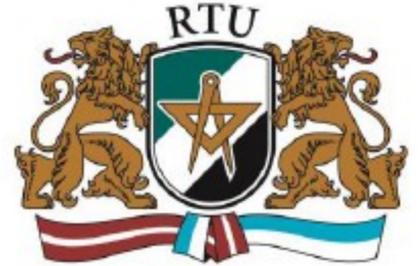


Game-based Training of Communication Skills in Requirements Engineering



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MBTI CHARACTERISTICS

The MBTI instrument is based on the theory of personality types described by Carl Jung and Isabel Briggs Myers and Katharine Briggs. This theory states that many of the valuable differences between people are a result of natural preferences that everyone has for different ways of perceiving, or taking in information, and for different ways of judging, or making decisions. If these natural differences can be understood and appreciated, working relationships can be improved. Theory can help with:

- Better understand how you communicate with each other;
- Identify possible sources of misunderstanding;
- Resolve or avoid communication conflicts;
- Build on your combined strengths to develop a more productive working relationship.

#	Characteristics	Description
1	Extraversion (E)	Dealing with situations and facts from outer world
	Introversion (I)	Dealing with ideas, thoughts, information, explanations, beliefs, and reflections
2	Sensing (S)	Dealing with facts, known things, information fit in with the direct here-and-now experience, i.e. clear, tangible data
	Intuition (N)	Dealing with ideas, the unknown; generating new imaginative possibilities or more abstract, conceptual, and speculative information
3	Thinking (T)	Deciding on the basis of objective logic, using analytical and detached approach; emphasizing on tasks and results to be accomplished
	Feeling (F)	Respecting values and personal beliefs, visceral-oriented, empathetic
4	Judging (J)	Stable and organized; managing the outer life, focusing on completing, organizing, and planning
	Perception (P)	Maintaining flexibility, dealing with problems as they arise, rather experiencing the outer world than managing it



CRITICAL SUCCESS FACTORS

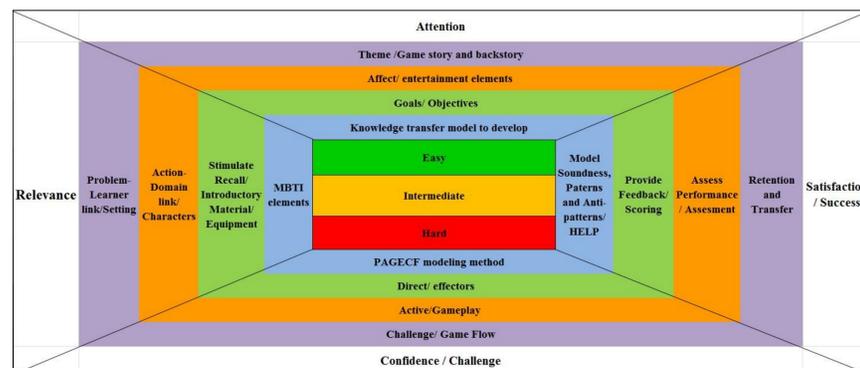
Global software development (GSD) has brought about its own unique set of challenges. Issues regarding cultural and language differences, trust and commitment, extended feedback loops, asynchronous communication, and knowledge management add new difficulties to today's already-complicated software development. These issues seem to preclude the use of processes reliant on informal communication, such as agile methodologies. Communication, particularly informal communication, plays a critical role in the success of a GSD team. The role of cooperation within and between different groups of stakeholders within case study:

Cooperation	Role of cooperation
Between the development team and the	To pool software resources
Within the members of the management board.	To resolve potential conflicts between high-level requirements and then to prioritise them. To agree terminology
Between the development team and the management board	The management board: to communicate the prioritisation of requirements and the agreed terminology, and to check that the system in its current state is meeting, or has the potential of meeting, the scientific goals. The development team: to communicate the resource implications of potential prioritisation decisions, and the current state of development.
Between the development team and the wet lab bench scientists	To ensure that the software meets the users' needs; to ensure usability; to gain buy-in from the users
Within the development team	Probably a necessity for any successful development

THE GAME

Military and emergency services were the early adopters of serious games for training. Nowadays serious games as training means are used in many different industries and are also utilized in universities and schools. While the characteristics of common computer games and serious games are quite different, they both incorporate common game attributes, namely, Backstory and storyline. Every game has a backstory upon which the game is based, and a story line that it follows, which can be referred as the rationale for the game play. Serious games offer an additional value to traditional learning materials and methods by allowing the student not only to learn, but also to apply the learnt skills in practice. For training interpersonal skills in requirements engineering, the MBTI is incorporated into concept of serious games.

We propose the following concept of the game. The content on particular requirements engineering issues, such as knowledge to be acquired during business or systems analysis tasks can be incorporated in the backstory of the game. Different distributions of this knowledge among the virtual actors can be enriched by specific MBTI categories-based knowledge delivery (speed, completeness, truthfulness), externalization, visualization, and structure patterns. These patterns can be incorporated in the storyline. Thus the game may help to train right approach for specific actor types (pure or combined categories) an ability to recognize actor types and choose appropriate requirements engineering approaches in a given situation. The game corresponding to this concept becomes a tool for improving interpersonal skills of business and systems analysts, and can be useful in training requirements engineers.



Control panel

Software licence is expiring in September 2015. You can renew it by clicking [here](#). Information about renewal options can be found [here](#).

Game progress:

Game difficulty: easy hard

Settings Maris Dargis (logout) Back Forward

Brief project information

New ERP system implementation project. Banking and Financial Services industry. Small company. Lead specialist has clear vision of business need, enterprise architecture, organizational process assets, stakeholder roles. Business analysis approach and requirements management proces is not strictly defined. CRM vendor not chosen yet.

Situation description

You are appointed as lead analyst. Your current tasks include – Solution approach definition (with constraint that it must be packaged CRM system), Solution scope definition. Solution gaps assessment. For current situation stakeholders are Maris, Andrew, John and Johana. In order to elicit options for vendors you have made own research, consulted with domain experts, company representatives and so on. You want to foster creative thinking within team to produce numerous new ideas and left no reasonable option unconsidered. Background information: recently Johana and John had serious conflict about possible options. John has expressed his concerns on Johana's proposed CRM vendor which lacks references from corporate customers. Johana have told team that she finds it hard to work in team with John.

Options

Organize brainstorming session, set **John** as scribe, **Andrew** as facilitator

Organize focus group session, set **John** as scribe, **Andrew** as facilitator

Send individual e-mails to participants and ask for their opinions with one close-ended and one open ended question

OK

Stakeholders

Stakeholder	Professional skillset	Underlying competences	Position	Current task	Knowledge								
Maris					<table border="1"><tr><td>■</td><td>■</td><td>■</td><td>■</td></tr><tr><td>■</td><td>■</td><td>■</td><td>■</td></tr></table>	■	■	■	■	■	■	■	■
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John					<table border="1"><tr><td>■</td><td>■</td><td>■</td><td>■</td></tr><tr><td>■</td><td>■</td><td>■</td><td>■</td></tr></table>	■	■	■	■	■	■	■	■
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Johana					<table border="1"><tr><td>■</td><td>■</td><td>■</td><td>■</td></tr><tr><td>■</td><td>■</td><td>■</td><td>■</td></tr></table>	■	■	■	■	■	■	■	■
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SERIOUS GAME DESIGN FRAMEWORK RATIONALE

Researchers G.A. Gunter et al. in [55] states "We are witnessing a mad rush to pour educational content into games or to use games in the classroom in an inappropriate manner and in an ad hoc manner in hopes that players are motivated to learn simply because the content is housed inside a game. A failure to base serious game design on well-established and practical instructional theories as proposed by well-respected educators like Robert Gagne [56] and James Keller [57] increases the risk of the game failing to meet its intended educational goals, yielding a player base who is entertained but who has not acquired new skills or knowledge. Well-developed video games certainly engage players, but games designated as educational are not always based on sound educational principles and theories, thereby potentially losing power as an educational tool".

INSTRUCTIONAL THEORIES

- Robert Gagne's Nine Events of Instruction
- Benjamin Bloom's Taxonomy
- James Keller's ARCS Model