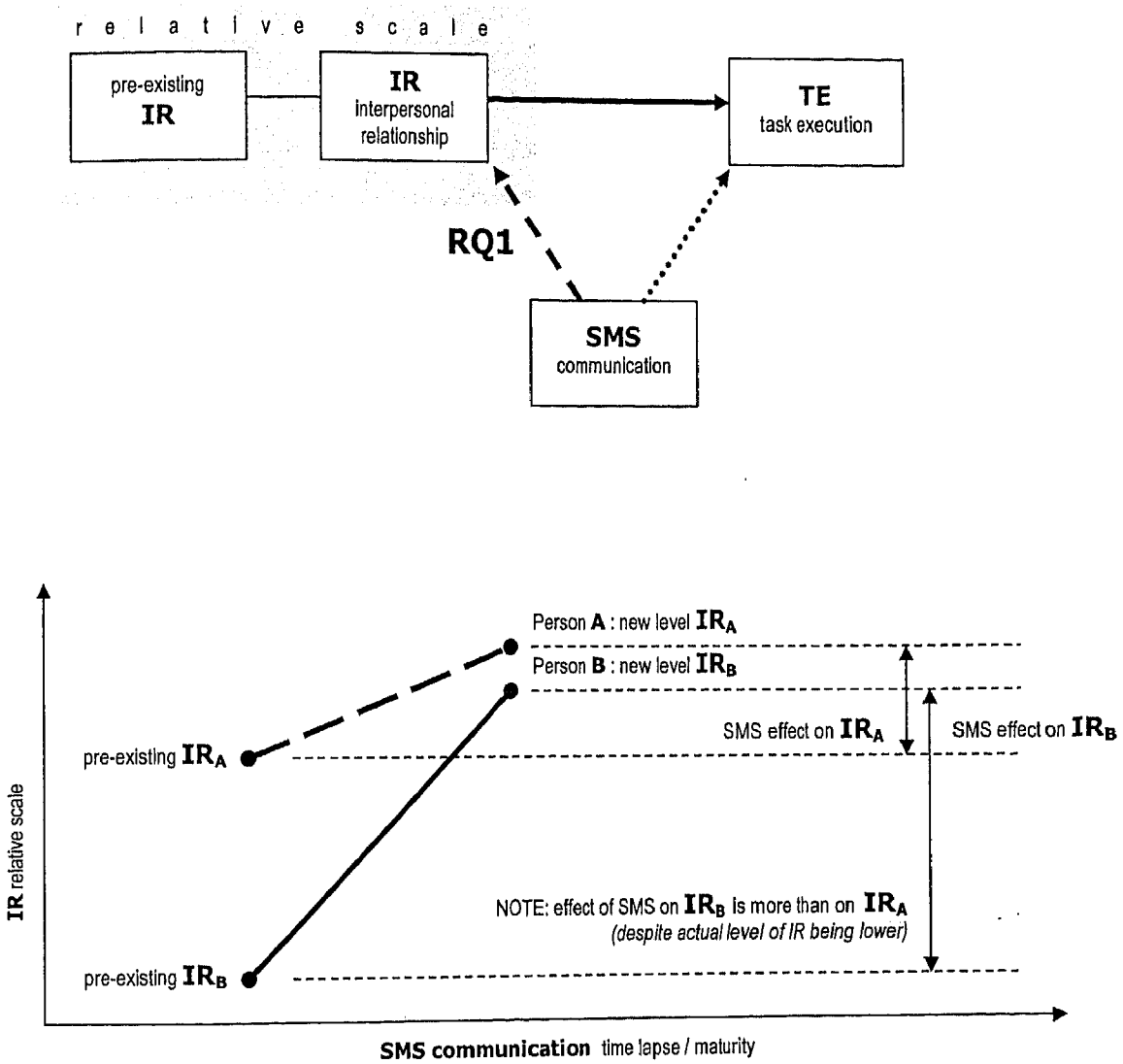


Figure 4RQ1 - 2: Benchmarking of Interpersonal Relationships (IR)

Observations

Equal opportunity. A simple mobile handphone with SMS capability can be purchased for as low as RM160, or even obtained for free as an incentive gimmick, as some service providers have done in the past three years (my own handphone was procured as a free gift when I signed up for a credit card with a local bank).

Example empowerment due to free cost of sending SMS via office PF internet

Refer: 12 11 03 / 21:20

E $P_L(1)$@xxx.edu.my

<no subject>. $P_L(1)$: my hp num has changed to xxx-xxx-xxxx, coz digi has MMS & TM doesn = B9t=3D). pls update ur phonebook. 1503 111103 11:28:32

Asides from the service provider initial or operating fee, the cost for sending an SMS is as low as 10sen per transaction, and receiving an SMS costs absolutely nothing at all. So, as long as a person has a handphone, even if he is out of credit, he can still receive instructions via SMS for free. A few industrious SMS users even learned to use email-based SMS. This allowed them to send SMS using their office desktop PC, and therefore, they were able to send SMS for free when they were working at their desk.

Example empowerment due to free cost of receiving SMS

Refer: 23 08 03 / 07:05

$P_H(2)$ sms me 6:45am. Ask 2 report progress... (contd)... I m 2 debrief $P_H(2)$ 2pm 2day on yr progress. Pls pas me copy of amended stuff b4 then. M unavailable til 1pm. Wil c u aftr. Pls pas word around. URGENT. TQ

This "zero" cost factor was an important feature in this case study, as it set the tone for the office work culture. As major monetary investment was not necessary, SMS communication was assumed to be a standard procedure. All staff were expected to be on call

via SMS. Even if they did not reply to a SMS instruction, they were expected to have received and acted upon it.

Ubiquity. Such affordability allowed the proliferation of work-related SMS in the said establishment and resulted in the mobility of staff at all levels. It was commonplace for clerical level staff, resource operations labourers, and even truck drivers to use SMS to communicate on the job. Anyone can SMS anyone. Everyone is empowered to initiate and communicate on the job, enabling the establishment of work related interpersonal relationships (IR) between staff of different levels and areas that in the past may not have been possible. Anyone can give an SMS instruction to anyone.

Example empowerment learners of all levels
Refer: 13 05 04 / 07:45
Lori on the way. Tunggu loading bay.

Proximity. SMS enabled staff to contact each other wherever they were. Even when staff had to physically be on separate continents, separated by physical distance and time difference, accessibility via SMS was almost limitless and occurred in real time. Of course, the jet-setters could have also contacted the head office for work information through email, but in some of the venues where they were sent to, internet

Example empowerment despite venue distance
Refer: 01 08 03 / 18:47
Don't ask y. Jus do. I bz nw. No time 2 explain. Get Ps(3) 2 book hotel in case. Start Sunday til 8aug.

connectivity was not available. Thus, despite being thousands of miles away, the instructor is still empowered to instruct.

Accessibility. SMS communication also allows learners to communicate to instructors or other learners in situations where they are unable to gain access to. For example, a junior staff who needed to solicit information from her supervisor (who was currently attending a meeting), found it easier to SMS to a colleague (who was also attending the meeting), to ask the favour of relaying the question she needed.

Example empowerment via a controlled conduit
Refer: 23 06 03 / 16:09
If P_H (3) is there can u ask hr about kuching ad;

This 3rd party solicitation solved both the barriers of venue and of hierarchy, as the colleague who assisted in relaying the massage, was of a higher rank than the junior staff. Thus, the needed response from the supervisor was ensured, despite having been interrupted during the meeting. In other words, indirectly, the junior staff used SMS as a self-empowerment tool to gain access to where she otherwise could not have. After six months of such access, some participants actually "moved up" in rank due to their ability to "get the job done".

Example empowerment despite uncomfortable and tense situation
Refer: 01 10 03 / 10:25
Pls don't b sad. Its not personal. It's a better way 2 protect outcomes.

Sensitivities. The example shown was an SMS from a very senior boss who had the uncomfortable task of reminding a subordinate of protocol. Although the reprimand was carried out behind closed doors, there was much bottled up tension and apprehension that could not be expressed by either side. The "consoling" SMS was sent immediately after the subordinate left the room with the intent of expressing compassion. Sometimes it is inappropriate to exhibit emotion in a work environment. Restrained feelings and not having the freedom to express opinion out loud can aggravate an already uncomfortable or tense situation. SMS provides an outlet where such opinions can be expressed direct to the persons concerned without the need for embarrassing or uncomfortable face-to-face interaction.

Example empowerment regardless of attitude incompatibilities
Refer: 051203 / 10:15
PL(2), arguing in front of public & walking off in a huff is unprofesional. I sugest u calm down so that the team can work out a best solution. (contd)... Pls focus on objectv.. (contd)....
Reply: 051203 / 10:23
I calm n thinkin now wic is mos importan. (contd)...

Attitude. Another example of SMS communication solving difficult situations is when attitude differences are so severe that it can cause stand offs. Some situations are so tense that it is better that the people concerned have the freedom to vent their anger and have their "space". In cases like these, arguments can persist and the angry parties can express their emotions, but without causing disruption to the

situation. As the message text must be premeditated, SMS arguments tend to be concise, specific and logical in content, unlike verbal confrontation, where unintended offensive language often supersedes the actual argument topic. Also, the time lapse spent for the SMS dialog often acts as a therapeutic remedy, of which by the time the dialog is over, the participants would have solved the conflict.

Example empowerment to express individual personalities

Refer: 09 10 04 / 21:40

Tak larat la $P_R(1)$... Timun di celah durian. $P_H(3)$ suruh ke timur, $P_H(4)$suruh ke barat, $P_H(5)$ suruh ke utara. MANA pergi pun, SEMUA salah. Sigh... Tapi timun tetap timun. I m glad u r doing wel. It's lonely

Personality. In a work environment, manpower is often expected to be homogenous. In return for treating everyone equal with equal opportunity, bosses often forget that staff are individuals with individual responses, opinions, and abilities. But since SMS allows individual channels of communication, staff can be individually heard, and thus, individually responded to.

This is useful especially when dealing with Asian cultures where people often hide behind a crowd. SMS communication encourages individual expressions of personalities. Such openness facilitates in formative evaluation as instructors are able to obtain honest feedback from even shy learners.

Example empowerment to defy rank or hierarchy

Refer: 09 10 03 / 18:35

May I speak freely. I m afraid if I keep quiet, I may add 2 problem.

Reply: 09 10 03 / 18:38

Sure

Hierarchy. Subordinates often hesitate to inform bosses of problems. Fear of exposing mistakes by others, especially superiors, fear of uncertainty, inferiority complexes or other unfounded fears often result in worse problems. SMS allows learners to approach instructors in a non-confrontational manner. This empowers the learner to contribute meaningfully and directly despite his disposition. Instructors, on the other hand, are able to receive candid feedback from all levels, which is crucial for evaluation and improvement of the task, situation, as well as self.

Example empowerment undercover/secrecy

Refer: 02 09 03 / 22:04

Lets quietly exchange notes on the negative ones.

Confidentiality. Conventional memos, which although could be marked "confidential", are still subject to administrative red-tape interference. Manual memos often get lost "in the system" or "along the way". And email memos are easily tampered with or could be retrieved from the server by others. In contrast, an SMS transaction is received directly by the recipient. Issues of highly confidential and sensitive nature can be brought up through SMS in complete confidence. This direct access is immensely useful to instructors deal with information of sensitive nature. SMS facilitates covert communication.

Example empowerment regardless time of day
Refer: 15 10 03 / 00:31
P_R(1), can cal? Nid advis urgent

Time. It would not be too extreme to assume that SMS is the only contemporary media of communication that provides access 24hours a day in an unobtrusive direct totally mobile manner. Telephone calls are equally mobile and convenient, but irritating at ungodly hours. Email and chat-rooms are nice and quiet, but require infrastructure. SMS, on the other hand, can be carried out even in bed, when one is half asleep.

Example empowerment regardless time of day
Refer: 25 07 03 / 23:30
Checked my email. Not rec proposal copy yet. Did u send. Need ASAP. P_H(3) askg me already. Pls email 2moro a.m. TQ.

The fact that a dialog can take place in such circumstances has opened the doors for interpersonal relationships to be redefined. It was not uncommon for participants in this case study to have dialogs at hours that were totally unprecedented prior to the advent of SMS. The nature of the dialogs ranged from personal advice seeking and social chatting, to serious problem-solving and emergency-help solicitation. While the sender is somewhat dependent on the recipient's willingness to respond to the SMS (for the dialog to commence), the sender has total control to initiate the dialog. Anyone can send an SMS at any time that he wants the receiver to receive it – total empowerment to initiate contact. As the time of sending is automatically displayed on the recipient's handphone, the recipient is able to evaluate the nature of urgency, importance, or

even attitude of the sender. For example, if a work related SMS is sent at 11:30pm on a Sunday night, it is obvious that the matter is urgent which could not wait for the next morning. If the mode of contact was via telephone, it could have been disruptive of personal time. But SMS allows interference minus the irritation.

Prejudice. Personal hang-ups are theoretically unacceptable in a work relationship, but in reality unavoidable. There will always be prejudice in one way or another. There will always be some people whom are disliked or avoided due to incompatibilities of age, race, religion, personality, or other characteristics that are unchangeable. It was interesting to discover in this case study that SMS provided a virtual environment where people who did not generally communicate amicably in person, were able to do so via SMS.

Example empowerment to overcome prejudices

Refer: 05 10 03 / 20:06

I am sure once we trust each other, the team wil wok towards 1 goal & recognize everyone strength

Honesty. The truth can be embarrassing, painful and hard to swallow. Most of the time, it is impossible to be unabashedly honest in a work relationship, especially if it involves facing a truth that should not be. In the example given, two senior staff had to come to grips with their own inadequacies. However, throwing the towel in was not a solution. Bosses must maintain a

Example empowerment to be honest and blunt

Refer: 08 09 03 / 08:25

Ps (2), u must b CLEAR in yr mind: (juniors) r doing FINE. It is YOU & ME who must improve. Do NOT go in2 mtg & scold them. It is BAD mgmt that caused watevr (juniors) do/did. Fault is OURS. NOT theirs.

level of seniority, not for superiority sake, but to avoid total anarchy. And thrashing the next person down was also not a solution. Even if a subordinate made a mistake, it is the boss that bears the final responsibility. In this case, SMS dialog was used to debate the problem at hand and work out a best strategy. It offered a non face-to-face neutral environment where the participants could express themselves with honesty.

Teamwork. As SMS offers speed, real-time, direct access and confidentiality, groups of participants were able to use SMS communication to work in tandem on the job. Often, bosses did not need to know who actually did which part of the job. Efficiency of task execution was paramount, regardless of means. Diligent use of SMS communication between team members produced seamless flow of work with maximum results. It did not take long for the majority of participants in the case study to become converted "believers" in using SMS for work communication. It is also interesting to note that these participants continued to use SMS communication for teamwork even after the initial stimulation (artificially created by the author for this case study) was no longer imposed. Another interesting observation was that some staff, which did

Example empowerment to work in tandem to maximize individual team member strengths

Refer: 13 10 03 / 12:27

P_H(3) in very bad mood. N at one P_H(3)'s having the briefing (...contd). Can u pls contact P_H(3) n... (contd).

Reply: 13 10 03 / 12:41

SMS already. Wil handle it

Example empowerment & self initiated teamwork

Refer: 02 09 03 / 09:52

P_R(2), email u action plan 4 (...) yesterday. Please go thru pls remind P_H(3) of staf briefing for the visit at 10.30am..

not have direct communication with the mainstream group involved with the original artificial stimulation, initiated SMS based teamwork on their own accord after witnessing the positive results of the main group. SMS based teamwork became an integral, integrated, and probably permanent "culture" in the case study establishment within the short span of a few months.

Example empowerment despite difference in ability or aptitude

Refer: 161203 / 19:50

(contd).. im here if u nd my help (contd)... u knw hw 2 find me if u nd me (contd)

Reply: 161203 / 20:04

Okaye. Noted. U know I always ask u 4 advice wat. Hehe. Be prepared then. Im gona keep bugging u. (contd)...

Ability and aptitude. When working in teams, there are always members who are more able than others in various different ways. Sometimes, this disparity alone can cause disruption in work flow. SMS communication provided a channel for team members of different levels to work on two levels: literal level of working together on a common task, and conceptual mentor-apprentice for personal development. Some of these partnerships evolved to become personal friendships. Others remained purely job related.

Example empowerment despite difference in ability or aptitude

Refer: 27 08 03 / 08:23

I agree its people in management who need training. Can u tell me how best to do it given players we have.

But in all cases, SMS introduced the possibility of simultaneous dual level rapport. A participant could be junior and answerable to another on the job, but the same person could play the role of advisor in his parallel SMS dialog. SMS allowed participants to be acknowledged for their aptitude and ability, regardless

of their rank or disposition. Thus, a learner could become an instructor and vice versa. Roles within an interpersonal relationship need not be fixed.

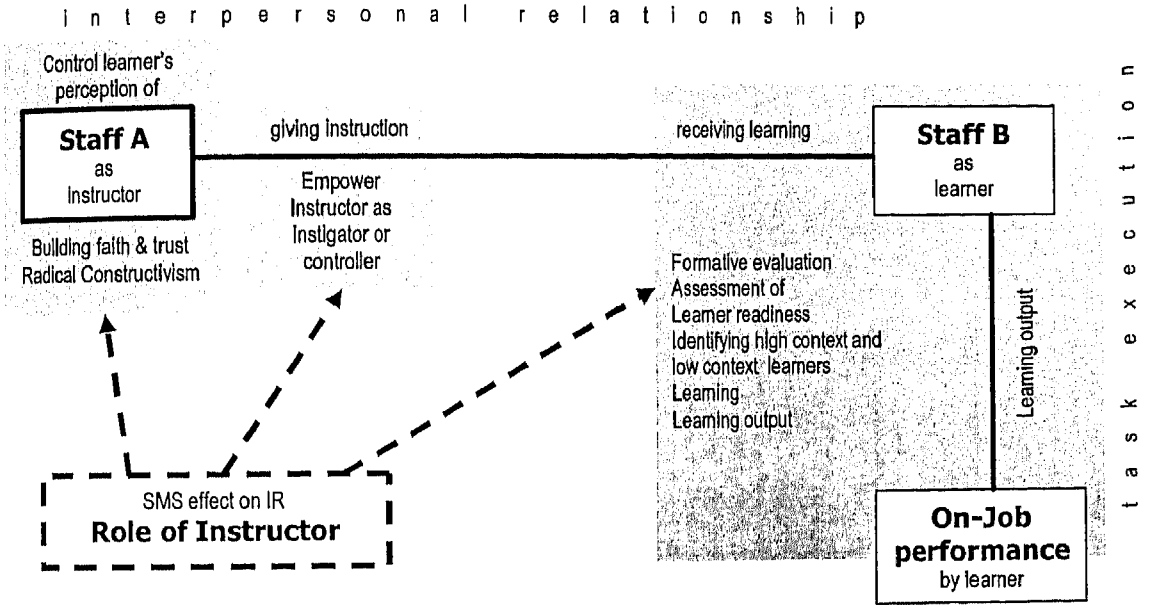


Figure 4RQ1 - 3: SMS effect on Interpersonal Relationships (IR) – The Role of Instructor

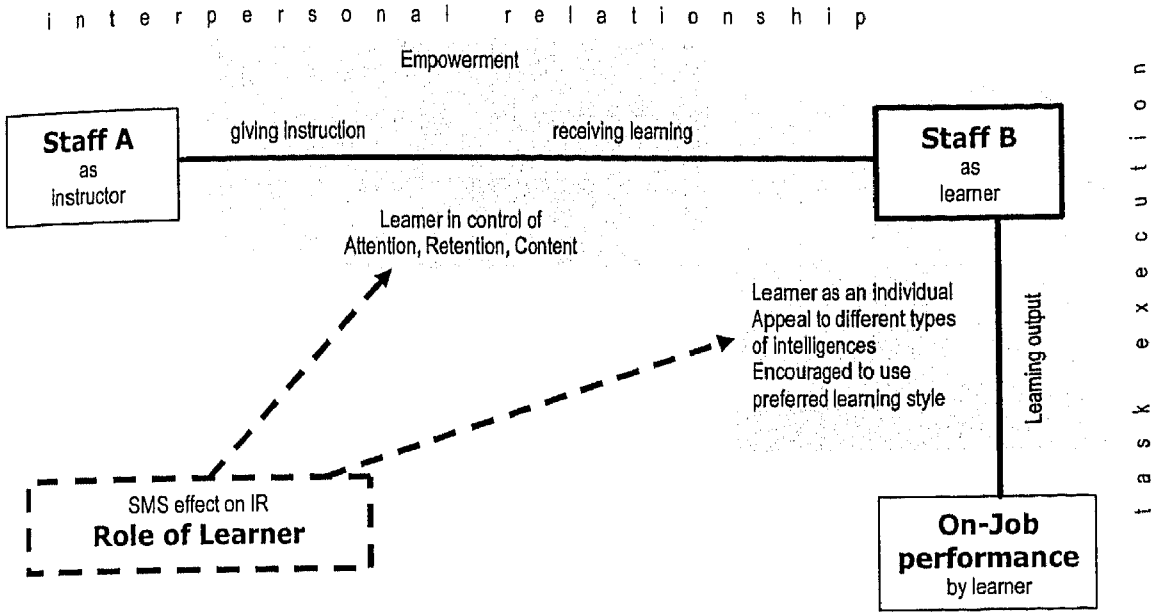


Figure 4RQ1 - 4: SMS effect on Interpersonal Relationships (IR) – The Role of Learner

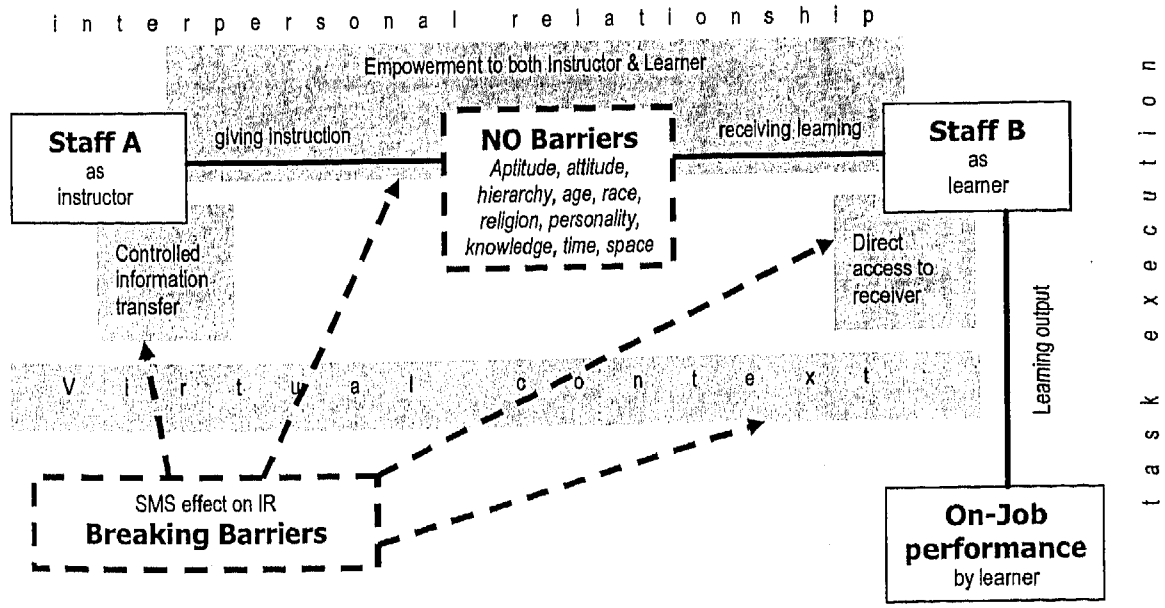


Figure 4RQ1 - 5: SMS effect on Interpersonal Relationships (IR) – Elimination of Barriers

RQ2 – SMS effect on TE
How does the employment of SMS communication in the process of task execution alter the linguistics used on a job?

Area of Focus

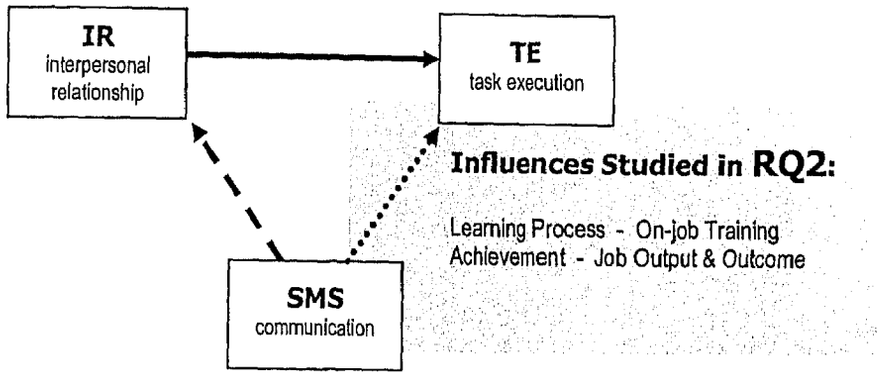


Figure 4RQ2 - 1: SMS influence on Task Execution (TE)

This research question (Figure 4RQ2 - 1) zoomed into the process of task execution, narrowing down on the effect SMS communication has on linguistics used on the job.

The issue of linguistics however cannot be studied in isolation. SMS technology has been able to drastically alter the systemization and speed of interaction on a job. It was also found that linguistics used in SMS is interrelated to issues of confidentiality and context on the job. However, the nature of how, what and when these unique linguistics are employed depend greatly on the task intent. The job outcome expected, or "learning objectives", determines the choice of linguistics made by a participant when composing SMS transactions or indulging in SMS dialog. Three distinct categories of job output, or "achievements" were identified. SMS communication was used for information or data transfer, for

procedural coaching, and for delivery of opinions or advice.

The observations recorded in the following section exemplify, analyse and discuss these findings. The summary of coded observations are presented in Table 4RQ2 – 1 to Table 4RQ2 – 12. The summary of findings is illustrated at the end of this section (Figure 4RQ2 - 2 and Figure 4RQ2 - 3)

Case study scenario

The analysis focused on the obvious unique characteristics of SMS linguistics. Most SMS transactions contained short form terminology. A dictionary of 250 sample short forms was extracted from the overall collection of data (Table 4RQ2 –12). These were the most commonly found recurring abbreviations that remained constant throughout the duration of the study.

While this sample is representative of the variety of short forms used, in terms of length, type, and structure, it may have omitted some of the more obscure one-off or context-specific abbreviations that do not contribute to the overall SMS linguistics patterns in relation to the research questions being studied.

Observation

Linguistic Patterns. There were varying linguistic patterns observed (Table 4RQ2 –3). Usage of abbreviation was found to be determined by the length of transaction and type of Interpersonal Relationship (IR), but not affected by sender personality (participant).

Use of colloquialism was observed to be effected by the type of IR and Task Execution (TE) but not by the length of SMS.

Curt to cut dialog. Some SMS transactions comprised purely of short form terminology. These types of transactions tended to be curt or short in length, lacking in punctuation and limited in variety of intent types. The most common intent was as an end-of-dialog closing statement for parties with low IR. Short form SMS terminology was used as a "turn-off" to discourage long dialogs.

Example curt/extremely abbreviated linguistics
Refer: 17 07 03 / 08:50
Gd 4 u. Drvg nw

Refer: 29 06 03 / 23:06
TQ n c u tom

Coded for covert dialog. Another common intent was a method of coding dialogs with sensitive issue content for parties with high IR. Short form SMS terminology was used to "hide" multiple meanings and/or ensure privacy that any SMS cc-forwarded to others are not understood by other participants.

Example abbreviated linguistics coded for covert message
Refer: 18 11 03 / 20:51
4 ur info: c me tmw 1st thg. I m nt at all plsd abt (event) mtg 2day ccPH(4)

Simplification encourages dialog. The most obvious reason for using short forms is, of course, to simplify or reduce the length of a transaction. This can be achieved efficiently by using symbols with universally understood meanings as well as using

Example how simplification encourages dialog
Refer: 06 10 04 / 21: 10
Update (issue#1): ...(contd).. Update (issue#2): ...(contd)..

Reply: 06 10 04 / 21:12
Tks for update. Will try to catch up on wed.

symbols which sound the same as the words they represent. (Table 4RQ2 –5). For example, a report update can be greatly reduced in length is done via SMS, making the process shorter, easier, faster than if done in conventional media. Participants can easily communicate intent with minimum time and effort investment. As this makes the process of dialog less cumbersome and free from the exasperating human drawback of impatience, participants are encouraged to dialog actively during an SMS based TE in progress. Such dialog indirectly contributes to the formative process of a TE.

Symbols representing feelings. Some of the short forms used are non-alphabetic and utilize symbols instead. For example, the colon [:] symbol, when used in consecutive sequence with other symbols or letters, is used to simulate facial expressions within an SMS dialog. These graphic "compositions" play on the human ability to visualize or perceive the colon as eyes and the subsequent characters as a nose and mouth in a sideways position. For example, the sequence of a colon, a dash and a close-parenthesis [:-)] is a smiling face, while the sequence of a colon, a dash and the letter

Example symbols representing smiley face
Refer: 11 12 03 / 08:09
Alright :-)

P [:-P] is a person sticking his tongue out.

Refer: 06 10 04 / 21:15
Ok. U hav gd rest. Just thot beter update u b4 u return. C u. :-)

While the former intends to express to the SMS receiver the happy emotion felt by the SMS sender, the latter implies perhaps a friendly jeering by the SMS sender to the SMS receiver. These SMS compositions, although only 3-characters in length, are able to transmit a multitude of meanings which inevitably alter the character of a TE communicated via SMS. "The whole is more than the sum of its parts" (Wertheimer, 1924). Thus, SMS-based TE offers more opportunity than just what meets the eye.

Simplification increases efficiency. The type of short form used in an SMS transaction is also reflects the cognitive processes involved. Based on the sampling of 250 most commonly found short forms which were extracted from the documents, the average length of an abbreviated word is 3-characters. (Table 4RQ2 –6).

Example increase efficiency through simplification

Refer: 08 09 03 / 13:53

SMS or email me wat u hav 1st. Makes communication faster & more time efectiv. Avoids lengthy mtgs dat lead nowhere. Ok? TQ. Not dat I don't want 2 meet u...

From this, depending on the interval range used, the average reduction percentage is found to be varied. When using the closest interval of 10%, the results reveal a double peak at 21-30% and at 51-60%. However, when cross checked at interval ranges of 15% and 20%, only the lower peak was repeatedly found.

(Table 4RQ2 –7 and (Table 4RQ2 –8a,b,c).

This revealed that although there are cases of very high reductions in length, the most common length reduction is approximately to a third of the original length. This would result in a considerable savings of time and energy, thus, making it inevitable that participants often resort to using short forms. If we were to take this percentage of reduction in a lose interpretation, imagine translating it to efficiency level of TE. 30% reduction in time spent communicating unnecessary words equals to 30% increased time for doing more useful work.

Example specialized abbreviating skills
Refer: 09 11 03 / 12:30
ETA?

Refer: 10 11 03 / 08:20
Leavg KLIA 4 jkt. Hp in jkt: +6281311093887

Added advantage with specialized skills. Another area where the limited use of SMS short forms was observed was for specialized syntax or for proper nouns. (Table 4RQ2 –11). Abbreviations unique to certain vocations, such as aviation, were used only by participants familiar with the field, or by those who fly frequently. And abbreviations for names of places were only used in an already defined dialog context.

Simplification requires specific language skills. The use of short forms, however, requires a minimum

level of prior knowledge. Bearing in mind that this study involved SMS dialogs primarily only in the English language, the data analysis revealed that the most popular methods of reducing length are via removal of vowels (30.3%) and the usage of letter sounds (21.5%) (Table 4RQ2 –9). The former technique requires good recognition of a wide range of vocabulary, as it involves the shortening of a word by relying only on its consonants. And the latter, requires good enunciation, as a word is redefined in a shorter format using its literal sound.

Example language literacy as prerequisite for abbreviating skills
Refer: 12 11 03 / 15:20

Actual SMS=44ch
JUST got approval. Confirm roller doors.

If short form=22ch
JUS gt aprv Confm rollr drs

Thus, it is not surprising that short forms were seldom found in transactions where the recipients' command of English was weak. When dealing with receivers with very little English skills, it was obvious that the usage of short forms was avoided by the senders. For example, many short forms have double meanings (Table 4RQ2 –10). and the lack of understanding the short form could cause the dialog to be lengthened unnecessarily in order to clarify and re-explain the original SMS intent. In these cases, SMS communication did not enhance TE as much as it did with participants with good English.

Capitals for emphasis. Most handphone brands have automatic capitalization mode which tends to "automatically" designate capitals, sometimes at junctures unintended.

Example using capitals for emphasis

Refer: 08 09 03 / 07:56

...(cont).. in adtn 2 yrself overseeing logistics, pls allocate 1 othr team membr who CAN b contactd/rely on. Important we move FORWARD in our teamwork. Not just get job don. Objctv: IMPROV content. IMPROV logistics. The former is MY job. The latter is YOURS.

Participants who were novices tend to have problems using upper and lower case characters. This caused some novice participants to switch to all upper case mode to avoid the problem of switching modes, but as time progressed, the same participants showed increased skill and no longer utilized all capitals. Participants who were experts toggle effortlessly between using mixed upper and lower case with using strictly upper case for emphasis. The use of upper case in this context is to simulate a stressed intonation on a particular word. This allowed the sender to impress upon the receiver the focus of his instruction. Needless to say, novice participants had a much harder time sending effective instructions.

Language formality. A few participants resorted to using a mixture of two (sometimes three) languages within one SMS. This only occurred for less formal SMS dialogs, and incidentally, between participants with close IR. SMS with serious TE content tended to be

Example using capitals for emphasis

Refer: 10 10 04 / 20:15

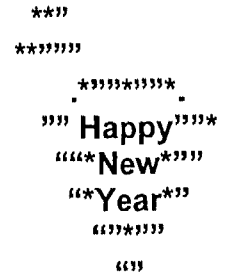
Ok u ambik plus hway sampai tol senawang then u just go straight sampai t junction. Turn right to kpilah n straight lagi. U wil go thru a bengkang bengkok road (careful) sampai pekan kpilah. T junction lagi n turn rite. Terus n da kolej is on ur left. Hepi driving n b really careful wit da road ok?

in formal English with proper grammar structure, although often using short form spelling. Lengthy "chatty" SMS tended to be used when participants wanted to emphasize informality or indicate effort to build rapport. The more personal the IR, the more the use of colloquialism and abbreviations. The more formal the IR, the less likely colloquialism was used, although expert SMS users still used abbreviations. A few expert users preferred to use the automatic spell-prompter feature that is available on most high-tech mobile handphone models, but this was not common.

Diagrams, graphics, animation (DGA). Curt and short transactions never contained DGA, as it requires more characters. However, essay-type transactions did not contain DGA either, as its content is always custom typed. DGA on the other hand, is often downloaded or from generic reproducible sources. Transactions with declared "cc" duplicates also never contain DGA. This is because "cc" transactions are specifically used for formal multi-receiver TE instructions. The most common use of DGA is for social communication to build or improve IR.

Example animated graphics for greetings

Refer: 01 01 04 / 00:50



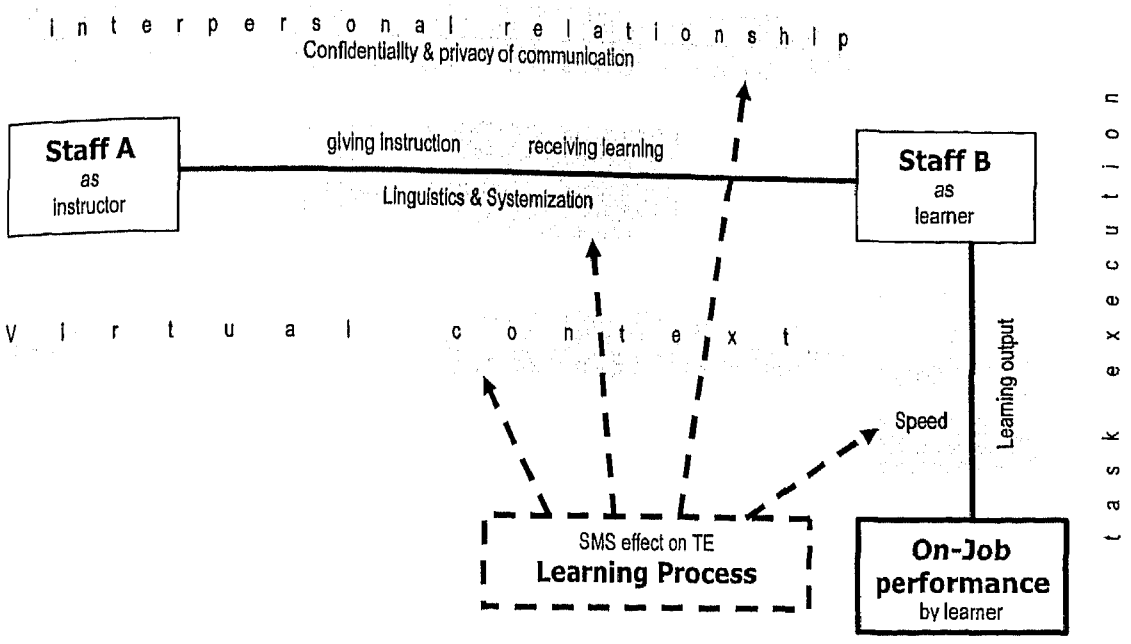


Figure 4RQ2 - 2: SMS influence on Task Execution (TE) – the Learning Process

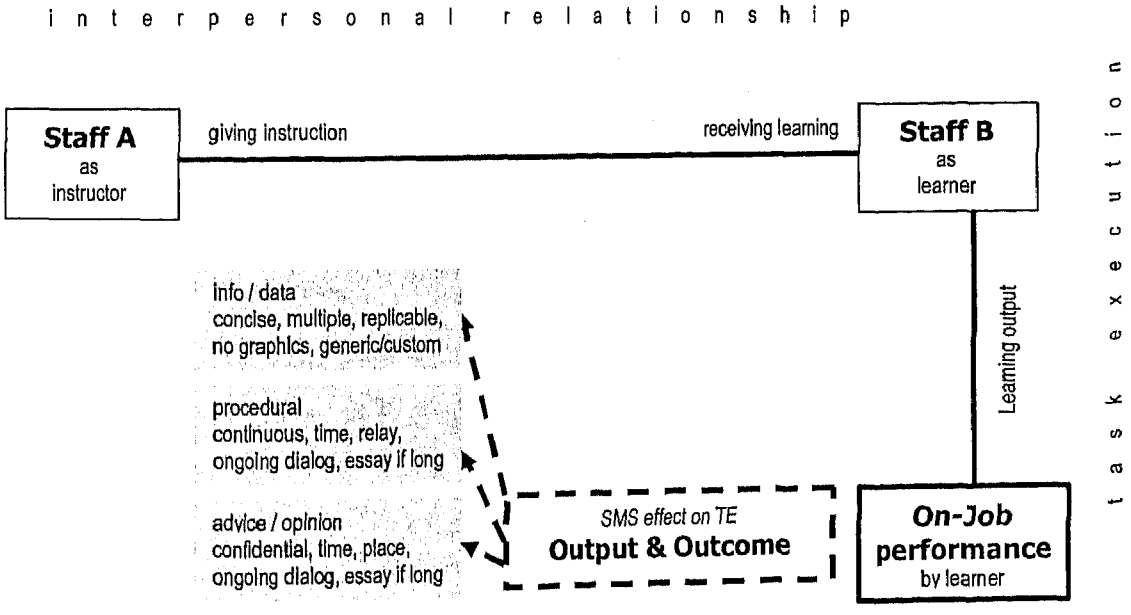


Figure 4RQ2 - 3: SMS influence on Task Execution (TE) – Job Output & Outcome

Variable	Short form code	Colloquialism	Symbols	Diagrams	Graphics	Animation
transactions						
Curt	Often	n/a	n/a	Never	Never	Never
Short	n/a	n/a	n/a	Never	Never	Never
Medium	n/a	n/a	n/a	Seldom	Seldom	Seldom
Long	Always	n/a	n/a	Seldom	Seldom	Seldom
Essay	Always	Typical	n/a	Never	Never	Never
dialogs						
1-way	n/a	n/a	n/a	n/a	n/a	n/a
2-way	n/a	n/a	n/a	n/a	n/a	n/a
Multiple	n/a	n/a	n/a	n/a	n/a	n/a
participants						
2-participants	Typical	n/a	n/a	Seldom	Seldom	Seldom
2-participants + CC	Typical	n/a	n/a	Never	Never	Never
Multiple	Typical	n/a	n/a	Seldom	Seldom	Seldom
Multiple + CC	Typical	n/a	n/a	Never	Never	Never
Type of IR						
IR =close+pre-extg	Always	Typical	n/a	Seldom	Seldom	Seldom
IR =close	Typical	Typical	n/a	Seldom	Seldom	Seldom
IR =casual	Seldom	Seldom	n/a	Seldom	Seldom	Seldom
IR =formal/only work	Seldom	Never	n/a	Never	Never	Never
Intent						
Info / data	n/a	n/a	n/a	n/a	n/a	n/a
Procedure	n/a	n/a	n/a	n/a	n/a	n/a
Advice / Opinion	n/a	n/a	n/a	n/a	n/a	n/a

Table 4RQ2 – 1: Analysis of Linguistics – Characteristics of Transaction Transcript Documentation (TTD)

Variable	Give / State			Ask / Solicit		
	Info / data	Procedure	Advice / Opinion	Info / data	Procedure	Advice / Opinion
Transactions						
Curt	Never	Never	Seldom	Seldom	Seldom	Seldom
Short	n/a	n/a	n/a	n/a	n/a	n/a
Medium	n/a	n/a	n/a	n/a	n/a	n/a
Long	n/a	n/a	n/a	n/a	n/a	n/a
Essay	n/a	n/a	Always	n/a	n/a	n/a
Dialogs						
1-way	n/a	Never	n/a	Never	Never	Seldom
2-way	n/a	n/a	n/a	n/a	n/a	n/a
Multiple	n/a	n/a	Never	n/a	n/a	n/a
Participants						
2-participants	n/a	n/a	n/a	n/a	n/a	n/a
2-participants + CC	n/a	n/a	Seldom	n/a	n/a	Seldom
Multiple	n/a	n/a	n/a	n/a	n/a	n/a
Multiple + CC	n/a	n/a	Seldom	n/a	n/a	Seldom
Type of IR						
IR =good+pre-extg	n/a	n/a	Often	n/a	n/a	Often
IR =good	n/a	n/a	Often	n/a	n/a	Often
IR =casual	n/a	n/a	n/a	n/a	n/a	n/a
IR =formal/only work	n/a	n/a	Seldom	n/a	n/a	Seldom
Linguistics study						
Short form code	n/a	n/a	n/a	n/a	n/a	n/a
Colloquialism	n/a	n/a	n/a	n/a	n/a	n/a
Symbols	n/a	n/a	n/a	n/a	n/a	n/a
Diagrams	Never	Never	Seldom	Never	Never	Seldom
Graphics	Never	Never	Seldom	Never	Never	Seldom
Animation	Never	Never	Seldom	Never	Never	Seldom

Table 4RQ2 – 2: Analysis of Task Execution (TE) - Dialog Intent

Variable 1	Variable 2	Observation	Analysis
Short form code	Transactions	*Clear pattern for long & essay transactions*	Participants who type long & essay type = familiar w SMS communication = familiar w short form codes
		Generally common / universally understood short forms used	Curt transactions = <10 characters = need to utilize short form = creation/application common language
Short form code	Participants	*Pattern same for all types dialogs*	Usage of short form = not dependent on type of interaction
Short form code	IR	*If IR increase* *= use of code increases*	IR = familiarity of dialog partner = confidence partner understands code
		If IR = personal +pre-extg Code = always used	Pre-extg IR = guarantee shared-familiarity = guarantee same language understood
Colloquialism	IR	*If IR increase* *= colloquialism increases*	IR = familiarity of dialog partner = confidence partner tolerate informality
		If IR = formal/work related colloquialism = never	Formal = guarantee clear-cut boundaries = guarantee only formal language used
Colloquialism	Transactions	*No observable pattern except for essay type*	no influence by length of transaction
		In essay type *Code = commonly used*	Essay = usually long instructional input = detailed descriptors/examples/analogies = require use of colloquialism
Diagrams Graphics Animation	Transactions	*Curt+short = never*	Visual format = need a lot space/memory = > 45 characters
		Medium+long = seldom	Medium+long = > 45 characters = possible for visual format
		Essay = never	Essay =series of transactions = not suitable for visual (non-text) format
Diagrams Graphics Animation	Participants	*cc dialogs = never visual*	cc dialogs = only for formal work related visual format = not formal / not suitable
		Visual format = seldom	Visual = require hi-tech hp/big memory/patience = not many participants have such luxury
Diagrams Graphics Animation	IR	*Same pattern all types IR except for formal/work*	Usage of visual format = not dependent on type of interaction
		In formal/work type *Visual format = never*	Visual format = not formal / not suitable
Symbols	all	*No observable pattern in symbols usage (%#@?<)*	Symbols = integral to language = usage same as alphabets & numbers
Dialog Intent	all	*No observable pattern*	no influence on linguistics pattern

Table 4RQ2 – 3: Analysis of Linguistics – Patterns

Transactions	
Curt	<10-characters
Short	1-screen = max 45-characters
Medium	2-screens = under 100-characters
Long	3-screens = max 459-characters
Essay	Sent in parts as series transactions = > 459-characters

Dialog	
1-way	only one participant active (monolog)
2-way	2-participants – both active (dialog)
Multiple	many-participants – all active (discussion together / parallel dialogs)

Participants	
2-participants	Only 2-participants in closed dialog
2-participants + CC	2-participants with addtnl SMS-copies forwarded to others (passive)
Multiple	Many simultaneous participants in open dialog (all active)
Multiple + CC	Many participants + addtnl SMS-copies forwarded to others (passive)

Interpersonal Relationship (IR)	
IR =good+pre-extg	Rapport on personal level established before defined research period
IR =good	Rapport on personal level built during defined research period
IR =casual	Rapport impersonal but at comfortable/ informal level
IR =formal/only work	No rapport on personal level at all during defined research period

Intent	
Give / State	Sender of SMS intends to give or state (the contents stated)
Ask / Solicit	Sender of SMS solicits or asks from SMS receiver (the contents stated)
Info / data	Statements of facts or information
Procedure	Step by step instruction or direction
Advice / Opinion	Personal views of the SMS sender

Frequency	
Never	Occurrence not observed at all during the defined research period
Seldom	Occurrence sometimes observed
Typical	Occurrence is commonplace
Often	Occurrence is almost always observed
Always	Occurrence is a definite must
n/a	Occurrence is not dependent on this variable – no patterns observed

Linguistics	
Short form code	Using acronyms or letters that have same sound as words intended
Colloqualism	Informal language or slang terms
Symbols	Characters other than the 26 alphabets or 9 numbers
Diagrams	Characters & symbols used to form picture
Graphics	Dot matrix pictures
Animation	Display text or picture is modified to "move" – not static

Table 4RQ2 – 4: Legend of Linguistics Analysis Criteria Categories

symbol	#ch	meaning	notes
:-(	3	sad	used to simulate facial expression within an SMS dialog
:-)	3	smiling	
:-D	3	laughing	
:-O	3	wow	
:-P	3	sticking out tongue	
;-)	3	winking	
1	1	want	simulated by symbols (numbers) with similar enunciation (sound)
2	1	to	
2	1	too	
4	1	for	
Gr8	3	great	
!	1	what do you mean	symbol/abbreviation used are common/universally understood – easy to guess meaning
#	1	number	
&	1	and	
?	1	what do you mean	
@	1	at	

Table 4RQ2 – 5: Analysis of Symbols and Visual Acronyms

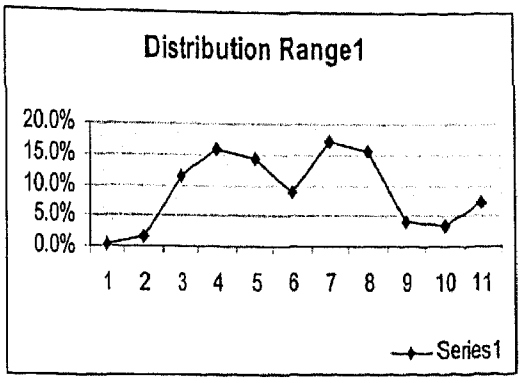
#ch	#ab	% ab	score	notes
1	31	12.4%	31	
2	36	14.3%	72	
3	85	34.0%	255	mode = 3.00 characters
4	50	19.9%	200	
5	20	8.0%	100	
6	22	8.8%	132	
7	2	0.8%	14	
8	3	1.2%	24	
9	1	0.4%	9	
total	**250**	**100%**		sample = 250 abbreviations
				mean = 3.35 characters

Table 4RQ2 – 6: Analysis of Length of SMS Abbreviations

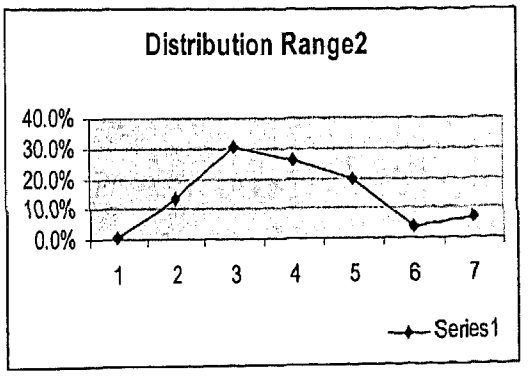
% rdctn	# wrds	range1	# r1	% r1	range2	# r2	% r2	range3	#r3	%r3
-50%	1	increase	1	0.4%	increase	1	0.4%	increase	1	0.4%
0%	3									
10%	1	0-10%	4	1.6%						
14%	9							0-15%	13	5.2%
17%	7									
20%	13	10-20%	29	11.6%	0-20%	33	13.1%			
22%	2									
25%	36									
27%	2	21-30%	40	15.9%						
29%	5							16-30%	65	25.9%
33%	26									
38%	5	31-40%	36	14.3%	21-40%	76	30.3%			
40%	12									
43%	8									
44%	1	41-50%	21	8.4%				31-45%	52	20.7%
50%	31									
55%	1									
56%	3									
57%	8	51-60%	43	17.1%	41-60%	64	25.5%			
60%	5							46-60%	48	19.1%
63%	4									
64%	3									
67%	23									
69%	1									
70%	3	61-70%	39	15.5%						
71%	1									
75%	4							61-75%	39	15.5%
78%	3									
79%	2	71-80%	10	4.0%	61-80%	49	19.5%			
80%	2									
82%	3									
83%	2									
86%	1									
88%	1	81-90%	9	3.6%	81-100%	9	3.6%	76-90%	14	5.6%
n/a	18	n/a	18	7.2%	n/a	18	7.2%	n/a	18	7.2%
total	250		250	100.0%		250	100.0%		250	100.0%

Table 4RQ2 – 7: Analysis of Word Length Reduction

Length Distribution Range1			
	range1	**# r1**	**% r1**
1	increase	1	0.4%
2	0-10%	4	1.6%
3	10-20%	29	11.6%
4	21-30%	**40**	15.9%
5	31-40%	36	14.3%
6	41-50%	21	8.4%
7	51-60%	**43**	17.1%
8	61-70%	39	15.5%
9	71-80%	10	4.0%
10	81-90%	9	3.6%
11	n/a	18	7.2%
		250	**100.0%**



Length Distribution Range2			
	range2	**# r2**	**% r2**
1	increase	1	0.4%
2	0-20%	33	13.1%
3	21-40%	**76**	30.3%
4	41-60%	64	25.5%
5	61-80%	49	19.5%
6	81-100%	9	3.6%
7	n/a	18	7.2%
		250	**100.0%**



Length Distribution Range3			
	range3	**#r3**	**%r3**
1	increase	1	0.4%
2	0-15%	13	5.2%
3	16-30%	**65**	25.9%
4	31-45%	52	20.7%
5	46-60%	48	19.1%
6	61-75%	39	15.5%
7	76-90%	14	5.6%
8	n/a	18	7.2%
		250	**100.0%**

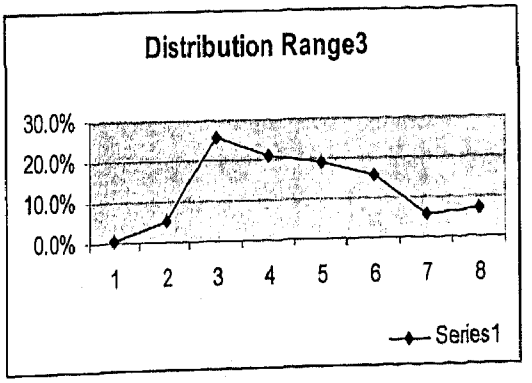


Table 4RQ2 – 8 a,b,c: Analysis of Abbreviations - Length Distribution Range

description	# type	% type	%diff	distribution		notes
remove vowel	76	30.3%	14%	4		• *reduction type:* most often used (30.3%) • *reduction range:* between 14-64% • *max reduction:* 64% (medium) • *common reduction:* 57(75%) range between 25-50%
			17%	4		
			20%	3		
			22%	1		
			25%	**12**	mode	
			27%	1		
			29%	3		
			33%	**13**		
			38%	1		
			40%	6		
			43%	3		
			44%	1		
			50%	**17**		
			56%	1		
			57%	1		
			60%	3		
			64%	1		
Use letter sound	53	21.5%	10%	1		• *reduction type:* second most often used (21.5%) • *reduction range:* between 10-82% • *max reduction:* 82% (high) • *common reduction:* 36(69%) range between 33-67%
			20%	6		
			25%	6		
			29%	1		
			33%	**7**	mode	
			38%	1		
			40%	3		
			43%	3		
			50%	**8**		
			57%	1		
			67%	**12**		
			75%	1		
			80%	1		
			82%	1		
use acronym	35	13.9%	n/a	**5**	mode	• *reduction type:* third most often used (21.5%) • *reduction range:* between 10-82% • *max reduction:* 88% (highest of all reduction types) • *increased length:* (n/a, -50% and 0%) due to slang • *common reduction:* 13(37%) range between 67-88% however, only 3(8%) range between 1-33%
			-50%	**1**		
			0%	3		
			14%	1		
			33%	2		
			50%	1		
			57%	**5**	mode	
			60%	2		
			63%	2		
			67%	2	mode	
			70%	1		
			71%	1		
			75%	2		
			78%	2		
			79%	1		
			80%	1		
			82%	2		
			88%	1		

description	# type	% type	%diff	distribution		notes
truncate word	24	9.6%	38%	2		• *reduction type:* seldom used (<10%) - only used in context • *reduction range:* between 38-79% (only high level reduction) • *max reduction:* 79% (high)
			43%	3		
			50%	3		
			56%	2		
			57%	1		
			64%	2		
			67%	**8**	mode	
			69%	1		
			70%	2		
			79%	1		
use letter meaning	14	5.6%	50%	1		• *reduction type:* seldom used (10%) - only in context • *reduction range:* between 50-83% (only high level reduction) • *max reduction:* 83% (high) • *common reduction:* n/a length due to symbol-letters
			55%	1		
			63%	2		
			67%	2		
			75%	1		
			78%	1		
			83%	2		
			n/a	**4**	mode	
reduce double letter	13	5.2%	14%	2		• *reduction type:* seldom used (≈5%) - only used for common words • *reduction range:* between 14-33% (only low level reduction) • *max reduction:* 33% (low) • *common reduction:* 5(38%) at 25% reduction
			17%	3		
			20%	2		
			25%	**5**	mode	
			33%	1		
remove silent letter	13	5.2%	14%	2		• *reduction type:* seldom used (≈5%) - only used for common words • *reduction range:* between 14-33% (only low level reduction) • *max reduction:* 33% (low) • *common reduction:* 7(54%) at 25% reduction
			20%	2		
			25%	**7**	mode	
			29%	1		
			33%	1		

description	# type	% type	%diff	distribution		notes
remove vowel/suffix	12	4.8%	22%	1		• *reduction type:* seldom used (≈5%) - used for words with suffixes (-ing, -ion, -ed) • *reduction range:* between 22-40% (only low level reduction) • *max reduction:* 40% (low) • *common reduction:* 6(50%) at 25% reduction
			25%	**6**	mode	
			27%	1		
			33%	2		
			38%	1		
			40%	1		
visual acronym	6	2.4%	n/a	**6**	mode	• *reduction type:* used to simulate facial expression
flight acronym	4	1.6%	86%	1		• *reduction type:* used when referring to places & travel schedule
			n/a	**3**	mode	
	250	**100.0%**		**250**		

Table 4RQ2 – 9: Analysis of Types of Word Reduction

short form	Your	description	notes
2 2	to too	use letter sound use letter sound	• both words similar sound as *number* • common words – easy to guess meaning
+ +	and plus	use letter meaning use letter meaning	• common/universal symbol/abbreviation – easy to guess meaning
prep prep	prepare preparation	truncate word truncate word	
nt nt	not night	remove vowel remove vowel	• *words easily identified in context* of sentence • common reduction – by removing vowel
nw nw	new now	remove vowel remove vowel	
yr yr	*year* your	*remove vowel* remove vowel	
a/c a/c	account air condition	use acronym use acronym	
pic pic	pick picture	remove silent letter truncate word	
std std	stand standard	remove vowel use acronym	

Table 4RQ2 – 10: Analysis of Abbreviation Type - Same SMS short form used for different meanings

short form	#ch	actual text	#ch	#diff	%diff	description	notes
jkrta	5	Jakarta; name place	7	2	29%	remove vowel	most *common* type is to use acronyms
KLIA	4	KL International Airport	n/a	n/a	n/a	flight acronym	
KK	2	*Kota Kinabalu*	n/a	n/a	n/a	flight acronym	
KCH	3	Kuching	n/a	n/a	n/a	flight acronym	
m'lcca	6	Malacca; name place	7	1	14%	use acronym	
mday	4	Monday	6	2	33%	use acronym	
ETA	3	estimated time arrival	22	19	86%	flight acronym	

Table 4RQ2 – 11: Analysis of Reduction type for proper nouns & specialized syntax

short form	#ch	Your	#ch	#diff	%diff	description
1	1	want	4	3	75%	use letter sound
2	1	to	2	1	50%	use letter sound
2	1	too	3	2	67%	use letter sound
4	1	for	3	2	67%	use letter sound
!	1	what do you mean	n/a	n/a	n/a	use letter meaning
#	1	number	6	5	83%	use letter meaning
&	1	and	3	2	67%	use letter meaning
?	1	what do you mean	n/a	n/a	n/a	use letter meaning
@	1	at	2	1	50%	use letter meaning
+	1	and	3	2	67%	use letter meaning
+	1	plus	4	3	75%	use letter meaning
<	1	less than	n/a	n/a	n/a	use letter meaning
=	1	equals	6	5	83%	use letter meaning
>	1	more than	n/a	n/a	n/a	use letter meaning
b	1	be	2	1	50%	use letter sound
c	1	see	3	2	67%	use letter sound
d	1	the	3	2	67%	use letter sound
k	1	ok	2	1	50%	truncate word
n	1	and	3	2	67%	use letter sound
m	1	am	2	1	50%	use letter sound
o	1	owe	3	2	67%	use letter sound
p	1	pee	3	2	67%	use letter sound
q	1	que	3	2	67%	use letter sound
r	1	are	3	2	67%	use letter sound
s	1	as	2	1	50%	use letter sound
u	1	you	3	2	67%	use letter sound
v	1	we	2	1	50%	use letter sound
w	1	with	4	3	75%	use acronym
x	1	slang; not	3	2	67%	use acronym
y	1	why	3	2	67%	use letter sound
99	2	night night	11	9	82%	use letter sound
2x	2	two times	9	7	78%	use letter meaning
b4	2	before	6	4	67%	use letter sound
bd	2	bad	3	1	33%	remove vowel
bz	2	busy	4	2	50%	use letter sound
cc	2	carbon copy	11	9	82%	use acronym
cx	2	check	5	3	60%	use acronym
da	2	the	3	1	33%	use letter sound
eg	2	example	7	5	71%	use acronym
fr	2	for	3	1	33%	remove vowel
fx	2	fix	3	1	33%	remove vowel
g9	2	good night	10	8	80%	use letter sound
gd	2	good	4	2	50%	remove vowel
hd	2	hand	4	2	50%	remove vowel
hm	2	home	4	2	50%	remove vowel
hp	2	handphone	9	7	78%	use acronym

short form	#ch	Your	#ch	#diff	%diff	description
hr	2	here	4	2	50%	remove vowel
hs	2	house	5	3	60%	remove vowel
hw	2	how	3	1	33%	remove vowel
ie	2	which is	n/a	n/a	n/a	use acronym
KK	2	Kota Kinabalu	n/a	n/a	n/a	flight acronym
ko	2	slang; opposite of ok	n/a	n/a	n/a	use acronym
lu	2	slang; you; Hokkien	3	1	33%	use acronym
nd	2	need	4	2	50%	reduce double letter
nt	2	not	3	1	33%	remove vowel
nt	2	night	5	3	60%	remove vowel
nw	2	now	3	1	33%	remove vowel
nw	2	new	3	1	33%	remove vowel
nx	2	next	4	2	50%	remove vowel
ph	2	phone	5	3	60%	use acronym
rm	2	room	4	2	50%	remove vowel
TQ	2	thank you	9	7	78%	use acronym
ur	2	your	4	2	50%	use letter sound
wa	2	slang; me; gua; Hokkien	3	1	33%	use letter sound
yr	2	your	4	2	50%	remove vowel
yr	2	year	4	2	50%	remove vowel
:-(	3	sad	n/a	n/a	n/a	visual acronym
:-)	3	smiling	n/a	n/a	n/a	visual acronym
:-D	3	laughing	n/a	n/a	n/a	visual acronym
:-O	3	wow	n/a	n/a	n/a	visual acronym
:-P	3	sticking out toungue	n/a	n/a	n/a	visual acronym
;-)	3	winking	n/a	n/a	n/a	visual acronym
+ve	3	positive	8	5	63%	use letter meaning
a/c	3	account	7	4	57%	use acronym
a/c	3	aircondition	12	9	75%	use acronym
abv	3	above	5	2	40%	remove vowel
amt	3	amount	6	3	50%	remove vowel
apt	3	apartment	9	6	67%	truncate word
att	3	attention	9	6	67%	truncate word
b/f	3	brought forward	15	12	80%	use acronym
b/r	3	bedroom	7	4	57%	use acronym
bck	3	back	4	1	25%	remove vowel
BTW	3	by the way	10	7	70%	use acronym
coz	3	because	7	4	57%	use acronym
coz	3	because	7	4	57%	use letter sound
cud	3	could	5	2	40%	use letter sound
dif	3	different	9	6	67%	truncate word
din	3	didn't	6	3	50%	use letter sound
dun	3	don't	5	2	40%	use letter sound
dwn	3	down	4	1	25%	remove vowel
edu	3	education	9	6	67%	truncate word
ETA	3	estimated time arrival	22	19	86%	flight acronym
exh	3	exhibition	10	7	70%	truncate word
FAQ	3	frequently asked questions	26	23	88%	use acronym

short form	#ch	Your	#ch	#diff	%diff	description
fav	3	favourite	9	6	67%	truncate word
flg	3	fling	5	2	40%	remove vowel
fol	3	follow	6	3	50%	truncate word
frm	3	from	4	1	25%	remove vowel
ful	3	full	4	1	25%	reduce double letter
gav	3	gave	4	1	25%	use letter sound
giv	3	give	4	1	25%	remove silent letter
gon	3	gone	4	1	25%	remove silent letter
gov	3	government	10	7	70%	truncate word
gr8	3	great	5	2	40%	use letter sound
grw	3	grow	4	1	25%	remove vowel
haf	3	have	4	1	25%	remove silent letter
hav	3	have	4	1	25%	remove silent letter
jgn	3	don't; jangan; B.M.	6	3	50%	remove vowel
jst	3	just	4	1	25%	remove vowel
KCH	3	Kuching	n/a	n/a	n/a	flight acronym
lar	3	slang; suffix	0	-3	n/a	use acronym
lov	3	love	4	1	25%	remove silent letter
luv	3	love	4	1	25%	use letter sound
mah	3	slang; my	2	-1	-50%	use acronym
mar	3	slang; suffix	0	-3	n/a	use acronym
mia	3	missing in action	17	14	82%	use acronym
mis	3	miss	4	1	25%	reduce double letter
mtg	3	meeting	7	4	57%	remove vowel
ned	3	need	4	1	25%	reduce double letter
nid	3	need	4	1	25%	use letter sound
nxt	3	next	4	1	25%	remove vowel
opn	3	open	4	1	25%	remove vowel
pax	3	persons	7	4	57%	use acronym
pcs	3	pieces	6	3	50%	remove vowel
pic	3	pick	4	1	25%	remove silent letter
pic	3	picture	7	4	57%	truncate word
pix	3	picture	7	4	57%	use acronym
pls	3	please	6	3	50%	remove vowel
plz	3	please	6	3	50%	remove vowel
ppl	3	people	6	3	50%	use acronym
ref	3	reference	9	6	67%	truncate word
rep	3	representative	14	11	79%	truncate word
sch	3	school	6	3	50%	truncate word
shd	3	should	6	3	50%	remove vowel
spd	3	speed	5	2	40%	remove vowel
std	3	stand	5	2	40%	remove vowel
std	3	standard	8	5	63%	use acronym
thx	3	thank you	9	6	67%	use acronym
tis	3	this	4	1	25%	use letter sound
tkt	3	ticket	6	3	50%	remove vowel
-ve	3	negative	8	5	63%	use letter meaning
wat	3	what	4	1	25%	remove silent letter

short form	#ch	Your	#ch	#diff	%diff	description
whn	3	when	4	1	25%	remove vowel
whr	3	where	5	2	40%	remove vowel
wif	3	with	4	1	25%	use letter sound
wil	3	will	4	1	25%	reduce double letter
wit	3	with	4	1	25%	use letter sound
wrk	3	work	4	1	25%	remove vowel
wud	3	would	5	2	40%	use letter sound
wuz	3	slang; was	3	0	0%	use acronym
zzz	3	slang; sleeping	8	5	63%	use acronym
2day	4	today	5	1	20%	use letter sound
2mrw	4	tomorrow	8	4	50%	remove vowel
4got	4	forgot	6	2	33%	use letter sound
affr	4	affair	6	2	33%	remove vowel
aftr	4	after	6	2	33%	remove vowel
arch	4	architecture	12	8	67%	truncate word
ASAP	4	as soon as possible	19	15	79%	use acronym
batt	4	battery	7	3	43%	truncate word
bhaf	4	behalf	6	2	33%	remove vowel
chgs	4	charges	7	3	43%	remove vowel
comm	4	communication	13	9	69%	truncate word
corp	4	corporate	9	5	56%	truncate word
cryg	4	crying	6	2	33%	remove vowel/suffix
dats	4	that's	6	2	33%	use letter sound
driv	4	drive	5	1	20%	remove silent letter
drvg	4	driving	7	3	43%	remove vowel
efct	4	effect	6	2	33%	remove vowel
folo	4	folow	5	1	20%	use letter sound
fren	4	friend	6	2	33%	use letter sound
hmwk	4	homework	8	4	50%	remove vowel
info	4	information	11	7	64%	truncate word
KLIA	4	KL International Airport	n/a	n/a	n/a	flight acronym
latr	4	later	5	1	20%	remove vowel
leav	4	leave	5	1	20%	remove silent letter
lupe	4	slang; forget; lupa; B.M.	4	0	0%	use acronym
mday	4	Monday	6	2	33%	use acronym
mech	4	mechanism	9	5	56%	truncate word
mktg	4	marketing	9	5	56%	remove vowel
ofis	4	office	6	2	33%	use letter sound
pis	4	piss	6	2	33%	reduce double letter
pisd	4	pissed	6	2	33%	remove silent letter
prep	4	prepare	7	3	43%	truncate word
prep	4	preparation	11	7	64%	truncate word
prog	4	program	7	3	43%	truncate word
pymt	4	payment	7	3	43%	remove vowel
rite	4	right	5	1	20%	use letter sound
sayg	4	saying	6	2	33%	remove vowel/suffix
shdv	4	should have	11	7	64%	remove vowel
shud	4	should	6	2	33%	use letter sound

short form	#ch	Your	#ch	#diff	%diff	description
smal	4	small	5	1	20%	reduce double letter
sori	4	sorry	5	1	20%	use letter sound
stil	4	still	5	1	20%	reduce double letter
tats	4	thats	5	1	20%	use letter sound
thnk	4	think	5	1	20%	remove vowel
thot	4	thought	7	3	43%	use letter sound
undr	4	under	5	1	20%	remove vowel
wana	4	want to	7	3	43%	use letter sound
wats	4	what is	7	3	43%	use letter sound
xbtn	4	exhibition	10	6	60%	remove vowel
xtra	4	extra	5	1	20%	use letter sound
2moro	5	tomorrow	8	3	38%	use letter sound
aprov	5	approval	8	3	38%	truncate word
arrge	5	arrange	7	2	29%	remove vowel
beter	5	better	6	1	17%	reduce double letter
hmwrk	5	homework	8	3	38%	remove vowel
izzit	5	slang; is it	5	0	0%	use acronym
jkrta	5	Jakarta; name place	7	2	29%	remove vowel
knwlg	5	knowledge	9	4	44%	remove vowel
laptp	5	laptop	6	1	17%	remove vowel
leter	5	letter	6	1	17%	reduce double letter
longr	5	longer	6	1	17%	remove vowel
nite2	5	night night	11	6	55%	use letter meaning
numbr	5	number	6	1	17%	remove vowel
prblm	5	problem	7	2	29%	remove vowel
reciv	5	receive	7	2	29%	remove silent letter
ridle	5	riddle	6	1	17%	reduce double letter
stepg	5	stepping	8	3	38%	remove vowel/suffix
supos	5	suppose	7	2	29%	use letter sound
t'row	5	tomorrow	8	3	38%	truncate word
wantd	5	wanted	6	1	17%	remove vowel
admitd	6	admitted	8	2	25%	reduce double letter
aloctn	6	allocation	10	4	40%	remove vowel/suffix
anytim	6	anytime	7	1	14%	remove silent letter
aplied	6	applied	7	1	14%	reduce double letter
avoidg	6	avoiding	8	2	25%	remove vowel/suffix
emaild	6	e-mailed	8	2	25%	remove vowel
exhbtn	6	exhibition	10	4	40%	remove vowel
infrmd	6	informed	8	2	25%	remove vowel/suffix
m'lcca	6	Malacca; name place	7	1	14%	use acronym
plan'g	6	planning	8	2	25%	remove vowel/suffix
printg	6	printing	8	2	25%	remove vowel/suffix
receiv	6	receive	7	1	14%	remove silent letter
recevd	6	received	8	2	25%	remove vowel
removg	6	removing	8	2	25%	remove vowel/suffix
replid	6	replied	7	1	14%	remove vowel
startd	6	started	7	1	14%	remove vowel
step'g	6	stepping	8	2	25%	remove vowel/suffix

short form	#ch	Your	#ch	#diff	%diff	description
studnt	6	student	7	1	14%	remove vowel
supose	6	suppose	7	1	14%	reduce double letter
trnspt	6	transport	9	3	33%	remove vowel
weathr	6	weather	7	1	14%	remove vowel
wrkshp	6	workshop	8	2	25%	remove vowel
discusd	7	discussed	9	2	22%	remove vowel
remindg	7	reminding	9	2	22%	remove vowel/suffix
archture	8	architecture	12	4	33%	remove vowel
expctatn	8	expectation	11	3	27%	remove vowel
instrctn	8	instruction	11	3	27%	remove vowel/suffix
xhibition	9	exhibition	10	1	10%	use letter sound

Table 4RQ2 – 12: Dictionary of SMS terms documented in study

RQ3 – IR effect on TE
How can instruction for task execution be manipulated through information or third-party planting by SMS-enhanced interpersonal relationships?

Area of Focus

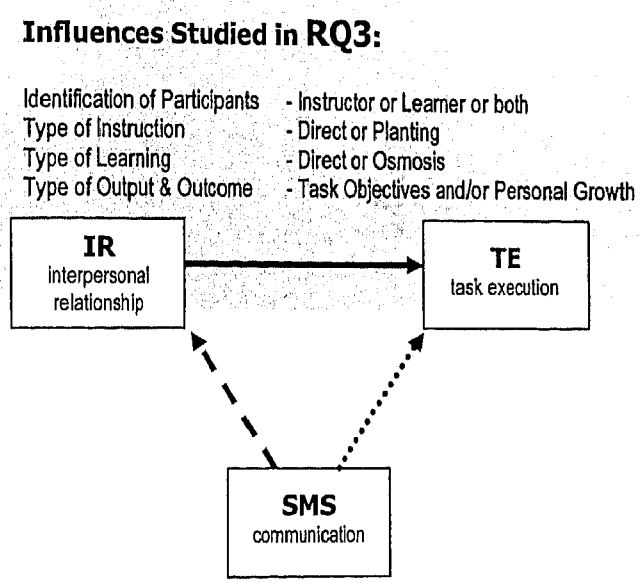


Figure 4RQ3 - 1: IR influence on Task Execution (TE)

The last research question explored the power of SMS communication in redefining the concept of learning. While traditional models emphasize on conscious effort by instructors and learners to create ideal learning conditions, SMS communication provides an "incidental" platform for "involuntary" learning.

SMS deals directly with both learner and instructor as individuals. It penetrates and breaks all barriers between learner and instructor. It defies conventional definition of task execution and allows learning to occur in a multitude of on-job situations. It even challenges and redefines the roles or "learner" and "instructor", by offering empowerment to anyone who masters the

science (and art) of its application.

From this new paradigm, many startling observations were made. In addition to the obvious methods of instruction, SMS communication enables instruction to take place through psychological and reverse-psychological coaching. SMS also provides the perfect grounds for "planting", where information or third-party participants can be used as investments for instruction to be carried out at a later time or situation. These methods, although unorthodox, showed amazing results. The participants involved demonstrated learning in various modes, from simple behavioural changes, to complex constructivism and self transcendence. And on the macro scale, the working community in this case study exhibited many characteristics associated with that of a "Learning Organization".

The observations recorded in the following section exemplify, analyse and discuss these findings. The summary of findings are illustrated in Figures ??? - ??.

Case study scenario

Unlike the earlier two research questions, which deals with clear-cut overtly observable effects of SMS on the variables of IR and TE, this third investigation specifically addresses the underlying effects that are not so visible to the untrained eye. This issue of IR effecting TE required systematic and persistent analysis of data obtained mostly through covert solicitation. It was imperative that the participants were unaware that they were being observed. Many of the examples highlighted in this section involved "deep" learning, or retrospection towards self enlightenment. Such issues are very personal and sensitive in nature.

It was discovered, as the six month study progressed, that covert observation enabled me to access witnessing such precious learning taking place.

Going undercover to observe behaviours and outcomes meant that all documentation must be kept confidential. For ethical reasons, raw transactions which could reveal classified issues could not (and still can not) be brought out in the open, even for analysis discussion. Thus, only the coded analysis and interpreted findings are presented in this paper.

Needless to say, given the intense "emotional" nature of the study, it was important that the researcher maintained a level perspective. Being personally involved in the pseudo-experiment myself, a benchmark for counter-checking was necessary to ensure accurate interpretation of my observations. I needed to have a control participant that I could do "member-checking", a "white rat" (WR) that I could talk to. Documentation pertaining this topic is discussed and presented under the subheading "Analysis of Bias Controls", immediately following this section.

Observation

Identifying roles. When a junior staff needed to influence the TE of a senior staff, often, those with close IR had better success. The first step was for the junior to acknowledge the role of the senior. This initial transaction could be in the form of an apology, a solicitation for advice, or a direct tribute. Once the respect towards the senior has been established and

Example acknowledging role of "instructor"

Refer: 25 08 03 / 21:13

I apologize if I disapointd u 2day. I wil try 2 play the role u expect of me better in future.

Example opening dialog for reversed roles

Refer: 25 08 03 / 21:39
Permit me to make observation... (contd)

accepted, the junior could provoke or seek to open a dialog for reversal roles. If the senior reciprocates positively, then the SMS based Osmosis Learning (OL) would be initiated.

Timing. These occurrences (where IR was used to influence TE), were observed at varying times of the day. However, those that involved "deep" Osmosis Learning (OL), as opposed to pure information or procedural based instructional learning (IL), mostly occurred only after office hours. The closer the IR, the more likely that the SMS dialog would take place during "private hours".

Example retrospective dialog at late hours
Refer: 25 08 03 / 21:47
How do we teach? Is there where the answer is? We must find the answer soon.

Speed. The interval of time between transactions also revealed the nature of IR and the extent of its influence on TE. When the dialog progressed intensively with very short intervals between responses, the content of the transactions showed greater attention to the advice or "instruction" being given. When a long lapse occurred, it usually correlated to "time out" needed for the participant to search within himself the "answers" to the "questions" that he had received. The longer the lapse, the more meaningful the response that finally

Example delayed response after 2 days of retrospective thinking (NOTE: response was first thing early morning)
Refer: 27 08 03 / 08:23
I agree its people in management who need training. Can u tell me how best to do it given players we have.

came in.

Feeding answers. SMS dialog was clearly a superior medium for feeding instructions and solutions. Data in the form of information, procedural steps, and opinions could be sent direct to the learner as and when needed. The closer the IR, the more effect the "feeding" had on the learner.

Example of feeding answers to the learner

Refer: 27 08 03 / 08:24

D best thing u did 4 me was pairing me w som1 who has opposite strength 2 mine & enuf age/seniority diff 2 ensure both players play specific role. This technique of paired mentor-mentee has worked since Socrates. U succeeded creating chemistry once. Y don't u repeat it? Explicitly pair us all & giv ea 1 yr fatherly talk BEFORE u announce d pairing.

Instructors utilized various means of feeding their learners. Some gave reassurances which acted as positive reinforcement. Others provided scaffolding (Vygotsky, 1978), or bits and pieces of solutions for the learner to piece together. Some used advanced organizers (Ausubel, 1960) which enabled the learners to gradually develop their own solutions, as explained in the Zone of Proximal Development (ZPD) model.

Planting cues. Equally effective, but less obvious than simple "feeding", was the act of "planting", or providing indirect stimulation for future responses. Designing the content of an SMS transaction requires careful choice of words. In order to maximize the effect of "planting", it was observed that instructors used terminology that made reference to relevant incidences

Example planting cues using words relevant to the TE scenario at

hand
Refer: 25 08 03 / 21:39
Permit me to make observation. Reciprocal of "order" is "obey". But reciprocal of "instruction" is "learn to carry out". Key word: LEARN. That is what we lack. We obey orders. Bt not yet learn from instruction.. We must learn. This we lack.

and situations that were occurring around the learner at that time. These cues were casually employed in the SMS transaction to provide double meaning to the dialog. The learner would involuntarily absorb the "plant" and later on be influenced by it.

The same words repeated by he learner in a later SMS or during a face-to-face situation would be "evidence" that the learner had absorbed the plant. Sometimes, this déjà vu would be realized by the learner. When that happened, the instructor would have to play it by ear, sometimes choosing to pretend and ignore it, sometimes maximizing the situation by re-emphasizing it. In either scenario, the instructor would be able to evaluate his learner's progress.

Third party planting. Sometimes, it was more efficient for planting to be done on an intermediary person, rather than on the targeted learner. The instructor would identify a mutually recognized third participant, and plant cues on that third party. Often, the third person is one who has better IR with the learner than the instructor, or, it could also be someone whose rank or role is more influential to the learner being targeted. This method of "instruction" showed much similarity to the

Example using SMS for third party planting
Refer: 25 08 03 / 21:57
Some don't give "instruction"... only "orders"...

techniques of "espionage" as advocated by Tsun Szu in the Art of War. The human-plant, or "spy" as labelled by Tsun Szu, may or may not have realized that he was a party for a TE with another learner.

Parallel multiple planting. Some instructors were found to be very apt at utilizing this indirect channel. A few used it to penetrate several learners of different levels simultaneously. A single SMS transaction, containing cues that triggered different meanings to different recipients, would be "cc" to a number of different learners. The instructor would then wait to see how the various different learners responded to his initial SMS, and then proceed to have multiple parallel dialogs with the various respondents. In addition to being able to multitask and achieve several TE all at once, these expert SMS instructors also benefited from the macro scale bird's eye view of the overall establishment which resulted. This "systems thinking" (Senge, 1990) gave the instructors total empowerment. And the participants experienced "team learning" (Senge, 1990), working together towards a unified cause.

Example parallel multiple planting

Refer: 25 08 03 / 21:24

(they).. failed me badly. I didn't expect being let down again. I am now convinced we have to be more regulated. CC To $P_R(1)$ $P_S(3)$

Manipulating focus. In this case study, it was observed that IR had the most effectiveness on TE when

the participants were in agreement on the final outcome pursued. "Shared vision" (Senge, 1990) was found to be the most powerful tool in manipulating a learner. After establishing consensus on the mutual goal, an instructor would then have to "package" his instruction for the intended TE to be seen as in line with, or complimentary to, the end goal. This almost always ensured the learner's response to be favourable. The extent of such manipulation depended on the instructor's skill in "packaging" the TE.

Example expressing mutual objectives
Refer: 25 08 03 / 21:56
YOU taught me to SEE. From there I learned to learn. Now I m stil learning, from MANY sources. We must giv instruction HOW TO LEARN. Not just what to do. Takes more time & energy. But WORTH IT. Sometimes we r impatient. Easier 2 giv "orders" than "instruction". That's when result is meaningless. $P_H(1)$*, u must teach the others to SEE this too.*

As explained in "Radical Constructivism" (Glaserfeld, 1970), a learner's output can be greatly influenced by what he perceives as reality. The instructors who achieved the most influence were those who mastered the skill of representing "reality" through SMS.

Drown the learner. One most obvious way of altering the learner's perception of importance, was to overwhelm the learner with a barrage of information.

> A wealth of information, can
> create a poverty of attention.
> Simon H. (n.d.)

Example manipulating focus by drowning
Refer: 16 11 03 / 22:09 WIB
Update (topic):.. (cont'd)
Update (topic):.. (cont'd)
Update (topic):.. (cont'd)
Update (topic):.. (cont'd)
Update (topic):.. (cont'd)
essay-type monolog
total=5transactions
back-to-back
length=459ch each

The learner would have had to swim through a

series of essay-type transactions that ended up being more of an SMS monolog than dialog. The end results in the learner being unable to focus on the topic he originally thought was important. Once such confusion is established, the instructor can easily plant the alternative focus that is desired.

Example manipulating focus by hounding
Refer: 08 08 03 / 22:19
Been harassed by bosses by SMS past 2 days. Brain messd up... (contd)....

Hound the learner. Another effective way of manipulating the learner's focus was to persistently pursue an issue.

> Diligence overcomes
> stupidity.
>
> Ming C.K. (n.d.)

The instructor only needed to diligently repeat the same instruction, either in identical or paraphrased format, over and over again, to gain the effect desired – ensuring the learner changes focus.

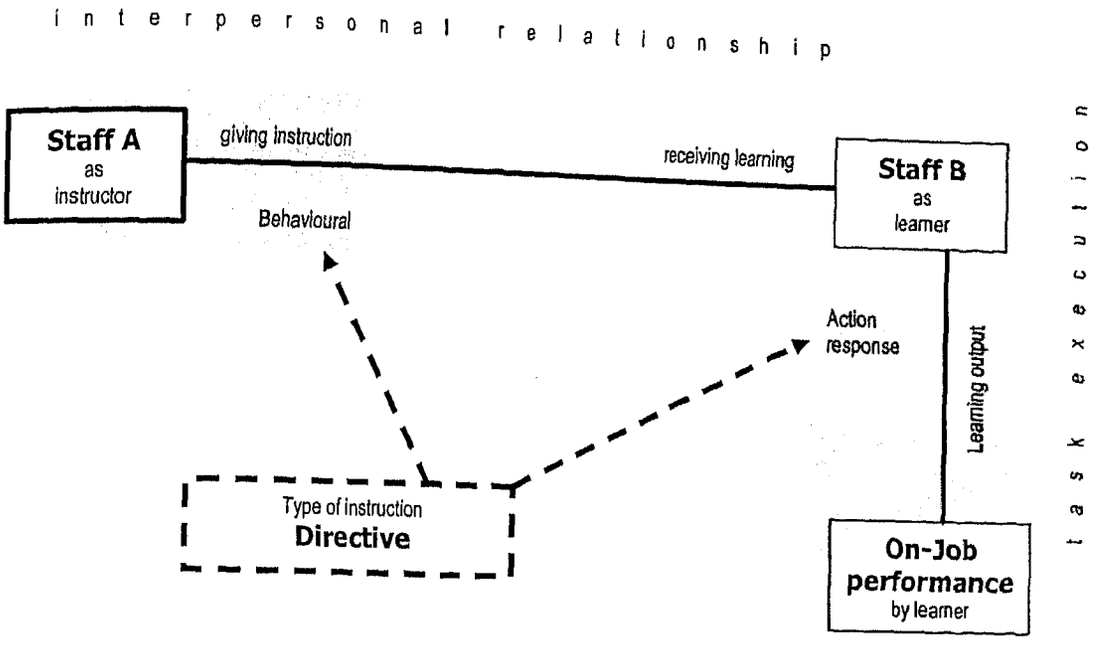


Figure 4RQ3 - 2: IR influence on Task Execution (TE) – Directive Instruction

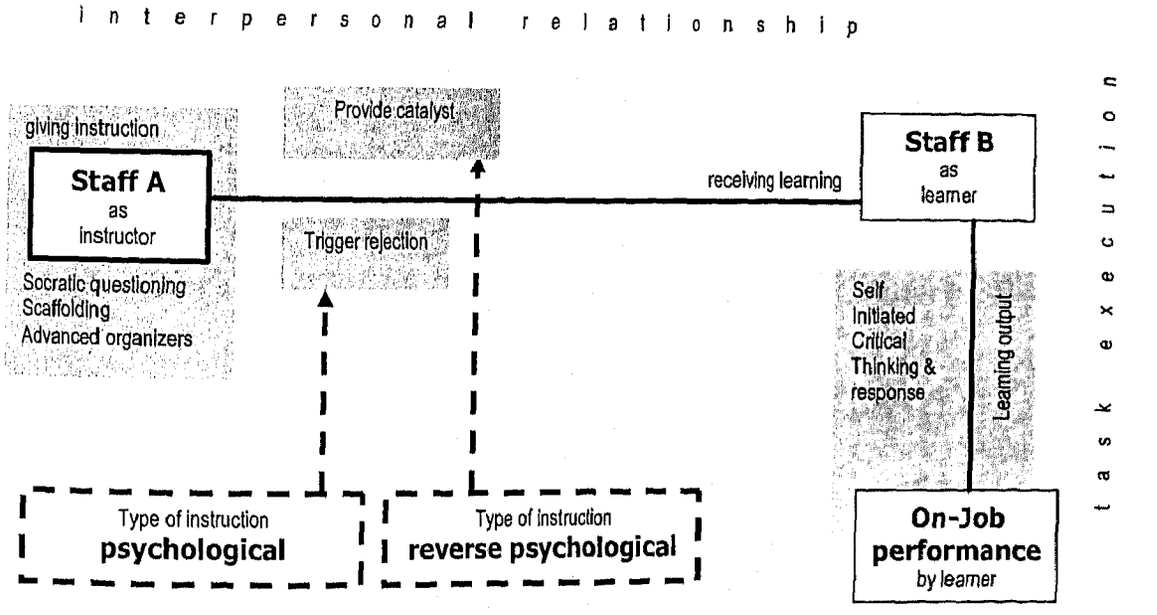


Figure 4RQ3 - 3: IR influence on Task Execution (TE) – Psychological Instruction

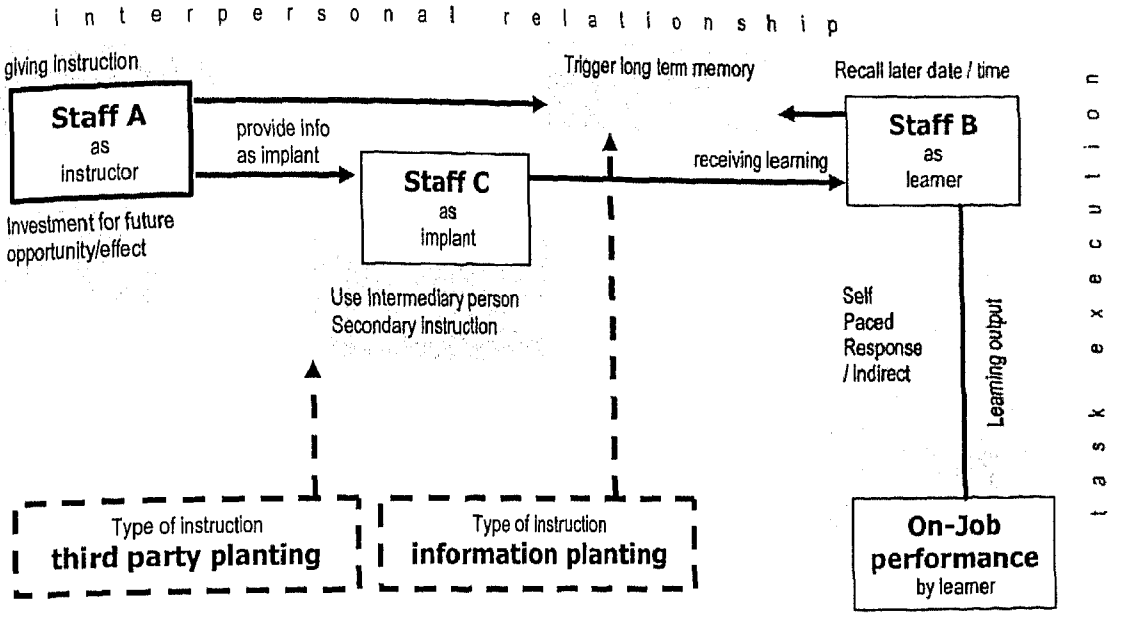


Figure 4RQ3 - 4: IR influence on Task Execution (TE) – Planting as Instruction

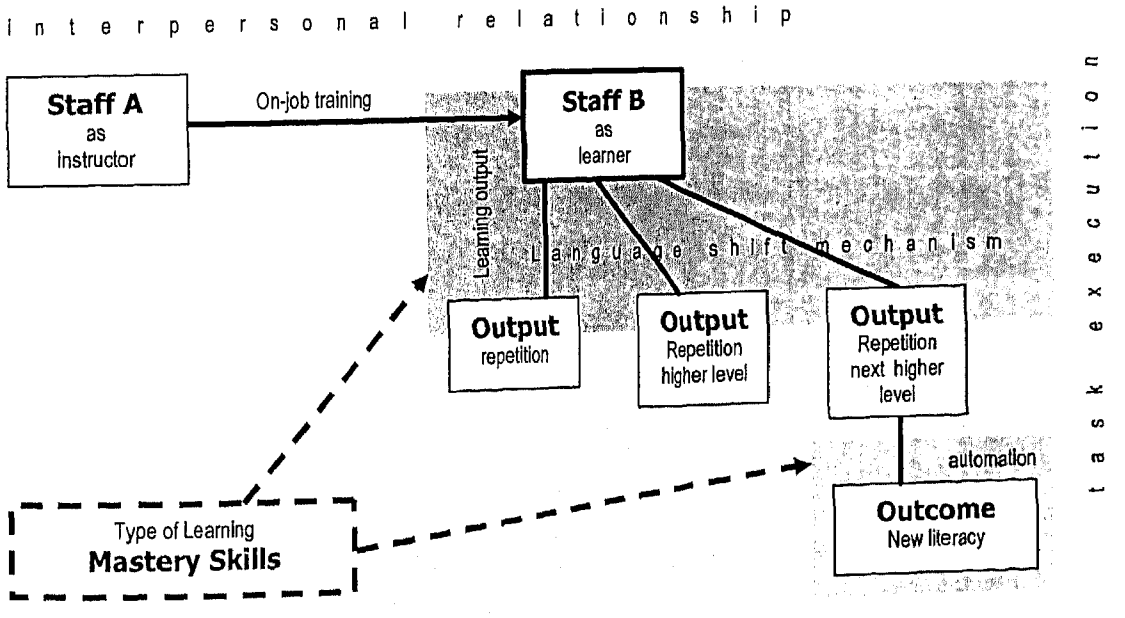


Figure 4RQ3 - 5: IR influence on Task Execution (TE) – Type of Learning - Mastery

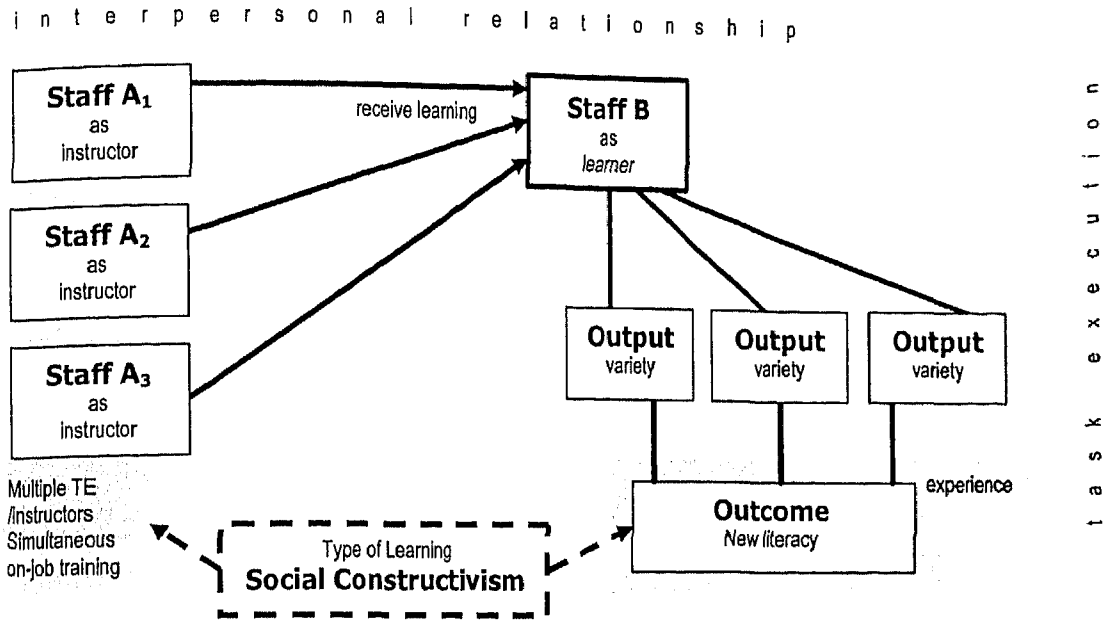


Figure 4RQ3 - 6: IR influence on Task Execution (TE) – Type of Learning - Social Constructivism

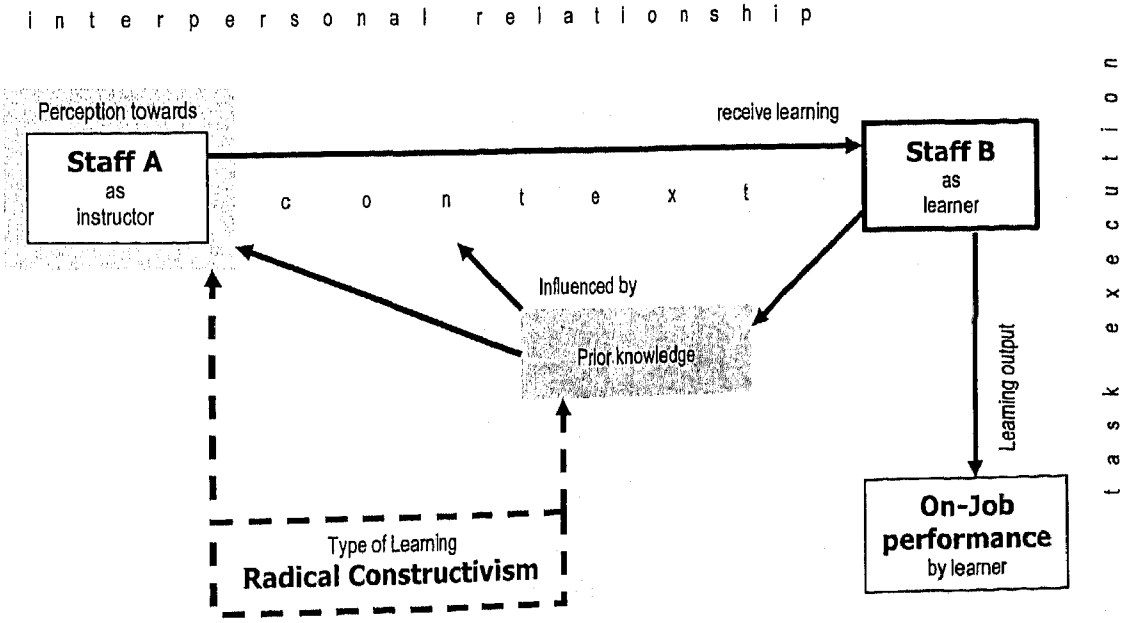


Figure 4RQ3 - 7: IR influence on Task Execution (TE) – Type of Learning - Radical Constructivism

Analysis of Bias Controls

Documentation

Medium. The most useful source of data used for cross-referencing analysis was found to be the author's own diary. The daily records included systematic documentation of events, occurrences, meetings, appointments and other details of interaction with other participants. Another crucial source of information was the author's email. Correspondence received and sent often correlated to SMS dialogs pertaining relevant TE.

Audit trail. The quantum of Transaction Transcript Documentation (TTD), totalling approximately 12,656 transactions, was gargantuan. At the onset of the study, the projected estimate was only for an average of 300 transactions a month, equivalent to 10 a day. But that was during the novelty "pilot" period, before I discovered that it was impossible to separate transactions containing Instructional Learning (IL) from Osmosis Learning (OL). After that discovery, I decided to document all transactions. And the numbers suddenly increased by leaps and bounds.

The escalation was also due to the extraordinary proliferation of this new "work-culture" amongst the participants. The rate of growth was both unprecedented and unexpected. Nevertheless, to ensure accuracy of referencing, all 12,656 transactions were diligently recorded and filed in chronological order. While actual raw transactions are not submitted with this paper, the documentation was kept intact and systematically reviewed throughout the analysis to obtain the

necessary proof of findings as reported.

Process

Persistent observation. As reported in the results overview, a novelty effect period was observed to have occurred for the first 20 days of documentation. This was an adjustment period where the author experimented on various different modes of recording transactions.

Once a systematic process was established, the documentation was carried out persistently 24 hours a day 7 days a week, breaking only for actual sleeping hours. The handphone was kept on all the time. Responses, as well as recording of transactions received, were implemented in a systematic timely manner. This diligent (almost mechanical) effort was ceased only after midnight 31st December 2003, after which a cooling off period of 7 days was observed.

Document referencing. As an individual, I had always been known amongst my colleagues as a person who is methodological and systematic. In any meeting or work scenario, I was the one who would write detailed minutes and file the records chronologically for indefinite periods of time. In fact, as I had been employed by the establishment for almost 10 years, and as it was a known fact that I kept immaculate documentation throughout, I was often referred to as the "walking archives".

To add to the naturally inborn habit, it also happened to be, that one my official on-job portfolios required me to be the "keeper" of archived

documentation. This publicly known trait of mine came in quite handy during this study. My "habit" of jotting down every observation and recording every SMS transaction did not raise any eyebrows at all. It was seen as part and parcel of my normal daily routine, even from day one. The participants assumed that my observations were standard procedure and part and parcel of my job.

In retrospect, I found this most useful, as the persistent documentation ensured that the Transaction Transcript Documentation (TTD) was intact and reliable. In fact, as other participants were aware of my recording the transactions, I was approached many times throughout the six months by a few of them. These participants would consult me to ask for verification on "CC" transactions that were sent, either to double check content, time, date, or other details. Their act of double checking and the interaction dialog that ensued gave me valuable insight onto the effects that the transactions had. I was able to do additional "member-checking" with these participants, even without them knowing it.

Prolonged engagement on site. The initial plan was to observe for a duration long enough to witness pattern of change. The ideal would have been a one year period, but for practicality sake, half a year of continuous engagement on site was deemed to be sufficient. The assumption was for a period of 1-3 months of building IR, with another 1-3 months of observing improved TE results. This assumption, however, proved inaccurate. IR is not an exact science. The actual building of IR ranged from immediate "hitting it off on a good start" to impossible cases of "skull too thick to crack". Nevertheless, this variation turned out to be a useful outcome, as I was able to measure varying levels of effects IR had on TE.

Despite producing immense numbers of data in the six months, which revealed interesting patterns, some issues still could not be addressed. As some of the participants only became involved at a later stage of the study, and as generally all participants exhibited a period of novelty effect, patterns of changes in their SMS dialogs were not as clear cut as from the participants who had been observed for a longer duration. Examples of these inconclusive (n/a) results are presented in the section on "Linguistics Patterns". It is assumed that a longer duration may have revealed different outcomes.

External controls

Peer debriefing. Occasionally, I had solicited candid opinion from neutral parties who had no idea of the case being studied. This took the form of casual discussion using hypothetical scenarios. However, unfortunately, a proper audit of actual documentation could not be carried out due to the confidential and covert nature of the study. It would not have been ethical to discuss work related issues with people outside of the establishment.

Parallel sites. As peer debriefing was not possible, an alternative measure was taken to provide some level of neutral benchmarking with external sources. Similar tactics and strategies were carried out with "participants" from different environments (other than the establishment being studied). These were also in the form of covert observations of SMS dialogs involving IR and TE. Although these solicitations were sporadic and not extensive, to a certain extent, they provided alternative sources of comparison. The findings from these parallel sites were

generally in line with that from the case study.

Internal controls

Interviewing participants. As the work culture in the establishment clearly endorsed, encouraged and expected SMS communication, all the participants were fully aware that their SMS dialogs were "official" on the job. However, for ethical reasons, the actual content of the study maintained its covert status even after the six month period was officially over. The findings of this study were coded for anonymity. All names and terms of references were replaced with pseudonyms. And the participants were never actually informed of their "participation". Thus, conventional post-mortem "interviews" could not be held.

However, several participants did realize they had engaged in active teaching and learning through SMS dialog, and voluntarily gave feedback. These participants had been newly employed at the time and literally sought assistance in learning their job roles. Being new on the job, they were very open about evaluating their own learning process. In addition to SMS dialog, they also gave feedback in the form of verbal discussion and through email. Some of the more explicit feedback received was included in the Conclusion of this paper (refer Chapter 5 for details).

Example building IR with Control-WR

Refer: 20 06 03 / 18:42

Sigh again... u think 2 lowly of me. I m a reliable ally & I can c dat in ur sms... I was merely referring 2 those who'll capitalize on this.

Member checking. This was one of the most valuable controls. It was by sheer coincidence that one of the participants ended up being the "control white rat" (CWR) in the study. The participant was a relatively new employee who had been assigned to work with me on specific tasks five months prior to the study period. There was much distrust and personality incompatibility in the earlier stages of the IR. At first, it seemed impossible to work together.

Example building IR with Control-WR

Refer: 22 06 03 / 08:57

Yes, u r learning fast. Hav 2 warn u.. My biggest weaknes yet: I m easily blinded by my students.Gets me in trouble in d end. I'v yet 2 learn 2 b a leader, but ppl naturaly folow me. Can get dangerous. B weary. Trust no 1. Not even me.

Reply: 22 06 03 / 08:57

Read y sms 2 times. Follow @ my own risk eh? Reply – worry not, I'm alwiz weary but I m no leader myself so reckon in da land of da blind, one eye'll b king, yes?.

However, persistent effort to improve IR and consistent success in TE (due to the improved IR) gave initiative to the participant to pledge adherence to the work methodology involving SMS communication. Seeing was believing, and the five month "breaking in" period had provided me with the leverage needed. CWR eventually learned to gain my trust, and I in turn, learned to rely on CWR as a key player to build SMS work culture in others.

Thus, when I proceeded to initiate the same work methodology on others during the actual study period, this participant volunteered to play the role of "leader-by-example". Two months into the study, after I was

convinced that I could trust this participant, I revealed my study intent, which surprisingly led to the self-appointed nickname "CWR". For the remaining four months of the study, I used CWR as a barometer to double check my "reading" of transactions received. CWR provided valuable second opinion interpretations.

Example member checking dialog with Control-WR

Refer: 211203 / 23:29

Well, I m jus an outsider giving membr checkn dat u may sometimes need in any xperiment, u normally haf dat. (contd)

However, although my solicitation with CWR was candid, for ethical reasons, I never revealed confidential details or identities when discussing analysis of dialog, TE or IR. For all intents and purposes, CWR only played the role of "member-checking", but did not have access to classified information.

Most of the time, CWR provided feedback based on the TTD alone. Sometimes, I would inform CWR of a situation, and directly ask for an opinion or interpretation. The main mode of communication between CWR and me was via SMS dialog. Sometimes, we would converse via telephone, but only at night after work. It was only on very rare occasions that we would discuss the analysis of TTD face-to-face. This was not only to maintain the confidential and covert nature of the study, but also, I discovered that it was much easier to

Example member checking dialog with Control-WR

Refer: 221203 / 20:30

He impressed me. SMSed me jus nw 2 infrm me status softcopy. 4 once, he folowd thru WITHOUT remindr. Tel me, wud YOU hav don same? & if yes, y? 2 impres? Or 4 fear? Or wud u ACTUALY hav learnd 2 b eficient (by nw)?

"study" about the effects of SMS communication by total immersion in, and adherence to, the environment of SMS based Osmosis Learning myself.

There were many cases where, without realizing it, CWR played the reverse role of instructor to me. For example, the gesture of providing moral support, while simple on the surface, required me to introspect and question my own reactions. Often, I realized I could visualize myself in the shoes of the other participants, as there were many similarities between dialogs that took place between my superiors and me, with dialogs that occurred between me and my subordinates. The patterns were the same. CWR gave critical, and often brutally honest, insight to many scenarios which I could have easily misread, due to my own involvement in the scenario. This ensured I kept a level head when interpreting the TTD.

Example member checking dialog with Control-WR

Refer: 08 08 03 / 22:37

Not ok. Very messd up. PH (3) & (4) both GOT ME. I been planted & harvested even b4 I cud hav time 2 grow.

Reply: 08 08 03 / 23:29

I din knw but I reckon u shldnt let bosses sms get 2 u.. Easier said than done, I knw but dat's price 2 pay 4 being able 2 read between lines, yes?

In short, having an "inside" second opinion for member-checking was extremely useful.