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THE IMPACT OF ASYNCHRONOUS (DISTANCE) E-ICEBREAKERS ON ADULT FACE-TO-FACE LEARNING

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Abstract

This project explores the impact of asynchronous (distance) electronic icebreakers on adult face-to-face learning based on the perceptions of the participants (trainees and trainers). In adult face-to-face training activities, participants coming from different backgrounds feel anxiety for being together with people they do not relate with. The research tests the following hypotheses:
(a) E-icebreakers implemented from distance before adult face-to-face training activities are helpful in facilitating learning
(b) Participants support distance e-icebreakers regardless of their familiarity with ICT
(c) Participants are influenced, regardless of their degree of participation in the distance e-icebreaker activity.
The above hypotheses were tested in six short multi-company training programmes in Cyprus, with a total number of participants 50 trainees and 4 trainers, out of which 37 trainees and all 4 trainers evaluated the e-icebreakers. E-versions of the Autograph icebreaker were implemented through three media of communication: E-mail, online questionnaire and discussion forum. Participants were given a user name and password in order to access project's website (developed in a Moodle VLE) and participate in the research. Findings fully verified the hypotheses of the research, as the vast majority of the participants supported the idea of implementing distance e-icebreakers before adult face-to-face learning activities as a technique enhancing face-to-face communication and supporting learning.

1. Hypotheses

In adult face-to-face training activities, especially in multi-company (open) programmes, participants come from different companies and usually they do not know each other. But even when it happens that some of them know each other, they may have different backgrounds with regards to education level, experience, organisational culture etc. On the other hand, the level of communication and collaboration within the group is crucial for the successful implementation of the training programmes and the effectiveness and efficiency of learning. Therefore, the use of icebreakers is important for the participants (trainees and trainers) in relation to the creation of good atmosphere and helpful climate and the establishment of better mutual understanding and communication. This may be done either with a face-to-face icebreaker during the introductory training session or through an e-icebreaker before the commencement of the training programme or even better by combining both, an e-icebreaker before the programme and a face-to-face icebreaker at the beginning of the programme.

Asynchronous e-icebreakers seem to be more attractive, less time-consuming, more useful, more preferable and easier for participants than traditional in-classroom icebreakers and they may be used outside the traditional training time at users own place, pace and time. Furthermore, asynchronous e-icebreakers seem to be very helpful in motivating adults for participation in training activities, in creating the appropriate atmosphere within the group, in enhancing face-to-face communication, in positively influencing group dynamics, in strengthening collaboration between the participants and in better achieving training objectives.
Another issue is to confirm whether asynchronous e-icebreakers, even being optional, they influence all participants, regardless of whether they participated or not and despite the degree of participation. Furthermore, another hypothesis to be tested is whether the degree of participants' familiarity with Information and Communication Technologies in any way influences their opinion for or against e-icebreakers.
Finally, we have to underline the fact that if icebreakers and e-icebreakers are important in learning activities in general, they seem to be more essential in short adult training programmes (of one day to a few weeks duration) than in training programmes of medium or long duration (of one month to several months or even years). As participants will stay together for a very short time, the ice has to be broken quickly and effectively, so that they will feel comfortable in collaborating towards achieving the learning objectives. In longer training programmes there is quite enough time for trainees to come closer to each other and for trainers to implement several icebreaking activities during the learning experience.

2. Delimitations

The project aims at evaluating the impact of asynchronous e-icebreakers on adult face-to-face learning based on the perceptions of the participants (trainees / learners and trainers / training organisers).In this context, the following issues have to be made clear:

- The evaluation within the context of this project has nothing to do with any kind of comparison between electronic and face-to-face icebreakers.
- The issue is examined regardless of whether a face-to-face icebreaker is planned to be implemented in the classroom during the introductory session, following the implementation of the e-icebreaker.
- The question is not "An e-icebreaker Vs A face-to-face icebreaker" but "Having Vs Not Having" an e-icebreaker before a face-to-face adult training programme.
- The evaluation refers only to the impact of asynchronous e-icebreakers. Synchronous e-icebreakers are not examined here.
- Not all types of asynchronous e-icebreakers are evaluated, but only three different versions of a specific e-icebreaker called "E-Autograph", being the electronic analogue of the homonymous face-to-face icebreaker. These three different versions have to do with the electronic medium of communication used.

3. Face-to-face, Electronic and Blended Learning

From time to time face-to-face or in-classroom or traditional instruction is criticised that it promotes passive learning and does not pay attention to the needs of learners. On the other hand electronic learning is also criticised as promoting human isolation

and as being impersonal, hiding people behind the machines. Blended learning is the combination of the above two categories. Rovai and Jordan (2004) give the following definition: "Blended learning is a hybrid of classroom and online learning that includes some of the conveniences of online courses without the complete loss of face-to-face contact… Blended courses produce a stronger sense of community among students than either traditional or fully online courses".

Blended learning has a number of advantages compared to face-to-face and e-learning. Newman (Not dated: 6) refers to the benefits of blended learning: "Class time can focus on those subjects that gain the most from face-to face interaction. Individuals also benefit from self-paced, online learning for content that requires minimum interaction. Web-based follow-up mechanisms have the potential to reinforce learning and improve retention and reinforcement". Ziob & Mosher (2006) state that the blended format offers flexibility and variety that can accommodate various learning styles and levels of student preparation (cited in Newman, not dated: 7).

Kaplan (2008) refers to Blended learning communities and "Icebreaker" Blended Learning Communities stating that "There are two core assumptions that underlie approaches to building blended learning communities: (1) that the deeper the personal relationships between learners, the richer the collaborative learning experience; and (2) that relationships between learners may be strengthened through structuring group interactions (using technology) before and/or after an face-to-face training event". For "Ice Breaker" Blended Learning Communities, Kaplan states that they involve pre-event activities to "break the ice" prior to a face-to-face meeting. ... By engaging learners in structured introductions and pre-work through web conferencing, online discussions, and conference calls prior to a face-to-face training, it becomes possible to accelerate openness, sharing, and collaborative learning when participants finally come together in-person".

Computer mediated communication was used in a research contacted by Dietz-Uhlera and Bishop-Clark (2001) in Miami University to enhance subsequent face-to-face discussions. The research refers as the main advantage of CMC the lack of time and place constraint. The results of the research survey showed that face-to-face discussions preceded by either synchronous or asynchronous computer-mediated communication were perceived to be more enjoyable and include a greater diversity of perspectives than face-to-face discussions not preceded by computer-mediated communication.

4. Icebreakers, E-icebreakers, Autograph and E-Autograph

An icebreaker is a "(usually) short activity designed to help participants overcome initial anxiety in a training session and/or to acquaint the participants with one another. An icebreaker can be a fun activity or can be tied to specific topics or training goals. While a useful tool in itself, the icebreaker comes into its own in situations where tension or resistance exists within a group" (Pfeiffer, 2008).

Clark (2007) refers to the etymology of the word stating: "The term "icebreaker" comes from "break the ice", which in turn comes from special ships called "icebreakers" that are designed to break up ice in the arctic regions. And just as these ships make it easier for other ships to travel, an icebreaker helps to clear the way for learning to occur by making the learners more comfortable by helping to bring about conversation".

Varvel (2002) states: "Usually, an ice breaker is used at the beginning of a session or course in order to let everyone in the course get to know one another. Lucas (2007: 24) addressed to teachers and trainers states: "Before you can share information or teach anything to your learners, you must first capture their attention. It can also be done in some fun, innovative manner using activities that engage and energize a group while allowing them to get to know one another".

Townsend (2003) invents the "FABULOUS" criterion, stating that a good icebreaker should be:

Foolproof: has been tested and works
Amusing: trainees should enjoy it
Bridged: linked to the course subject (if possible)
Unique: trainees should not have done it before
Lively: has movement, exchange and chatter
Optimistic: is positive and non-threatening
Uncomplicated: is easy to explain and organise
Short: lasts between 5 and 10 minutes

E-icebreaker is an icebreaker implemented through electronic media of communication, such as e-mail, online questionnaires, discussion forums, chat rooms, videoconferencing and so on. E-icebreakers may be asynchronous or even synchronous, depending on the medium through which they are implemented. Asynchronous e-icebreakers may be implemented through communication that is not done at the same time (i.e. through e-mail, online questionnaires, and discussion forums), while synchronous use media such as chat rooms, video conferencing, telephones and so on.

Fooks (2005) states that in an online environment, facilitators need to take different approach to "breaking the ice" as the online environment moves asynchronously as opposed to a synchronous classroom setting. Conrad and Donaldson (2004) suggest that an effective icebreaker should humanize the technology-mediated experience so that trust can be built among learners. Some online learning environments accomplish this by having user's setup personal profiles of them which could include a picture, personal interests and other biographical information. Doran (2005) asserts that the psycho emotional needs of students must be considered and supported when implementing collaborative learning in an online course; nothing that students will vary in their willingness and initial ability to function, therefore needing extra scaffolding, coaching and instruction (cited in Fooks, 2005: 5).

Why are ice breakers so important in an online course? Varvel gives his own opinion and experience stating that an ice breaker, though comprising only a small portion of the total time spent in any meetings/class/group/etc., can be of vital importance to the success of any group process. In an online course, the need to establish an environment of open discussion where everyone can get to know one another must actively be sought in order for it to develop in a reasonable amount of time. Ice breakers help the instructor to develop this environment (Varvel, 2002).

Dixon et al. (2006) concluding about their findings in their research on online icebreakers state: "We have found that employing icebreakers in online learning environments is a step in the right direction and is particularly effective in helping communities form right from the conception of a group of online learners. This is particularly important where learners are expected to participate in any sort of group or collaborative work. The ability to seek out compatible colleagues to collaborate with on projects throughout the duration of a course could be greatly influenced by the ability to align oneself with counterparts who share common goals, values, and

interests. Using icebreakers as a means of building social strengths in an online community also aids individuals in finding suitable partners for collaboration" (Dixon et al., 2006).
Autograph is a specific icebreaker according to which participants in a face-to-face training session hold a card with a number of statements on it and they search for other participants who fit each statement listed. When they find one, they ask him to sign (autograph) next to the statement he or she satisfies. This icebreaker was tested by using the "FABULOUS" test (Townsend, 2003), according to which an icebreaker should be Foolproof, Amusing, Bridged, Unique, Lively, Optimistic, Uncomplicated and Short. It was found that Autograph and its electronic versions could satisfy most of these criteria.
Electronic versions of Autograph (E-Autograph) were developed for use in the six training programmes available. Asynchronous e-icebreakers of three different versions of E-Autograph were implemented from distance through three different media: e-mail, a website (online questionnaire) and a discussion forum.

5. Research design and Methodologies implemented

The design of the research included the following steps:

- Choosing the appropriate Virtual Learning Environment (VLE) to host the project.
- Finding training programmes that were planned to be implemented in the appropriate period of time and ensuring that Training Providers are committed towards being part of the research.
- Establishing communication with the participants of the programmes (Trainers / and Trainees) and attracting their attention towards participating in the survey.
- Selecting the appropriate icebreaker and developing the respective e-icebreaker.
- Deciding on the method the e-icebreaker will be evaluated with and designing the evaluation questionnaires and the hosting environment.
- Deciding on the statistical appearance of data and the level and type of statistical analysis.

The following methodologies were used during the different stages of the research:

- Questionnaire as part of the e-icebreaker through e-mail (for the Trainees of two programmes)
- Online questionnaire as part of the e-icebreaker through a website (for the Trainees of other two training programmes)
- A discussion forum including a questionnaire as part of the e-icebreaker through a discussion forum (for the Trainees of another one training programme)
- A programme-specific discussion forum as part of the e-icebreaker through a discussion forum (for the Trainees of the above same training programme)
- A discussion forum including a mixed questionnaire (general and programme-specific questions) as part of the e-icebreaker through a discussion forum (for the Trainees of the last training programme).
- Three e-icebreaker evaluation questionnaires with common and different parts for the Trainees of the six training programmes.
- A discussion forum for the Trainers of the six training programmes, including a number of issues regarding the e-icebreaker evaluation.
- Online observations (through VLE) regarding the participation of participants (Trainees and Trainers) in e-icebreakers and in e-icebreaker evaluation

- Online documents regarding the programmes details, the lists of participants and programme-specific articles
- Prototyping: Design of the front page and other pages of the project on the selected VLE, including the six different training programmes and all their components (documents, activities, etc), for use by the trainers /training organisers and the trainees / learners

6. E-icebreaker evaluation by trainees

The evaluation of the e-icebreaker by trainees / learners was conducted through three questionnaires, one questionnaire for each type of e-icebreaker (through e-mail, through a website and through a discussion forum). The main body of the questionnaires was common, but in a specific question referring to the way participants reacted to the e-icebreaker, the statements differed according to the medium through which the e-icebreaker was introduced and implemented.
The questionnaire was of "respond once" type with an opening and a closing date. The respondent had to login with own user name and password and after he or she responded the response was registered with his / her full name. The respondent had no right to view the responses of other participants.
The questionnaire consists of five parts totaling 25 questions, out of which 24 are required (compulsory), marked with a red asterisk and only one is not required. The first part of the Evaluation Questionnaire (questions 1-9) uses questions of "radio buttons" type and refers to participants' behaviour and feelings towards or about Information and Communication Technologies. Some important aspects of such behaviour were included in the questionnaire to give information about the "technological profile" of the participants, (their familiarity with various ways of using Information and Communication Technologies). For each participant and in each question we assign a number from 1 to 4 to each reply as follows: 4 for the "strongly agree" reply, 3 for the "agree" reply, 2 for the "disagree" reply and 1 for the "strongly disagree" reply. This number is the score for each question. Then we add scores of all the questions to get the cumulative technological profile and we divide by the number of questions (9). The result represents the "technological profile" of the participant on a 1 to 4 rating scale. The bigger this number, the higher the technological profile of the trainee.
The second part of the Evaluation Questionnaire (question 10) uses a question of "check boxes" type and includes 18 statements mainly referring to the behaviour (reaction and attitude) of the participants with regards to the e-icebreaker. This is the part that is different from Questionnaire to Questionnaire as some of these 18 statements are different, referring to the different medium through which the e-icebreaker was introduced and implemented. This part gives information on the level of "proximity" of the participants to the e-icebreaker activity (the degree of participants' involvement in the e-icebreaking activity). The nature of e-icebreaker activities is such that it seems to affect all participants, regardless of the degree of involvement each one of them had in the activity as such. Some participants participated fully in the e-icebreaker activity, others participated partially and others did not participate at all. Nevertheless everybody seems to be consciously or unconsciously influenced by the e-icebreaker, directly through participation or indirectly through the atmosphere created because of the e-icebreaker activity. In each selected statement out of the 18 statements under question 10 we assign one grade.

We count the selected statements for each participant and we get the level of proximity to the e-icebreaker for each one of the participants. The bigger this number, the higher the trainee's level of proximity to the e-icebreaker.
The third part of the Evaluation Questionnaire (questions 11-19) uses questions of "radio buttons" type and refers to participants' opinion on the impact of e-icebreakers on adult face-to-face learning and the role of Information and Communication Technologies in learning. This is the Degree of support by participants to e-icebreakers and ICT-aided learning (the degree to which participants believe in the positive impact of e-icebreakers and Information and Communication Technologies on Learning). For each participant and in each question we assign a number from 1 to 4 to each reply as follows: 4 for the "strongly agree" reply, 3 for the "agree" reply, 2 for the "disagree" reply and 1 for the "strongly disagree" reply. This number is the score for each question. Then we add scores of all the questions to get the cumulative degree of support and we divide by the number of questions (9). The result represents the degree of support to e-icebreakers and ICT-aided learning of the participant on a 1 to 4 rating scale. The bigger this number, the higher the support of the trainee.
The fourth part of the Evaluation Questionnaire (questions 20-24) uses questions of "rate (scale 1…3)" type and refers to participants' evaluation of the three different types of e-icebreakers according to the medium through which the e-icebreaker was introduced and implemented. This is the medium preference for e-icebreaker implementation (the participants' expressed preference for the medium of communication through which the e-icebreakers are implemented). The participants are forced to rank the three types of e-icebreakers against 5 specific statements. For the three different media of communication (e-mail, website and discussion forum) we add the ranking given by each participant (number 1, 2 or 3) in each one of the 5 questions and we divide by the number of questions (5). The result represents participant's medium preference for e-icebreaker implementation on a 1 to 3 ranking scale. The smaller this number, the higher the trainee's preference to the medium.
The fifth part (question 25) includes the only optional question of the Evaluation Questionnaire. It's an "essay box" type, open question aiming at giving the trainees the opportunity to express any additional views on the matter.

7. E-icebreaker evaluation by trainers

The evaluation of the e-icebreaker by trainers was conducted through a discussion forum open to all trainers or training organisers of the six training programmes in which e-icebreakers were introduced and implemented. Having in mind that the same Training Provider implemented the first two training programmes (with the same training organiser and same trainer), a second Training Provider / Trainer / Training Organiser implemented the third programme and a third Training Provider implemented the rest three training programmes (with the same Training organiser and same Trainer), this makes three Training Providers with three Trainers / Training Organisers.
The discussion forum for the Trainers of the six training programmes included a number of issues regarding the e-icebreaker evaluation. It was not in the form of a questionnaire, but it included an introduction and a main body with the issues on which the Trainers or Training Organisers would give their specific or overall comments and exchange views. In the introduction there is an explanation of what an icebreaker and an e-icebreaker are, what Autograph and E-Autograph are and what

the purpose of the project is. In the main body the Trainers / Training Organisers are asked to comment on some statements, based on their experience with the specific activity or their overall experience. The issues raised are distinguished in two parts.
The first part asks their comments on a statement implying that an e-icebreaker before a face-to-face adult training programme is helpful in:

- making participants familiar with other participants
- easing face-to-face communication
- positively affecting group dynamics
- facilitating adult learning
- saving time and money

In the second part they are asked to compare the three different types of e-icebreakers according to the medium through which they were implemented (through e-mail, through a website or through a discussion forum), against five criteria:

- Being easier
- Being more attractive
- Being less time-consuming
- Being more effective on face-to-face communication
- Having better impact on learning.

8. Statistical Analysis of the results

The core of the research is the impact of e-icebreakers on adult face-to-face learning based on the perceptions of participants. Therefore, in order to have the overall impact of e-icebreakers on adult training programmes the cumulative results of all six training programmes are required as well as the interpreted results of the three trainers or training organisers. Furthermore, statistical analysis of the results is done by:

- Training programme
- Medium of communication through which e-icebreaker was implemented
- Technological profile of trainees
- Level of proximity to the e-icebreaker

Moodle website automatically groups the responses of the participants (trainees) by training programme, question by question and presents the results in a bar chart with percentages or in other statistical forms.
The participation of trainees in the evaluation stage by programme and medium is shown on the table below:

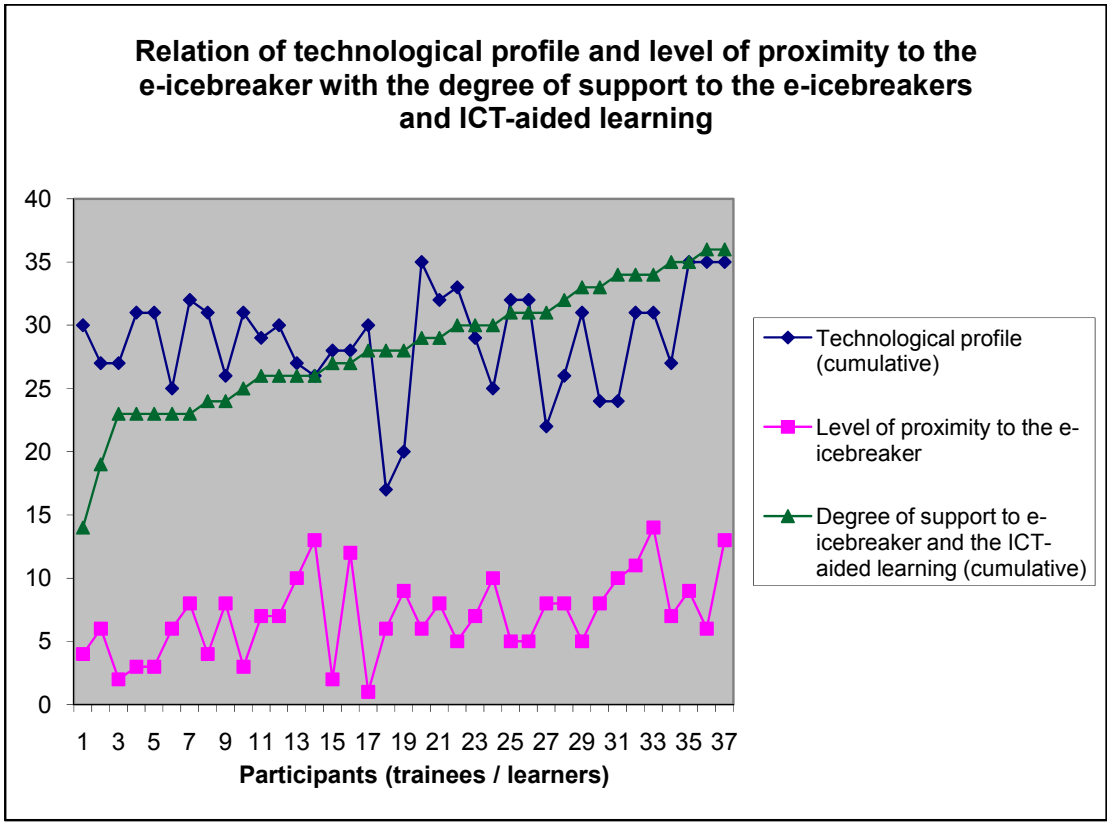
Training Programmes	Number of Participants	Participation in the evaluation process	Percentage (%)
Webstarter	13	10	77
Manager As Leader	9	5	56
Programmes through e-mail	22	15	68
Imagemaker	11	8	73
Coaching	5	4	80
Programmes through a website	16	12	75
Difficult People	6	5	83

Assertiveness	6	5	83
Programmes through a discussion forum	12	10	83
Cumulative (All six programmes)	50	37	74

All 4 trainers / training organisers participated in the evaluation process.

9. Findings

According to the findings of the research, there is no significant difference in the averages that may relate either trainees' technological profile or level of their proximity to the e-icebreaker with trainees' degree of support to e-icebreakers and ICT-aided learning. The relation of technological profile (cumulative) and level of proximity to the e-icebreaker with the degree of support to the e-icebreakers and ICT-aided learning (cumulative) is shown on the figure below.



10. Conclusions

The core of the research is the impact of asynchronous (distance) e-icebreakers on adult face-to-face learning based on the perceptions of participants (trainees and trainers). Therefore, the conclusions will have to give answers to the specific issues raised within the above context, in relation to the hypotheses of the research. Based on

the results of the research survey and findings described above, the author comes to the following conclusions:

According to the average perception of the trainees / learners of all six training programmes:

1. An e-icebreaker implemented before an adult face-to-face training programme is a good idea, makes face-to-face communication easier, helps in making participants familiar to each other, positively affects group dynamics, facilitates adult learning and saves time and money.
2. Information and Communication Technologies (ICT) may effectively facilitate adult learning in the context of blended learning, while pure e-learning does not seem to be more suitable for adults than pure face-to-face learning.

According to the perceptions of the majority of trainers / training organisers of the six training programmes:

1. It is worth having e-icebreakers before a face-to-face adult learning activity as they ease face-to-face communication, make participants familiar to each other, positively affect group dynamics and learning, make training innovative, fun and attractive and contribute to remove the initial anxiety in a training programme.
2. E-icebreakers need to be improved in order to be more effective and attractive.

The statistical analysis of the results of all training programmes, based on the perceptions of the trainees / learners, show that the degree of support to the e-icebreakers and ICT-aided learning is not related to the technological profile of the trainees, neither to the level of proximity to the e-icebreaker. This means that people do not need to have high technological profile to recognise and acknowledge the impact of e-icebreakers on adult face-to-face learning and support ICT-aided learning. It also verifies the hypothesis that participants are influenced by the impact of e-icebreakers regardless of the degree of their involvement in the e-icebreaker activity.

Finally, an important conclusion based on the perceptions of trainees is that they prefer e-icebreakers implemented through a discussion forum, followed by those implemented through e-mail, while trainers prefer e-icebreakers introduced through discussion forums, online chat and online questionnaires.

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