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POWERED BY INTELLECT
DRIVEN BY VALUES

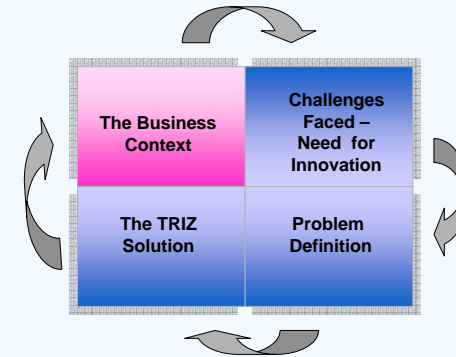


Changing the Paradigm in Business English Learning Using TRIZ

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Second TRIZ Symposium in Japan

Presentation Flow



Second TRIZ Symposium in Japan

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The Business Context – About Infosys

- Infosys Technologies Limited (NASDAQ: INFY) provides consulting and IT services to clients globally - as partners to conceptualize and realize technology driven business transformation initiatives.
- With over 58000 employees worldwide, we use a low-risk Global Delivery Model (GDM) to accelerate schedules with a high degree of time and cost predictability.
- We work with large global corporations and new generation technology companies - to build new products or services and to implement prudent business and technology strategies in today's dynamic digital environment.



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The Business Context

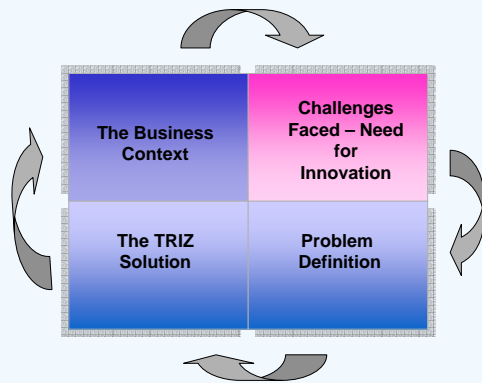
- For people development, Infosys has a competency framework that focuses on technical, functional and behavioral competencies. These competencies are mapped across different roles.
- Business Communication competency has been identified as a crucial competency for Infosys across different roles.
 - Business English is a sub-competency in this competency.
- **Infosys Leadership Institute (ILI)** was required to improve the Business English competency of Infoscons.



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Challenges Faced - Need for Innovation

The existing learning intervention had 2 days of instructor-led training and 0.5 days of e-learning. Following challenges were faced in developing the competency.



- Large number of learners across multiple locations.
- Existing learning intervention was not effective as....
 - There was low consistency of delivery between instructors.
 - The duration was too short to demonstrate competency improvement.
 - There was no standardized measurement.

Challenges Faced - Need for Innovation – contd.

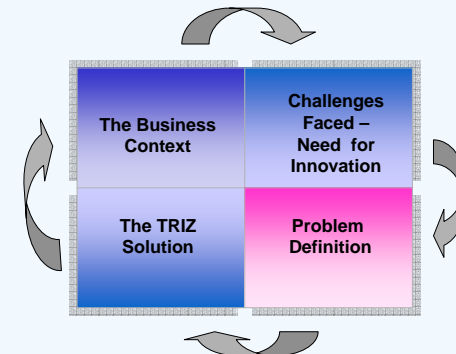


- Learners faced paucity of time due to work pressure / technical trainings.

- Contrary to Management philosophy, many Infoscons did not feel that Business English is an important competency, specially as compared to technical competency. Hence, there was a lower motivation to develop the competency.



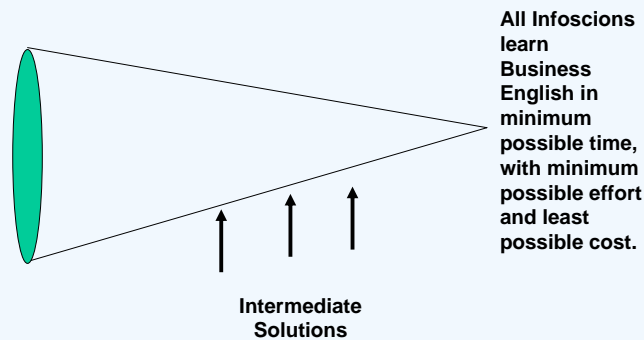
ILI was expected to design and deploy an effective Business English learning intervention that would increase the competency of Infoscons across different locations.



TRIZ problem definition tools – IFR, Perception Mapping and Contradiction – were used to define the problem.



Ideal Final Result



IFR Analysis

- **What is the final aim?**
All Infoscions reach the desired level of Business English competency.
- **What is the IFR?**
All Infoscions learn Business English and get certified in the minimum possible time, with minimum possible effort and least possible cost.
- **What is stopping us?**
 - Lack of time
 - Large scale – Large number of Infoscions spread across multiple locations
 - Lack of motivation
- **How can we make things stopping us disappear?**
Make Infoscions learn on their own in their free time. This can happen only if the learners have a lot of self-motivation and drive.
- **What are the resources available to us?**
Instructors, audio / video, books, CBT and e-learning, Infoscions free time, class rooms, physical infrastructure (rooms, computers, TV, video players), instructors
- **Has anyone used it before?**
Distance education and continuing executive education have used these resources. However, our problem is significantly different in two ways:
 - Distance education and continuing executive education mostly involve knowledge dissemination
 - High motivation of learners is a crucial factor that drives distance education and continuing executive education. Motivation of Infoscions to learn Business English is rather low.



Shift in Focus after IFR Analysis

| Focus Earlier | Focus Now |
|--|--|
| <ul style="list-style-type: none"> • Instructor and learners spend most of the time together – instructors help the learners pick up Business English competency. | <ul style="list-style-type: none"> • Learners learn themselves with support from the environment – instructors being just one element of the environment. • Use learner's time plus learner motivation to achieve the objective. |



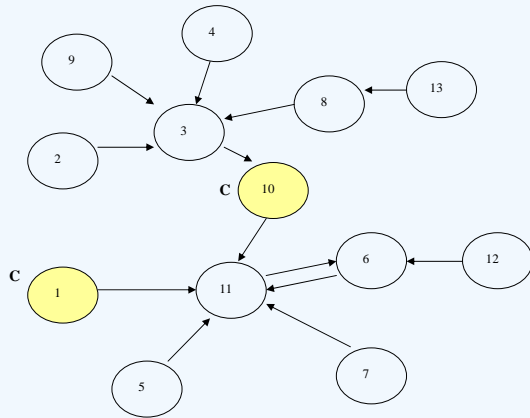
Perception Mapping

- Perceptions were collected from the three primary stakeholders in the process – ILI, Infoscions and Management. The perceptions were collected independently for the question '*Business English learning is not effective because....*'

| Business English learning is not effective because..... | | |
|--|------------|----------|
| Perception | Identifier | Leads to |
| ILI | | |
| Not enough class room training time is available to train Infoscions | 1 | 11 |
| Infoscions are busy either with projects or other technical trainings and certifications, they don't have time for Business English training | 2 | 3 |
| Infoscions are not motivated to learn Business English. They feel that they are quite good in Business English, so why bother. Some feel that this is not their main stream function, why bother? | 3 | 10 |
| The learning material is not very interesting – full of grammar – learners do not see much link to their work. | 4 | 3 |
| Large numbers to be trained across multiple locations. | 5 | 11 |
| No proper pre and post measurement | 6 | 11 |
| Lack of standardized delivery by all instructors. | 7 | 11 |
| Infoscions | | |
| We do not know the benefits of learning Business English. Why should we learn it, how is it going to benefit us? We thought we have joined Infosys to do software related work, not learn English! | 8 | 3 |
| Learning material offered by ILI is very boring | 9 | 3 |



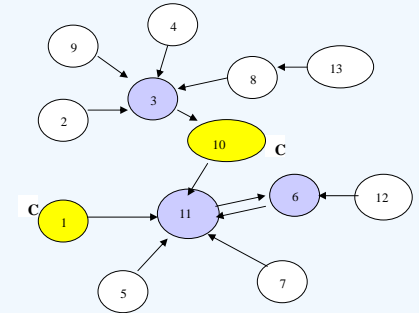
Perception Map



Interpreting Perception Map

After drawing the perception map, we looked for collector points, loop and conflict chain.

- **Perception 3** is a collector point as several other perceptions (2, 9, 4 and 8) are leading to it. Similarly, perception 11 is another collector point with perceptions 1, 5, 7, 6 and 10 leading to it.
- **Perceptions 11 and 6** are forming a loop.
- Perception 1 and 10 were identified as conflicting pairs. Perception 11 is a part of conflict chain.



Interpreting Perception Map – contd.

Perceptions 11, 3 and 6 were considered:

- Perception 11 - ILI does not have a learning model that is scalable and cost effective.
- Perception 3 - Infoscions are not motivated to learn Business English. They feel that they are quite good in Business English, so why bother. Some feel that this is not their main stream function, why bother?
- Perception 6 - No proper pre and post measurement.

Identifying Contradictions

| What are we trying to improve? ↑ | What is stopping us? ↓ |
|---|---|
| <ul style="list-style-type: none"> • Increase the effectiveness of Business English learning by Infoscions which in turn will lead to improved competency. | <ul style="list-style-type: none"> • Infoscions have very little time to spend on developing the competency – they are busy with their project work. Also, management cannot spare them out of their work for long periods. • Perception of Infoscions that they are strong in Business English competency and hence do not see much value in learning Business English. This is contrary to Management thinking that Business English is a crucial competency and Infoscions need to develop the same. |



Redefined Problem Statements

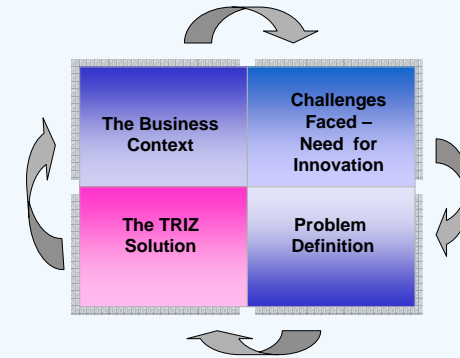
The redefined problem statements were:

Can Infoscions learn on their own in their own time using the support available from the environment?

If yes, how do we motivate them to do so?

How can we build a scalable and cost effective model for teaching Business English?

Can we use pre and post measurement to motivate Infoscions? If so, how?



Generating TRIZ Generic Solution

| <i>What are we trying to improve?</i> | <i>What is stopping us?</i> |
|--|---|
| <ul style="list-style-type: none"> Increase the effectiveness of Business English learning by Infoscions which in turn will lead to improved competency. <p>Parameter 6 – Production Specs / Quality / Means</p> | <ul style="list-style-type: none"> Infoscions have very little time to spend on developing the competency – they are busy with their project work. Also, management cannot spare them out of their work for long periods. <p>Parameter 8 – Production time Parameter 20 – Support Interface</p> <ul style="list-style-type: none"> Perception of Infoscions that they are strong in Business English competency and do not see much value in learning Business English. This is contrary to Management thinking that Business English is a crucial competency and Infoscions need to develop the same. <p>Parameter 21 – Customer Revenue / Demand / Feedback Parameter 25 – System Generated Harmful Factors</p> |



Generating TRIZ Generic Solution – Contd.

The following TRIZ principles were used to generate specific solutions:

- Principle 35 – Parameter Changes
- Principle 1 – Segmentation
- Principle 6 – Universality
- Principle 40 – Composite Structures
- Principle 2 – Taking out
- Principle 25 – Self service



Generating TRIZ Specific Solution

Pre-Post Measurement & Certification was used to increase overall effectiveness of intervention and motivation of Infoscions.

| Then | Now |
|--|--|
| The learning intervention was not associated with any certification or standardized measurement. Infoscions were selected for the learning intervention based on results of a Group Discussion (GD) or manager's request. There was no post measurement. | Business English learning intervention was mapped with BULATS (Business Language Testing Services) offered by Cambridge university. All the Infoscions would go through the certification test. Those who clear the test would be certified as competent in Business English. Rest would go through a learning intervention and retake the test after a minimum gap of 3 months. |

Peer Support / Monitoring Groups increased collaborative learning and learner motivation

| Then | Now |
|----------------------|---|
| No peer involvement. | Peer support / monitoring groups were created which in turn increased collaborative learning and increased the motivation to learn. |



Generating TRIZ Specific Solution

Scalable, cost effective learning model gave flexibility to learner and Cost effectiveness to organization

| Then | Now |
|--|--|
| The intervention included 2 days of instructor led training program and 0.5 days of e-learning. Moreover, the intervention was carried out at a stretch which further reduced the effectiveness. . | A blended learning intervention with approximately 80 hours learning was created. It was segmented as following: <ul style="list-style-type: none"> • 2 days of face-to-face classroom intervention • 44 hours of self-study – each segmented into smaller modules. Each module had a post test that helped learners assess their progress. • English Lab with audio, video, CBTs and books. The Lab was manned by instructors who would guide the learners on need basis. • The instructors would also conduct pre-scheduled events such as group discussions, what's the good word contest, News yesterday etc. <p>The learning intervention was designed such that the learners go through it over a period of at least 3 months.</p> |



Generating TRIZ Specific Solution

Learning modules served multiple purposes and increased learner motivation to develop the competency.

| Then | Now |
|--|--|
| The learning intervention primarily focused on grammar and vocabulary. Learners did not find the modules either interesting or applicable to their work. | The self-learning modules were made very interesting. The modules provided useful tips on soft skills, people management skills, social skills – skills which are considered valuable by Infoscions. |

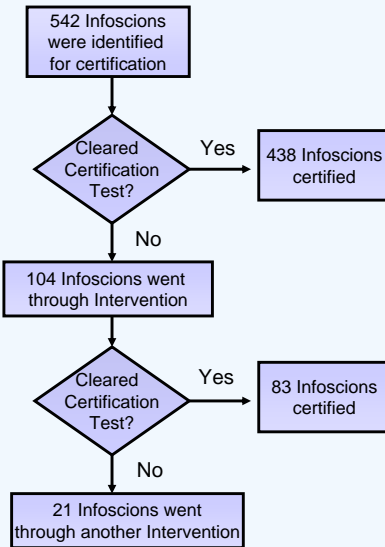
Top down approach and commitment from senior members demonstrated that Business English is an important competency.

| Then | Now |
|--|--|
| It was limited to specific roles – typically the entry levels. This in turn resulted in lack of commitment and motivation. | To demonstrate the importance of the competency, the senior members in the team would also take the test and if not cleared would go through the learning intervention. This drove down the message that it is an important competency – as important as a technical competency. |



Idea to Implementation

Certification and Learning Intervention



On the Job Performance

- Following sample was considered for measuring On the Job Performance
 - 92 Infoscions who cleared the certification without intervention.
 - 30 Infoscions who cleared the certification after intervention.
- The managers of these Infoscions were asked to observe them over a period of 3-4 months and give feedback on a specific template.

Feedback Template for Managers

Business Language – On-field Assessment

Name of SE:

Employee No.:

IBU:

Name of PA/PM:

Please rate all the statements on a scale of 1 to 5 as indicated below:

- 5 – Excellent
- 4 – More than satisfactory
- 3 – Satisfactory
- 2 – Below satisfactory
- 1 – Needs improvement

| Oral | The SE.... | Rating |
|------|--|--------|
| 1. | Speaks fluently without having to search for words and unnecessary pauses. | |
| 2. | Articulates messages or ideas well. | |
| 3. | Expresses himself or herself clearly. | |
| 4. | Shares information, opinions and ideas confidently. | |
| 5. | Asks relevant and appropriate questions. | |
| 6. | Listens attentively for the message being conveyed. | |

Relation of Certification Scores to On the Job Performance

All Infoscions

| | | BULATS_ overall | Mgr. Fdbck_ overall |
|---------------------|---------------------|-----------------|---------------------|
| BULATS_ overall | Pearson Correlation | 1 | .505** |
| | Sig. (2-tailed) | | .000 |
| | N | 122 | 122 |
| Mgr. Fdbck_ overall | Pearson Correlation | .505** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 122 | 122 |

** . Correlation is significant at the 0.01 level (2-tailed).

Infoscions without Intervention

| | | BULATS_ overall | Mgr. Fdbck_ oral |
|------------------|---------------------|-----------------|------------------|
| BULATS_ overall | Pearson Correlation | 1 | .455** |
| | Sig. (2-tailed) | | .000 |
| | N | 92 | 92 |
| Mgr. Fdbck_ oral | Pearson Correlation | .455** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 92 | 92 |

** . Correlation is significant at the 0.01 level (2-tailed).

Infoscions with Intervention

| | | Mgr. Fdbck_ overall | BULATS_ overall |
|---------------------|---------------------|---------------------|-----------------|
| Mgr. Fdbck_ overall | Pearson Correlation | 1 | .376* |
| | Sig. (2-tailed) | | .041 |
| | N | 30 | 30 |
| BULATS_ overall | Pearson Correlation | .376* | 1 |
| | Sig. (2-tailed) | .041 | |
| | N | 30 | 30 |

* . Correlation is significant at the 0.05 level (2-tailed).

There was large to moderate correlation between the certification scores and on the job performance.

Relation of Certification Scores to On the Job Performance – contd.

Tests of Between-Subjects Effects

Dependent Variable: Mgr_Fdbck_overall

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|------------------------------------|-------------------------|-----|-------------|----------|-------------|
| Corrected Model | 10.573 ^a | 7 | 1.510 | 5.331 | .000 |
| Intercept | 551.909 | 1 | 551.909 | 1948.007 | .000 |
| BULATS_Level | 2.707 | 3 | .902 | 3.184 | .027 |
| intervention | 1.325 | 1 | 1.325 | 4.676 | .033 |
| BULATS_Level * intervention | 1.558 | 3 | .519 | 1.833 | .145 |
| Error | 32.298 | 114 | .283 | | |
| Total | 1450.337 | 122 | | | |
| Corrected Total | 42.871 | 121 | | | |

a. R Squared = .247 (Adjusted R Squared = .200)

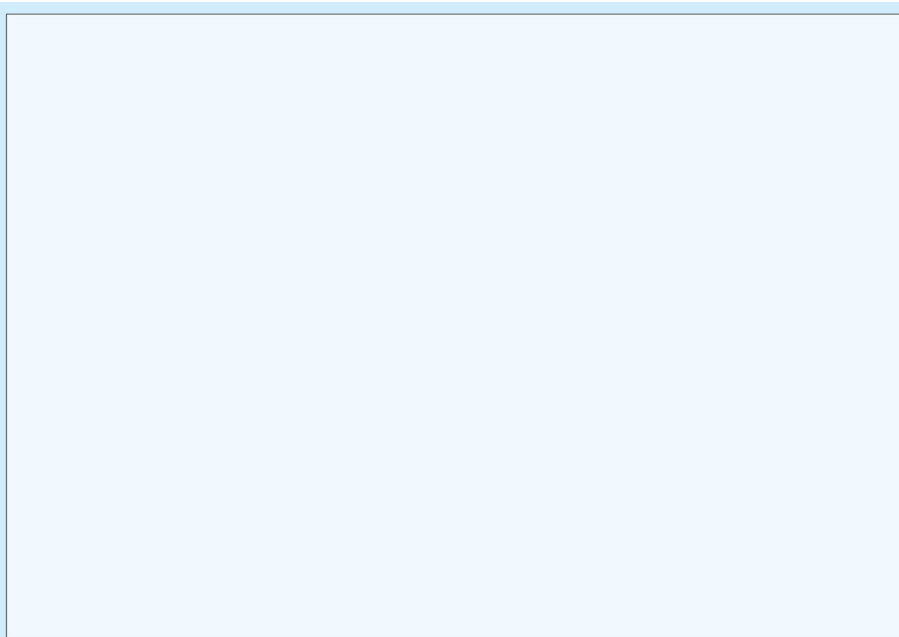
Managers reported similar performance from certified Infoscions.

Thus, the TRIZ generated specific solution was validated.



Thank You!

Presented by Infosys Technologies Limited



Certification and Learning Intervention

