

Deliverable 5.3: Learning: Operational and Educational Effectiveness Report


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1. Overview

Deliverable 5.3 reports on the operational and educational effectiveness of the curriculum, and game.

This deliverable outlines the development of the methodology to assess the learning through GAP by personnel from end user organizations in a training environment (Task 5.4) and the implementation of this methodology (Task 5.5-5.9) to see if the GAP intervention can generate positive movement on the continuum of each of Communication Competence, Gender Awareness and Cultural Awareness. The methodology encompassed in-game and out-game assessment, both of which will be explained and described, and the combination of which allowed for measurement of changes produced by playing the game. The in-game assessment was developed by conducting workshops with members of end users organizations in 4 different countries in the EU to establish a GAP Behavioural Anchor Ratings system (BARS), and this system was further refined by subject matter expertise workshops and workshops between TCD ADAPT and TCD Sociology. Key decisions in the game produce scores that are given digitally in feedback reports directly to the player after game play.

The Out-game assessment was developed through combining CPPB relevant indicators from existing instruments to measure Cultural Awareness, Gender Awareness and Communication Competence, customizing them with subject matter experts, and validating them in workshops with members of end user organizations. The out-game assessment produces scores delivered to each quiz taker after they have completed the Pre- play quiz, gone through game-play and completed the Post- game play or second quiz. Each player thus receives the scores they started with from the Pre- play quiz, the scores in the game, and the scores in the Post- play quiz.

The Learning Objectives for Communication, Gender Awareness and Cultural Awareness outlined in Deliverable 4.1 and revised during the work of Work Package 5 are included in Appendix 3. Each item in the Out-Game assessment and each decision point in the In-Game Assessment was matched to one or more Learning Objectives for Communication Competence, Gender Awareness and Cultural Awareness. Each of these competencies were divided into Knowledge Learning Objectives and Performance Learning Objectives.



Section 3.5 and 3.6 outlines the work of Task 5.4 – 5.9 which was to evaluate the operational and educational effectiveness of the curriculum, game and assessment with each end user organization in the GAP Consortium. The Evaluation sessions were implemented in September and October 2018. In August, a training day was organized for all those implementing the evaluation to ensure consistency and rigor in evaluation. In each location, players completed the out-game quizzes, and played the game, getting feedback from the in-game assessment reports and the out-game assessment reports. Qualitative feedback was solicited from the attendees and the personnel responsible for the training in post-play 15 minute interviews and discussion during the evaluation session. This was in order to ensure that any issues detected in the operation of the GAP application and the delivery of the curriculum, game and assessment, were identified and could be remedied prior to the final iteration of the GAP application.

Section 4 presents the key findings of the evaluation of the curriculum, game and assessment. Quantitative results for in-game and out-game assessment indicated quite a high level of soft skills among personnel but also indicated that there is scope for improvement, for progressing along the continuum in Gender Awareness, Cultural Awareness and Communication Competency. The crucial findings from the Evaluation sessions were the impact of time and language. The game took much longer to play than anticipated, we had expected 1.5 hours but it ranged from 2 hours for native English speakers to up to 5 hours for those whose English is not their first language. Fatigue set in for almost all non-native English speaker participants, arguably impairing their ability to correctly complete the second half of the game and the post-game assessment quiz. For the in-game assessment, scores received by game players ranged from 2 stars to 5 stars (converted from numerical scores) for each of the soft skills. It became clear as the Evaluations took place and results came in that not all decision points in the game were significant enough to warrant usage for rating/scoring purposes. Scores were also affected by contradictory ratings on some decision points, particularly around gender. Out-game scores were initially based on Pre- and Post- quizzes that used different items to access the same dimension and some items were deemed not relevant. For the final evaluation, the Pre- and Post- Quizzes were the same set of indicators but used in different order pre and post.

Qualitative feedback indicated a desire for a ‘blended learning’ approach, i.e. not as one isolated individual playing the game through and receiving assessment, but in a classroom context allowing



for group discussion and engagement with a trainer and peers. The players frequently requested to be able to play the game in segments, i.e. opportunities to pause or stop after playing key scenes and ideally to receive assessment scores for that segment, and to have the opportunity to discuss the content of the segment. A minority of those who took part in the evaluations were already trainers and they emphasized this point for optimizing the learning from the game. All felt that the value of the game was the feedback received and the opportunity to converse and discuss topics that would be difficult to raise and discuss without the medium and support of the game.

There were minimal issues with the technical delivery of the game and assessment.

Section 5 contains the individual Evaluation Reports from each of the six evaluation sessions.

Section 6 of this Deliverable outlines the key issues that emerged from the Evaluation sessions and the steps since taken to address them. A substantial revision of the in-game assessment out-game assessment took place on foot of the findings of the first five evaluations which took place close together in time. The final evaluation session took place after some of those revisions took place.

The game is now playable in 9 sections, and will be piloted by the European Security and Defence College over two and a half days in January 2019, allowing time around the Pre- and Post- play Quizzes for discussion and time for individual game play and group discussion of in-game assessment. The ratings have been revised and the decision point choices in the script revised to reflect and capture the changes in the ratings.



2. Background

The primary objective of GAP is to develop a soft skills curriculum, a digital game for the delivery of the curriculum, and assessment of changes in levels of soft skills that is benchmarked against international standards, with the goal of positive movement on the continuum of each of Communication Competence, Gender Awareness and Cultural Competence. CPPB relevant soft skills were identified through the examination of a combination of existing training practices, the available literature on soft skills and peacekeeper training, and through in-depth interviews with military, police and civilian personnel who are GAP end users. These were: Communication Competence, Gender Awareness, Cultural Awareness, Cooperation, Decision Making, Leadership, and Stress Management. Given the constraints of time and resources, the Consortium decided to focus on three of these soft skills in this iteration of the GAP curriculum and game.

Thus, learning objectives for gender awareness, cultural awareness and communication were identified and benchmarked against international standards, and are attached in Appendix 3. A digital role-playing game was developed. The storyline and content of the game were developed drawing from the real scenarios, characters, issues and events in the interviews, and these were embedded with the learning objectives to ensure delivery of the curriculum.

Assessment of competence in the curriculum in soft skills is done through a combination of in-game assessment and out-game assessment. In-game assessment is developed using the GAP BARs methodology, and out-game assessment is Pre- and Post- game play quizzes based on items drawn from a combination of peacekeeping contextualized measures and international measures, to produce Likhert scales allowing for the measurement of CPPB relevant Gender Awareness, Cultural Awareness and Communication Competence before playing and after playing to see if there has been movement along the continuum of these soft skills.

The Evaluation of the Curriculum, Game and Assessment has been completed and revisions of the Learning Objectives, In-Game Assessment, Out-Game Assessment , organization of the game (now segmented into 9 sections), and script are being completed.

The evaluations have demonstrated through the scores that GAP does make a measurable and positive contribution to increasing competence in the softskills specified in the curriculum. Feedback also indicates that the way to maximize the pedagogical value of GAP is to deliver it over 2 or 3 days in a blended learning environment (i.e. combination of individual and classroom group work).



3. Methodology

3.1 Explanation of methodology

The methodology encompassed in-game and out-game assessment, the combination of which allowed for measurement of changes produced by playing the game.

3.1.1 In-Game Assessment

For in game assessment a key challenge is to identify the appropriate score (called a rating) for each behaviour (i.e. a rating of each in-game learner utterance or decision) with regard to its demonstration or utilisation of a Communication competence, a Gender Awareness competence and a Cultural Awareness competence. These ratings are used for in-game assessment to score a learner's behaviour during a game and to drive the presentation of in-game assessment to the learner on immediate completion of the game (or as we shall show, segments of the game). In short, these game ratings were used to produce scores that are given digitally in feedback reports directly to the player after game play¹.

The GAP ratings were developed in three steps which encompassed the pre-Evaluation session period, and the issues that emerged during the Evaluation Sessions.

1. Workshops were conducted with expert end users² in 4 different countries in the EU to establish a GAP Behavioural Anchor Ratings system (BARS). The 'experts' were a combination of experienced peace keepers from Police, Military and NGO officer backgrounds as well as a small number of subject matter experts. These ratings were then aggregated to provide a more balanced rating for each possible game behaviour.

On analysis of the workshops, it was clear that not all decision points in the game were considered significant enough to warrant usage for rating/scoring purposes. Also the rating from individual experts captured during the workshops showed some divergence of opinion on the appropriate ratings. Therefore the following step was introduced.

¹ In fact to assist this final step, the original aggregated ratings were also run through the game reporting system to see how the difference in ratings affected the overall resultant performance.

² In fact GAP partners had difficulty selecting such experts and the ratings workshops were conducted with a combination of experienced peace keepers (military, NGO and Police) as well as a small number of trainers.



2. Subject Matter Experts from within the Consortium (TCD Sociology) rated the decision-points, drawing also from training material guidelines from international organizations and institutions.

3. Finally, ADAPT and the Department of Sociology with input from experts in training standards, Enquirya, analysed the decision points reported and aggregated from the workshops and the subject matter ratings. Based on the level of convergence and opinions discussed in the original ratings workshops, and the input from subject matter expertise, ratings were either confirmed, modified or considered not significant enough to warrant inclusion in the assessment of in-game behaviours.

3.1.2 Out-Game Assessment

The Out-Game Assessment consists of two quizzes, a Pre- game play Quiz, and a Post- game play Quiz, each consisting of the same list of items measuring levels of Communication Competence, Gender Awareness and Cultural Awareness. The Out-game assessment was developed through combining indicators from existing instruments to measure cultural awareness, gender awareness and communication, customizing them with subject matter experts, and validating these customized indicators in workshops with members of end user organizations. The out-game assessment produced scores delivered to each quiz taker after game-play and the second quiz. Each player thus sees the scores they started with before playing, the scores in the game, and the scores after game play.

The Learning Objectives for Communication, Gender Awareness and Cultural Awareness outlined in Deliverable 3.2 and revised during the work of Work Package 5 are included in Section A. Each item in the Out-Game assessment and each decision point in the In-Game Assessment was matched to a Learning Objective for Communication, Gender Awareness and Cultural Awareness. Each of these competencies were divided into Knowledge Learning Objectives and Performance Learning Objectives.

3.2 Rationale for methodology

Comparing the pre-play quiz scores, the in-game scores, and the post –play quiz scores provides a baseline for measuring the three competencies (gender awareness, cultural awareness and communication), the in-game assessment gives the scores in these competencies in the game, and the post-game score demonstrates the changes that take place in levels of these competencies after playing the game.



The suite of assessment methods also offers an opportunity to compare self-assessment in the pre and post-play phase with actual behaviours in the game scenarios as measured in the in-game methodology. This will help identify those behaviours and competencies which individuals think they are proficient at but who do not demonstrate such proficiency in what they do in the immersive digital environment, or vice versa.

3.2.1 Out-game Assessment

The goal of the GAP intervention is to generate positive movement on the continuum of each of Cultural Awareness, Gender Awareness, and Communication Competence with respect to a given item or subscale. GAP was designed to help peacekeeping personnel become more skilled in soft skills, including gender awareness, cultural awareness and communication. A tenet of experiential training in soft skills is that personnel can become more culturally competent, gender aware and better at communication when allowed to practice with no-cost-to-failing training such as through GAP. The self-assessment process of the quiz will reveal levels of Gender Awareness, Cultural Awareness and Cultural Competence, as captured by a given item, are present before the game and if they change after the game. In order to allow for meaningful measurement and comparison between organizations and sectors, each item or indicator is benchmarked to international standards (e.g. UN DPKO) and qualifications (e.g. ECVET).

The post-play quiz is used as a method of evaluating the impact of the intervention, specifically the playing of the game. If delivered in a blended learning format, trainers can review aggregated results and design discussions and exercises to have the greatest impact for the personnel. In addition, each indicator has attached Learning Objectives which are in turn web-linked to relevant training materials (see Deliverable 4.6) for individual players to access for learning. They may then repeat the game and quizzes to ascertain the level of improvement in the relevant soft skills.

The quizzes can also generate greater sharing and discussion of sensitive topics on an item by item basis. One format is interactive, where the facilitator or trainer asks a specific item, allows others in the audience or class to share their experiences, and develops a discussion, including recommending links to the training materials.

3.2.2 Practical and Ethical Considerations

We did not want the quizzes to generate anxiety or for personnel to feel intimidated by the questions or wonder what impact their responses will have. So it was important to share with



personnel that there was no way to perform poorly on the GAP Pre- and Post- Quizzes. The quizzes are not an aptitude test or a measure of goodness. The administration of the quizzes was simply a part of a process attempting to identify cultural, gender and communication blindspots in order to address them and to see if the game can help with that. The process is not to be experienced as ominous but at worst, would have no consequences, at best, consequences of the process would be positive for personnel development and for more effective peacekeeping. It is important, in the Evaluation and any administering of these Quizzes, that personnel know why the organization is conducting the assessment, why these soft skills are being pursued and the organization's commitment to these values.

Organizations received this information prior to the assessment quizzes and game-play and it was reiterated at the start of each Evaluation and throughout the session. It was important to explain to prospective GAP players the importance of candour because a desire for political correctness or other social acceptability might impact their responses. Therefore, confidentiality was assured when the quizzes were used.

A central tenet of GAP is that individuals are on different points on the continuum of gender awareness, cultural awareness and communication, and everyone can improve. Therefore, comparisons between individuals and organizations were avoided. We emphasized that the goal for an organization is not to rate individual personnel but rather to help personnel determine where they are themselves, where they need to grow in cultural awareness, gender awareness and communication skills, and help them gain those competences.

In-Game Assessment

The rationale for the in-game assessment is twofold. Firstly it provides feedback to the learner as to their actual performance in the game. As this performance is over multiple episodes (challenges, events, contexts, and roles) and the learner is not provided continuous scoring to mark progress³, it is important to provide periodic feedback. The performance feedback, calculated via the ratings of the chosen behaviours at key decision points in the game. In-game assessment provides (i) concrete performance feedback (ii) an invitation for the learner(s) to self-reflect on their (rationale) for their choices and (iii) an opportunity stimulate a discussion with their tutors. The performance feedback is

³ So as to make the game more realistic it was decided not to provide a continuously viewable score for relevant competencies as such scores do not exist in real life situations. Rather the learner is provided summative performance feedback at the end of the game.



both at an overall performance across the game, as well as at an individual 'per decision point' in the game. The latter feedback is quite voluminous (as there potentially a large number of decision points in the game) and for each decision point the assessment provides the learners score, as well as the scoring for the alternative decisions.

Secondly, in-game assessment enables the game to be used not only as an experiential learning tool but also as a means of assessment of competencies (i.e. in-context behaviour and skills). The comparison of the in-game and out-game can provide further detail as to the learners competencies.

3.3 In-game methodology

GAP Deliverable 4.2 presented an overview of the GAP approach to the instrumentation of the GAP game and collecting player data for post-game analysis. It described the approach to in-game behaviour assessment and discussed how

Pre- and Post- game play testing form part of a complete picture of learning activity and attitudes around the GAP game. The methodology for developing the BARS based in-game assessment was originally design for rating of decisions made in realistic scenarios drawn from real life incidents via interviews with experts is summarised in Figure 1.

In order to create the in-game ratings GAP followed the methodology outlined in section 3.3. The game prototype was not available for the ratings determination, but the game story line, accessible via interactive web pages, was available. In this way, experts could navigate textual descriptions of scenes in the game and could make decisions/take actions/utter conversational remarks. This allowed for the ratings of decision points to be commenced⁴.

The three competencies selected were Communication, Cultural Awareness and Gender Awareness. The original game storyline contained in excess of 800 ratable decisions. This was considered too vast to perform ratings on all decision points. It was also recognized that some decision points were clearly not applicable for the competencies e.g. were purely there to move on the storyline or were

⁴ The methodology is iterative, and where time is available the methodology could be rerun with the actual game but for the purposes of this project, the interactive web pages were deemed to suffice for the development of the Gap Game



irrelevant to the competencies being assessed. Thus a reduced set of decision points were determined.

The following rating workshops were held: one in Dublin (with Irish Military and an NGO), Finland (Military, subject matter trainers), one in Northern Ireland (Police and one trainer) and two in Poland (one consisting of Military, an NGO and a trainer in one workshop, and the other consisting of Police and a trainer in another workshop). Also in attendance were some researchers from GAP, some of whom performed the ratings tasks but their results were not used in the analysis.

The workshops consisted of 45 minutes of ‘playing’ interactive web based storyline. The storyline is divided in two parts: one as a military CIMIC officer and the other as a police mentor. The workshops with military personnel played the military part of the storyline and the workshops with police played the police based part of the storyline.

Each workshop then consisted of ‘behavior rating’ sessions where connected scenes were considered and decisions within each scene was rated **outstanding/competent/unsatisfactory/not applicable** for each competence (Communication, Cultural Awareness, Gender Awareness). Each scene and decision point was rated by each participant in the workshop and after each set of related scenes/decisions were rated, then a group discussion was conducted to gather feedback on the scene, decision points and other opinions of on scenes/decisions. Examples of such feedback were about the authenticity of the scene/decision points, clarity of the decision/utterance/behaviour, and opinion as to the possible positive and negative aspects of each decision/behaviour. This feedback provided useful feedback in later game design as well as instructional feedback to be included in the assessment feedback.

Figure 3 show an example form which was used to capture the rating of decision points in a particular scene. Each participant completed such a form for each scene rated in the workshop.



<p>"Yes, just as long as you do not mention that we have a sauna, and the Irish do not. They do not appreciate being reminded of it." Pauli chuckles. "They tried to sneak in when we were not using it. They were always in there, until the battalion commander found them one day. I have never seen people move so quickly in towels..."</p> <p>Anna smirks quietly. "You see, each country has a slightly different way of operating. We all follow the same orders, just in our own style. Each group has good and bad points."</p> <p>"Except us, of course," Niilo butts in, "we are perfect."</p> <p>"We pride ourselves on being organised, yes," Anna grins, "but the Irish make friends with anyone who breathes, and the Indians have brought all the best food."</p> <p>"Too bad they didn't bring any cutlery," laughs Niilo. "at least we don't have to eat with our hands!"</p>			
	Rating Communication	Rating Gender Awareness	Rating Cultural Awareness
<i>"I don't care how they're eating it, it smells delicious!"</i>			
<i>"Come on, don't laugh - they can eat their food however they want."</i>			
<i>"Hey, at least they have spoons to serve their curry; it's not their fault they forgot the knives and forks."</i>			

Figure 1: Example rating form where expert would rate three possible decisions across three competencies.

The results of all of the workshops were tabulated in an excel spreadsheet. During this time feedback from the workshops was passed back to the game designers. This feedback and other feedback informed the design of version 1 of the games. Most of the scenes which were rated (based on the interactive web pages) were also include in the game release. Some scenes were removed and some changed. Where ratings of any decision/scene was not available in the spreadsheet additional expert advice was requested and captured.

Different aggregation policies were tested as there was noticeable divergence in the ratings of some scenes. This divergence seemed to be based on cultural differences between the raters (from different countries), different levels of peace keeping experience of the raters and differences in perspectives in some instances between subject matter experts, trainers and peace keepers. The results was that the aggregation removed the rating of decision which were highly divergent and were their relevance for the GAP competencies were significantly called in to question. As the number of raters for the military and police parts of the story line were quite low (between 5 and 8) statistical weighting was not really possible.

As the user evaluations of the game began, the ratings team tested multiple policies regarding the aggregation of the individual rater ratings. Finally step 6 [described in Section 3.1] was taken to provide a final calibration of the ratings to be used and test with existing usage data from the evaluation trials.

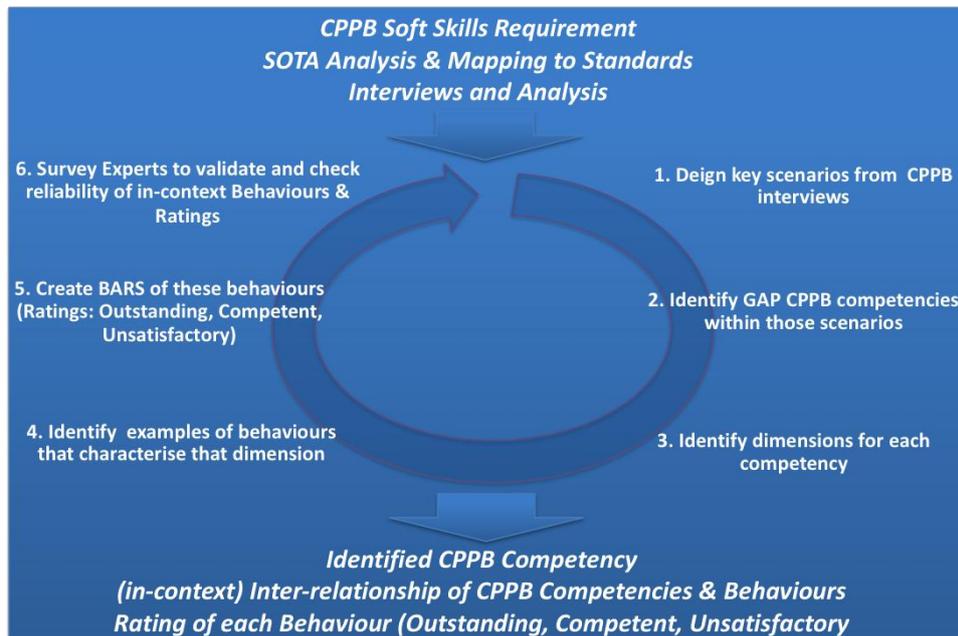


Figure 2: GAP Methodology for Identifying and Rating CPPB Competencies

This methodology had to be adapted as rather than CPPB scenarios, the CPPB game story line was available and decisions/utterance in the context of this story line were defined. Figure 2 presents the updated in-game GAP Methodology to rate the in-context behaviours (utterances, actions or decision) of the learner.

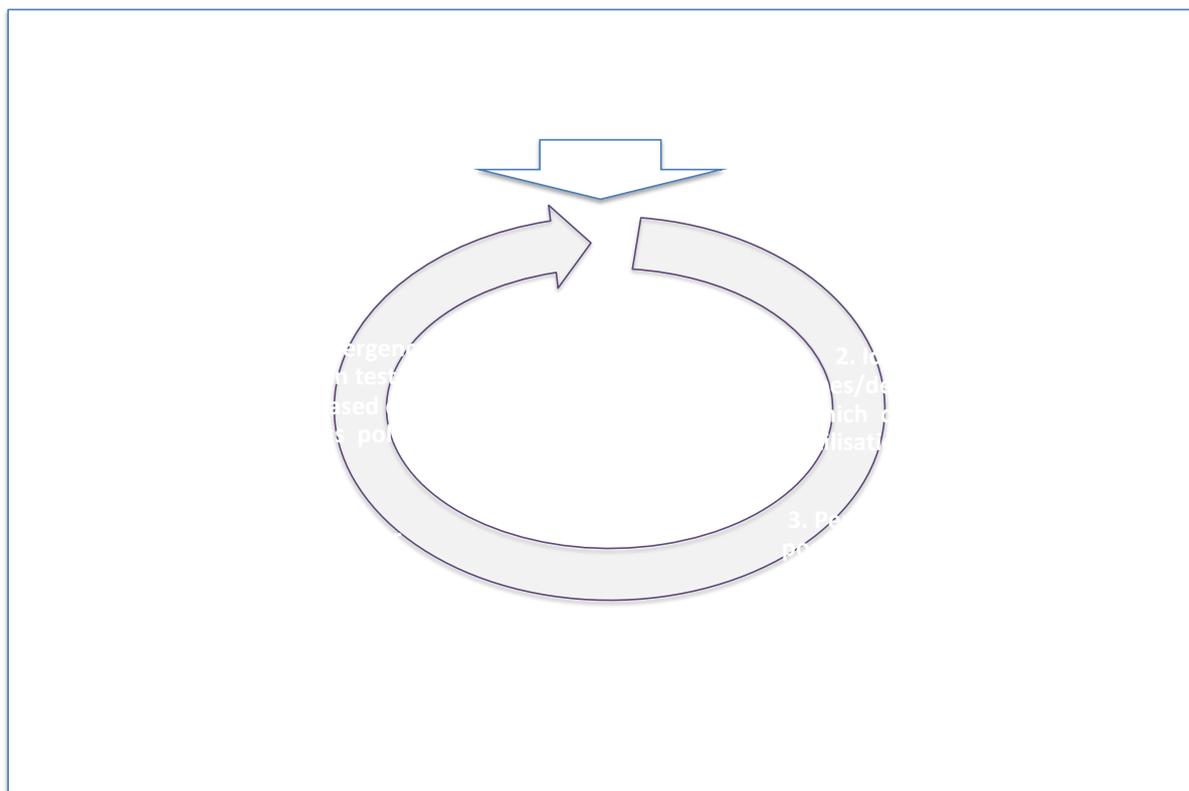


Figure 3: Methodology to identify Ratings of CPPB in-game competencies

Previously as part of the identifying ratings for observable competencies, decision points were defined in the game which requires the user (learner) to take actions, communicate (with non playing characters representing other peace keepers, local civilians or others), and reflect. Step 1 decides which competencies are to be rated for the game. In deciding which CPPB competencies which are of interest for assessment purposes, it allows the assessment designer to set the granularity of the competency (e.g. at the CPPB Communication Competency level, or sub competencies of the CPPB Communications Competency such as use of non-verbal communication, etc.). In GAP these were Communication, Gender Awareness and Cultural Awareness with sub-competencies based on Learning Objectives which in turn are based on a combination of relevant international standards and interview data from WP3.

In step 2 the methodology recognizes that not all scenes demonstrate/utilize the competencies which are being assessed. Typically games have many scenes both to move the story on, to provide some time for reflection as well as to perform accessible actions/decisions.

Step 3 is where there is significant effort to draw together experts to provide ratings for the in-game assessment CPPB competencies demonstrated/utilized in the decision points. For GAP each rating



for a decision point was: unsatisfactory, competent, or outstanding or not applicable. The not-applicable rating was where the decision point was not demonstrating or utilizing a desired CPPB competence. For example, a specific greeting of a local may demonstrate communication and cultural awareness competency but not necessarily gender awareness. This could be performed online, but as the competencies/behaviours can be quite subtle, individual ratings followed by group discussions provide a very valuable way of both understanding the thought processes being used to decide the ratings as well as identifying any problems with the clarity/confusion, authenticity, or other factors affecting the rating decision of expert participants. Such discussions provide valuable feedback in the redesign of decisions/utterances/scene actions in the game. It is also a great means of capturing valuable feedback which can be used to inform a learner as part of the assessment feedback for the scene.

Step 4 & Step 5 is where different aggregation policies can be tested with live performance data to generate different aggregated ratings and therefore different performance feedback. Several example policies include:

- (i) Simple average calculation where 1 represents unsatisfactory, 3 represents competent and 5 represents outstanding. The average of the rating per CPPB competence is then calculated and normalized to the nearest score of 1,3, or 5
- (ii) As (i) except do not rate a decision point if more than a certain threshold (depending on number of experts doing rating) rate the decision point as not-applicable. The interpretation is that such decision points have an ambiguity as to their relevance for that competency and could be considered unreliable.

In the GAP game, the subject experts and trainers also required some feedback to be at an 'overall level' (summary level) and easy to interpret. Several visualisations of such overall performance are quite common in games e.g. graph to show performance of time, graph to show performance relative to others in the cohort, (multiple) stars to represent the quality of performance (more stars representing better performance). The decision in the 'star' rating is to decide the number of stars to allocate to different intervals (between 1 and 5) to represent different performance levels. Different 'gaming' approaches can be utilized to decide this interval and to differentiate between what can be quite 'convergent' performance.

Step 6 is based on experience in developing the GAP game. It was found that as the expert group performing the ratings were quite diverse both in terms of culturally (four countries) as well as



experience (very few were experienced trainers and most were peace keepers from different backgrounds with different levels of experience). Step 6 suggests an evaluation of different aggregate calculations, examination of expert opinion convergence and divergence, and the final calibration of ratings for the games.

Both steps 5 & 6 should utilize test game data to generate performance reports so as to see the impact of different aggregation policies. This could be seen as equivalent to unit testing of the ratings.

3.4 Out-game methodology

The out-game assessment in cultural awareness or competency draws on measures of cultural competency designed for application in public health and education. The quiz on Communication also draws on existing measures primarily from the field of business and health. In comparison to Cultural Competency and Communication, there is a notable paucity in existing instruments in Gender Awareness. There were some from the field of health but mostly within instruments on Sexualities in Public Health and Psychology.

For GAP, in each instance (Cultural Awareness, Gender Awareness, Communication Competency), the Pre- game Quiz was used to establish a baseline, which could later be compared to the Post-game Quiz.

There are three versions of the Pre-Play Quiz which comprises of three separate measures for gender awareness, cultural awareness and communication: one for personnel from military organizations, one for personnel from police organizations, and one for personnel from civilian organizations. Each of these has a list of questions, which is given in full pre and post play, but in a different chronological order post-play.

Comparing results from the Pre and Post Quiz allows us to see the change from the baseline before playing the game to levels of Gender Awareness, Cultural Awareness and Communication competency after the game. The subsequent measures of the same individual will reveal some variance or positive change. Therefore, results of the GAP Pre and Post Play instruments should not be viewed as a static measure but rather should serve as an indication of areas where growth needs to and can occur.



The quizzes are self-administered on an iPad, laptop or desktop PC or Mac. Because soft skills competencies are a developmental process, the goal of assessment is not to tell people where they are on a scale, but to inform them where they need to enhance their skills in terms of culture, gender and communication. Moreover, since the GAP Pre and Post Quiz is a self-reported measure, the veracity of responses is critical. Therefore, in the evaluations administration of the quiz was preceded by a trainer led discussion about the reasons for participation and how each respondents confidentiality will be respected.

Outcomes.

The GAP Pre and Post Quizzes each provide a general score based on the three categories, Gender Awareness, Cultural Awareness, and Communication. When examined individually, each category can be analyzed by individual indicators which can identify attitudes and their degree of congruence with the Learning Objectives under Cultural Awareness, Gender Awareness and Communication.

Content Validity.

Vogt (1993) states that content validity is addressed when the items in a scale or measure accurately represent the phenomenon being measured, suggesting that it is not a statistical property as much as it is a qualitative judgement. For the GAP Pre and Post Play Quizzes, validity was established in three steps.

First, extensive reviews were conducted and secondly, subject matter experts and end user organization experts and personnel from within the GAP consortium were consulted on item or indicator content and indicator wording. Thirdly, during the WP5 Evaluation sessions, further consultation with End User organizations took place on indicator content and wording.

1. Reviews.

The development of the GAP Pre- and Post- Quizzes began with an extensive review of peacekeeping activities and training (documented in GAP Deliverables 2.1 and 2.2), training materials (included in Deliverable 4.6), and from the Learning Objectives on Gender Awareness, Cultural Awareness and Communication Competence documented in Deliverables 6.2 and 4.1. which are mapped to international standards in these areas. The goal of the review was to establish what constitutes cultural awareness, gender awareness and competent communication in peacekeeping contexts, benchmarked to international standards. There was also a review of state of the art instruments in measurement of cultural competence, communication, and gender and sexuality awareness in other fields, most notably education, health and business.



2. Expertise

After the reviews were conducted, the GAP TCD team from Sociology developed subscale items or indicators. The team constructed indicators for placement in each of the three subscales of Gender Awareness, Cultural Awareness and Communication. These measures were then reviewed and commented upon by end user organization experts and end user organization personnel gathered at workshops in Ireland, Northern Ireland, Poland and Finland to rate the in-game and out-game assessment.

The goal of the indicators is to evaluate the degree to which respondents are exhibiting appropriate levels of Gender Awareness, Cultural Awareness and Communication Competency for peacekeepers in these areas as benchmarked against international standards, e.g. the UN DPKO guidelines on gender awareness.

The GAP quizzes represent a process tool. For GAP, they give a baseline and allow a report of progress in the development of soft skills of gender awareness, cultural awareness and communication competence. With the rating removed, the items can generate useful discussions of what can be done to stimulate culturally competent, gender aware and good communication skills.

3. Feedback at each of the WP5 Evaluation Sessions led to a revision of the number of items in all three scales, and the rewording of a small number of them.

The indicators are each scored at intervals of 0,25,50,75, 100 on a 5 point Likert scale from Strongly Agree/Agree/Don't Know/Disagree/Strongly Disagree. They are a mix of positive and negative statements on each dimension of the relevant softskill, with negative score inverting the scoring to produce an accurate overall score for the indicator.

Presentation of Results

After the administration of the GAP quizzes (typically, the completion time averaged around twenty (20) minutes for each of the Pre- and Post- quizzes), and the playing of the game, the resulting data from the quizzes are presented in ways that are comprehensible to the relevant peacekeeping personnel. There is a link to the pdf containing the results of both the Pre and Post Play Quizzes after completing the Post- Play Quiz.



Tables are used with the score for each category displayed, indicating whether there was a variance in the Post- Play Quiz scores from the baseline established in the Pre-Play Quiz. Items that score higher or lower than the Pre-Play Quiz at the Post- Play Quiz can also be used to stimulate reflection or discussion.

The pre and post game assessment technical set-up has been implemented by Enquirya that used a cloud-based evaluation solution, and customized it to the needs of the GAP-project. The solution consists of a dedicated iOS application that also works offline and a reporting component. The iOS application allows users to answer the pre- and post- game questions on culture, gender and communication. After both question sets have been answered, an automatic report is generated, with the aggregated pre- and post-game scores. This is mailed to the trainers and used as an input for the after game interview.

The practical set-up has been described in detail the V01 of the training manual, in order to support the preparation of the trainers and have been reviewed in the August 2018 training session. The set-up has been configured in such a way that a dual use of the iPad would be made as the the iPads used to play the GAP-game were also used for the pre- and post-game assessment. This solution makes optimal use of existing tools and gives the user an integrated experience, by using only one device for both game and pre- and post game assessment.

Furthermore, the set-up was conceived in such a way that it would expedite the analysis of the pre- and post-game results and subsequent interviews. By using a digital system, no cumbersome pen and paper forms processing is needed and immediate reports with the scores are available to the trainers, that serve as the input for the post-game interviews.

In practical terms, to enable this, Enquirya set up the system with three questionnaires with 96 questions provided by TCD, that have been pushed to the iPad evaluation application:

- Pre-game and Post-game questionnaire Police
- Pre-game and Post-game questionnaire Military
- Pre-game and Post-game questionnaire Civilian

In total, three iterations of the of the question sets were pushed: (a) a starting set for the train the trainers session in August 2018 in Dublin; (b) a first iteration taking into account the feedback from the train the trainers session and; (c) the final session used in Dublin during the last workshop, that



further refined the questions and allowed a pre-/post-game analysis also at question level.

Also, unique but anonymous usernames for individual players have been created, in order to allow further more detailed analysis at a later stage. Each iPad has been marked with a sticker containing a unique username (e.g. username 01). At the first iteration, 10 usernames were created. However, due to the simultaneous running of the workshops, an additional 12 usernames were created, leading to 22 usernames in total.

Trainers were instructed to prepare the iPads the day before the training session, by logging in to the application on each iPad, and inserting the specific username and password. The logins and passwords for the pre- and post-game assessment have been included in the training manual. Logins are functional and not personal.

At the start of the workshop, each individual player is handed out an iPad and asked to fill in the pre-game assessment. The same iPad was used by the same individual player for the pre and post questions (and game play). The start screen would ask the user to select their affiliation, i.e. police, military or civilian. After that selection, a screen would ask them to select the pre-game questionnaire. The pre-game question set includes three general questions:

- Date of evaluation⁵
- Username (i.e. the sticker on the iPad)⁶
- Gender (male/female)

Originally, in a first iteration for the training session, three additional general questions were asked, i.e. number of deployments, age and organisation name. The reasoning behind asking this information is that it allows more in-depth analysis of the results, with queries such as are specific scores related to age or number of deployments. However, these were deleted in the final set-up after lengthy discussions about privacy and 'nice to know versus need to know'.

Once all individual players filled in the pre-game assessment questionnaire on culture, gender and communication, they were allowed to play the GAP-game. When an individual player indicated that having finished playing the game, he/she was asked to go back to the evaluation application and fill in the post-game questionnaire.

⁵ We asked each user to add the date so that we could easily distinguish the evaluation reports.

⁶ This data is needed in order to match the user to the evaluation report.



Once the individual player also finalised the post-game questionnaire, the evaluation application asked the user to tap on 'Create Report' to request a report to be created. This report was made by Enquirya using custom code, that would aggregate the scores in three ways, i.e. for the three areas (gender, culture, gender, communication), pre- and post- game and finally overall average per area. This report is delivered in a pdf and was emailed within 1 minute to a pre-defined email address, managed by the trainer.

An email account was set up for each iPad by going into the mail settings of the iPad, adding the gmail email address and then the report came into the inbox on the iPad. (e.g. gapuser01@gmail.com). Enquirya then sent the report to that address and the report was opened on the iPad as it is connected to the internet.

The results were given by Indicator (individual items) and Categories (Gender Awareness, Cultural Awareness, Communication) in the PDF, and were also available on the Web Dashboard created by Enquirya. For the first five Evaluations, a different set of indicators was used for the Pre and Post Quizzes, making it possible to compare pre and post results at the category level, but not a reliable comparative measure at the Indicator level.

For the last Evaluation, with the Irish Defence Forces, the list of indicators for the Pre- and Post- quiz was compiled into one, reduced based on the feedback from the first evaluations, and by only using indicators that are captured by the Learning Objectives used in the game, and then the same list was used for pre- and post- quiz, but in a different chronological order. Thus it was possible to measure learning more precisely. We can still keep the categories as an overall measure, but also display a drill down into the indicator level. This makes more sense to the player of the game, as he/she then can see and reflect on the assessment too.

3.5. Plan and Execution (what we did with whom)

In the GAP evaluation phase, the implementation of the out-game instrumentation took place with personnel from GAP partners at the following sites: Ireland, Northern Ireland/UK, Poland, Finland, Portugal and Bulgaria.

Task	Country	End User	Lead Person(s)	Dates	No of personnel
5.4	Ireland	TCD, UU,	Training	Tuesday,	



		NUIM, Laurea, WSU	Workshop for Evaluation	21st August	
Task 5.9	Portugal	PSP	M. Cooke	Tuesday, 11 th September	10 participants +2 trainers
Task 5.9	Bulgaria	BDI	M. Cooke	Friday, 13 and 14th September	10 participants (1 of them trainer)
Task 5.8	Poland	WSPol	J. Pyz	Tuesday, 18th September	10 participants + 1 trainer
		WSU	J. Pyz	Thursday, 20 th September	10 participants
Task 5.7	Finland	FINCENT	A. Holohan	Tuesday, 25 th September	10 participants (1 of them trainer)
Task 5.6	Northern Ireland	PSNI	A Holohan, M. Brainiff, J. Byrne	Thursday, 4th October	10 participants (2 of them trainers)
Task 5.5	Ireland	DF	A. Holohan, J. Pyz	Wednesday, 17th October	10 participants
					TOTAL: 73

Table 1. Table of Evaluation Location and Schedules

Requirements for Evaluations:

The evaluations were carried out on iPads to ensure technical consistency and reliability. 10 iPads and 10 headphones were purchased with overhead funds that the Department of Sociology at TCD received from GAP and were transported by GAP members to each location. The game and out-game assessment were downloaded onto each iPad, ready to use by each player. An internet connection was required so that each player could access the assessment reports both in-game and out-game during the evaluation sessions. At the end of each evaluation session, the personnel were interviewed in a semi-structured format for approximately 15 minutes by the researchers.



Information sheets and Informed Consent forms were prepared, printed out and signed by each participant in each location. There was a PowerPoint presentation made to explain the steps of the evaluation which was presented to each assembly of players at each Evaluation.

Two Trainers manuals were prepared: a Trainers' Manual for the Pre-Play Quiz and Post-Play Quiz, and the Trainer's Manual for the Game and In-Game Assessment. These were read by the team implementing the evaluation in advance and were available to be consulted during the evaluation.

In each location, the team leader ensured that their team made all preparations prior to the date of the Evaluation.

The planned sequence of the evaluation was: Pre-Play Quiz; Game-Play; Post-Play Quiz; Interview. Two hours were allotted in the middle of the day to allow the effects of the game to 'sink in'.

Evaluation Day

9.15 Introductions and Overview of project.

9.45-10 Pre-play Quiz

10-12 Game Play

Lunch

2-2.15 Post-play Quiz

2.15-5pm. 20 minutes interviews with each player.

It became apparent at the first Evaluation in Portugal that one day was not sufficient time to take the Pre- play quiz, play the game and take a 2 hour break before the Post- play quiz, and interview. The 2 hour break was reduced to a half hour for lunch and several of the Portuguese players took up to 5 hours to complete the game. Fatigue was then an issue in the completion of the Post-play quiz. Subsequent Evaluations experienced the same pressure on time and concomitant fall off in concentration in the latter part of the day.

3.6. Technical Description of Methods



3.6.1 Out-game Assessment:

The Pre- and Post- quizzes were implemented digitally. This is more user friendly than pen and paper and also less error prone at data recording and analysis level. Users can use iPads and desktop computers to answer the questions sets. In order to ensure a safe learning environment and be in line with the GDPR-requirements, the users are anonymous. Login credentials were randomly assigned.

Each participant had an iPad with a sticker on it with User01 -> User20. The passwords for the first Evaluation were in the annex of the V01 of the training manual, and thereafter in each Evaluation emailed from Enquirya to the Lead Trainer.

This password code is filled in the questionnaire by the individual player, as it is asked at the start (question 3, topic 'pre-game cultural awareness').

The same iPad was used by the same user for the pre and post questions (and game play). Once all pre and post questions are answered (i.e. all dots in front of the topics are green), the iPad asked the user to tap on 'Create Report' to request a report to be created. This report is a pdf and was emailed within 1 minute to a pre-defined email address. An email account was set up for each iPad by going into the mail settings of the iPad, adding the gmail email address and then the report came into the inbox on the iPad. (e.g. gapuser01@gmail.com). Enquirya then sent the report to that address and the report was opened on the iPad as it is connected to the internet.

A list of the Gmail accounts of the iPads was sent to Enquirya as follows, in 2 columns:

IPad username

IPad email address

Enquirya inserted it into the system and ensured proper mailing.

Logins are functional and not personal. We asked each user to add the date so that we could easily distinguish these reports.

gapgame001@gmail.com	user01	u4psdKidYXUN
gapgame02@gmail.com	user02	S5PLnSmrimti
gapuser03@gmail.com	user03	nymIKgMRk4sY
gapgame04@gmail.com	user04	7bafcSjqBfSj
gapgame05@gmail.com	user05	4fFvgJrPrmip
gapgame06@gmail.com	user06	uiD2fmNkKtAT



gapgame07@gmail.com	user07	vpex47tm
gapuser08@gmail.com	user08	r6UHZbW7
gapgame09@gmail.com	user09	cZAXWy8e
gapgame10@gmail.com	user10	4XM8Avsf

Table 2. iPad user email addresses, usernames and passwords

In sum, accessing and logging in were achieved in two steps, as follows:

Step 1: Access the applications

iPad: [iPad Enquiry Pro Application \(licensed\)](#)

Desktop: [Enquiry Desktop Login](#)

Step 2: Login with credentials

Users were asked to fill in three fields in order to access the application:

Organisation name

Username

Password

The results were given by Indicator (individual items) and Categories (Gender Awareness, Cultural Awareness, Communication) in the PDF, and were also available on the Web Dashboard created by Enquiry. For the first five Evaluations, a different set of indicators was used for the Pre and Post Quizzes, making it possible to compare pre and post results at the category level, but not a reliable comparative measure at the Indicator level.

For the last Evaluation, with the Irish Defence Forces, the list of indicators for the Pre- and Post- quiz was compiled into one, reduced based on the feedback from the first evaluations, and by only using indicators that are captured by the Learning Objectives used in the game, and then the same list was used for pre- and post- quiz, but in a different chronological order. Thus it was possible to measure learning more precisely. We can still keep the categories as an overall measure, but also display a drill down into the indicator level. This makes more sense to the player of the game, as he/she then can see and reflect on the assessment too.



3.6.2 Game-Play and In-Game Assessment

The game currently supports iPad, MacOS and Windows. In the evaluations, only iPads were used.

The GAP team leader in each Evaluation described the basic operation of the game, including how to start a new game, how to quit, pause and resume the game, as well as how to manage saved games.

The main menu is the first thing you will see once the game has started up. On Mac/Windows the main menu has a “Quit” button, but on iPad it does not. The reason is that never really “quit” an app on iPad, but simply click the iPad’s home button to exit the app. (You can force-quit any app by double-clicking the home button and swiping the app’s window up, but it’s generally not necessary.

Starting a Game

To start a new game, the player must press the “New Game” button in the main menu.

It was explained that the game then displays a unique five word phrase, which is the player’s id. It is extremely important for the player to remember their id, either by writing it down exactly, or by taking a photo of it. This id is used to obtain the player’s assessment results at the end of the game. Without this id, it is impossible to retrieve their results.

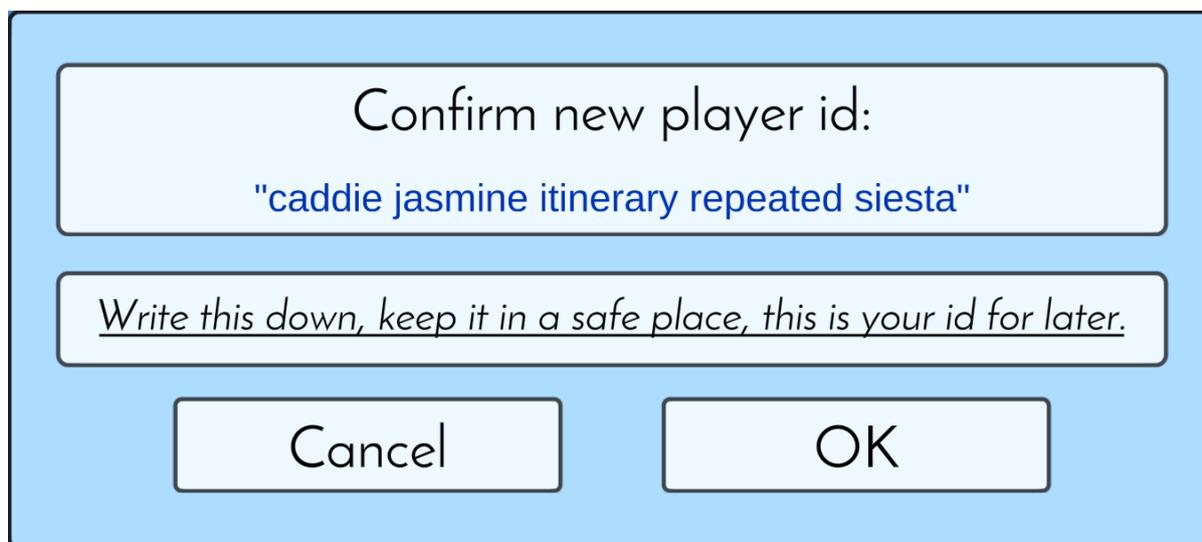


Figure 4: New player id - example

If the game already has a save file, it asks the player to confirm that they want to start a new game before continuing. Only one save file may exist at any time, so starting a new game overwrites any previous save file.

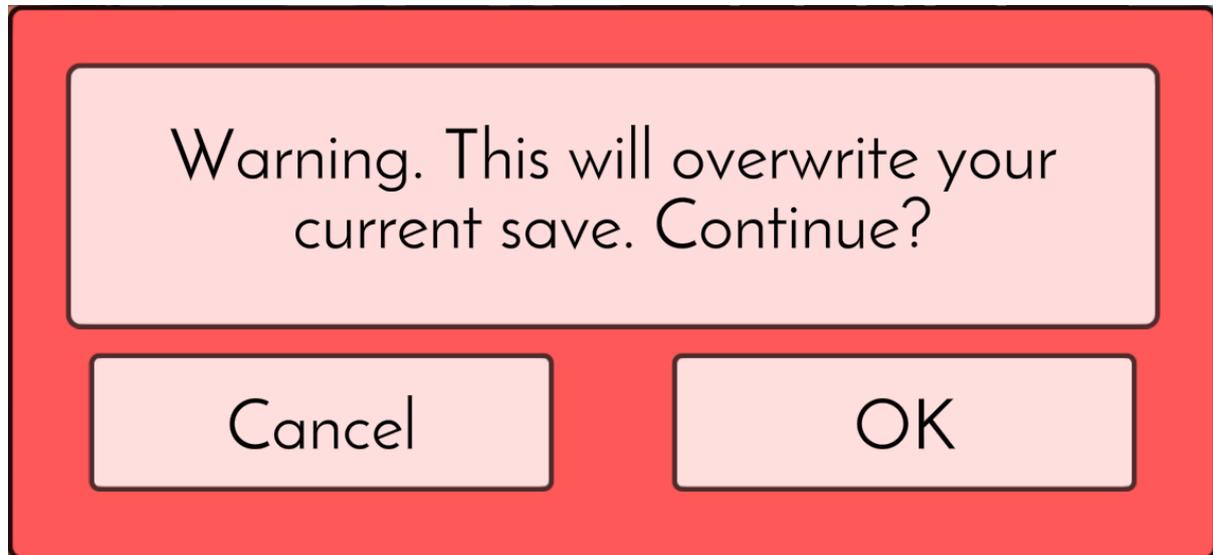


Figure 5: Select OK to start a new game when a save already exists

On Mac/Windows the player can quit the game by pressing the "Quit" button in the main menu. On iPad the player must quit by pressing the iPad's "Home" button as mentioned above. The player will be able to resume their current game from the last checkpoint when they restart the app.

If there is a game currently in progress, a "Resume" button will appear in the main menu. The player can resume this game from the last checkpoint reached by pressing the "Resume" button. The id of that game is also displayed on the "Resume" button.



Figure 6: Resume button on an iPad

Saving the Game

The game automatically saves at the start of each scene. The player can see the “Game Saved” text appear in the top left of the screen when this happens. When the game saves it will also attempt to send assessment data to the assessment server in the background.

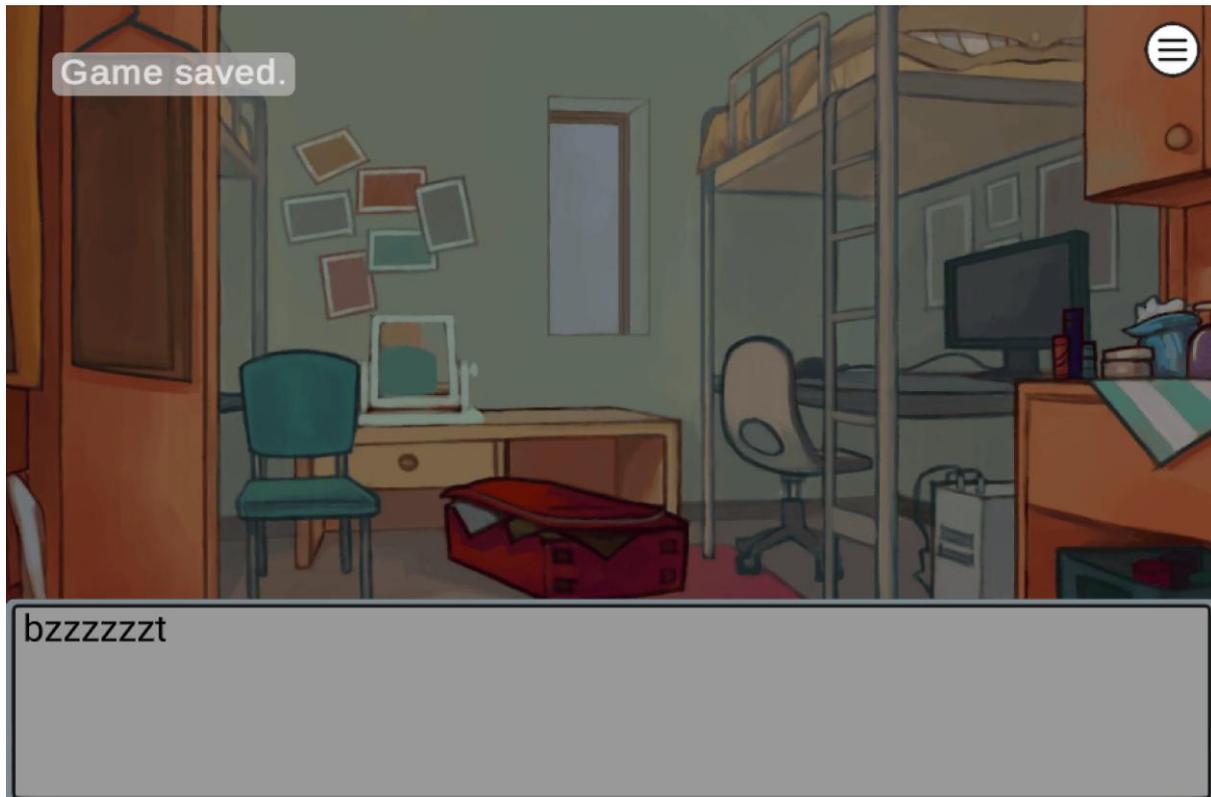


Figure 7: “Game saved.” text appears at top left of screen whenever the game is saved

To open the in-game menu, press the round white menu button in the top right corner of the screen.

Pressing the button will pause the game and open the in-game menu. From here you can either resume playing or you can return to the main menu. If you return to the main menu, any progress made since the last save will be lost.

Playing the Game

Audio is a very important part of the game experience. Where the game’s story and characters are intended to offer imaginative immersion, the primary function of audio is to offer sensory immersion into the play experience. This adds realism and makes it easier for the player to suspend disbelief and take the situations that appear in the game seriously.

For this reason, each player in the Evaluation played with closed over ear headphones.

There are three gameplay modes found in the game.

Gameplay Mode: Blackscreen



This gameplay mode gives the player story context. The player reads the text and then clicks (PC/Mac) or taps (iPad) the blue link displayed at the end. This advances the game to the next screen.

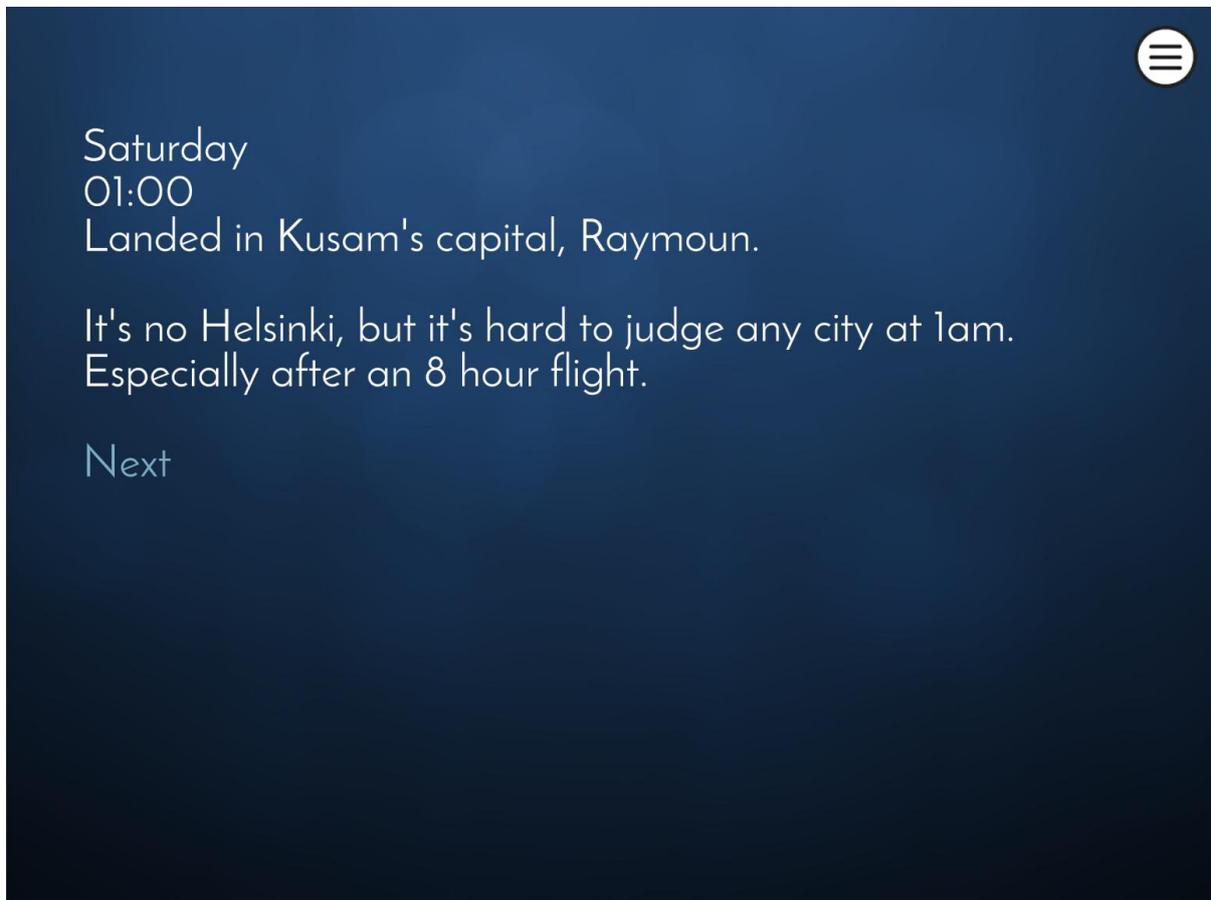


Figure 8: Blackscreen gameplay mode

Gameplay Mode: Conversation

This gameplay mode lets the player converse with one or more characters on the screen. The player reads the text at the bottom of the screen and then clicks (PC/Mac) or taps (iPad) their preferred box to proceed. The boxes may contain actions (in *italics* and surrounded by asterisks) as well as actual dialogue. The decisions taken by the player have assessment scores attached that are not visible to the player.

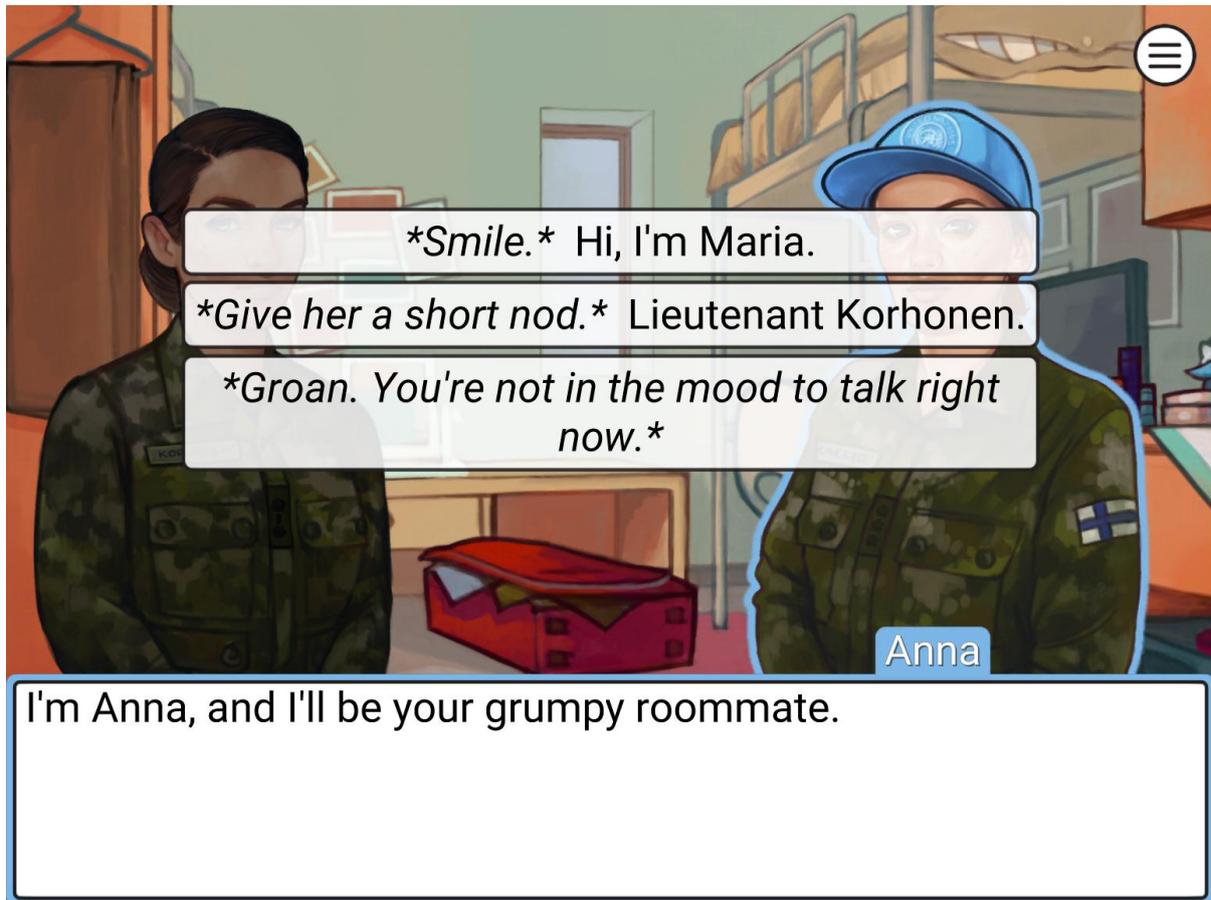


Figure 9: Conversation gameplay mode

Gameplay Mode: Exploration

This gameplay mode allows the player to explore a scene in the game. A scene is wider than the screen, so it is necessary for the player to pan the scene to discover all its elements.

On PC and Mac, the player uses their mouse to drag the scene left and right, and they can click on highlighted elements (e.g., characters in the scene) in order to interact with them. On iPad, the player swipes the scene left and right to pan, and they can tap on the highlighted elements to interact.



Figure 10: Exploration gameplay mode

Assessment Results

When the player finishes playing the game, they will be shown their id again and given a link to click to access your assessment results. If you can't get the link to work, please try to access it manually, as described in **Troubleshooting** at the end of this document.

Final Game Screen

If you need to see your id again, resume your game and it will take you back to this page. As long as you haven't started a new game.

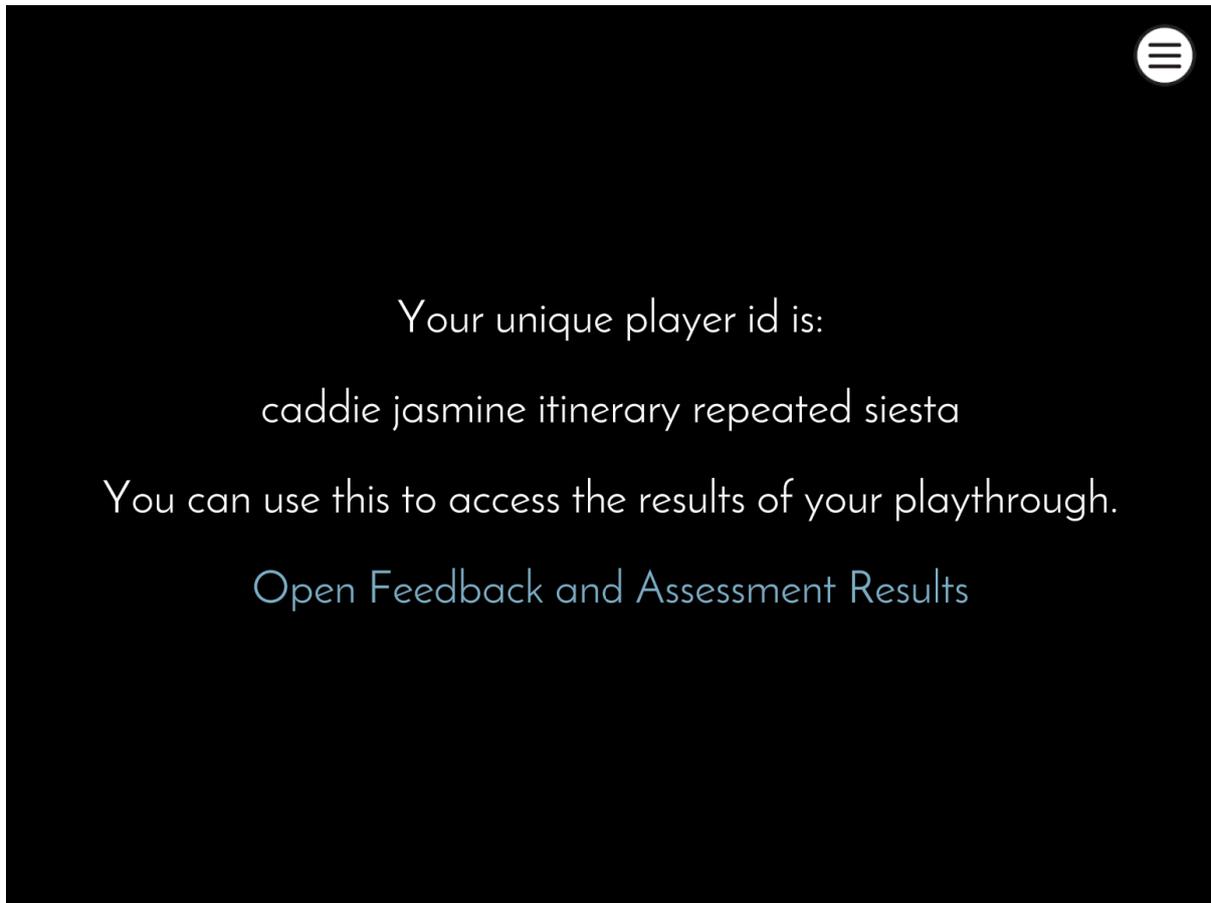


Figure 11: Final screen of game with link to assessment results

Assessment Results Page

The assessment results page shows how a given ID performed during the play experience. The entire report is quite long, so the figure below only shows a partial view.

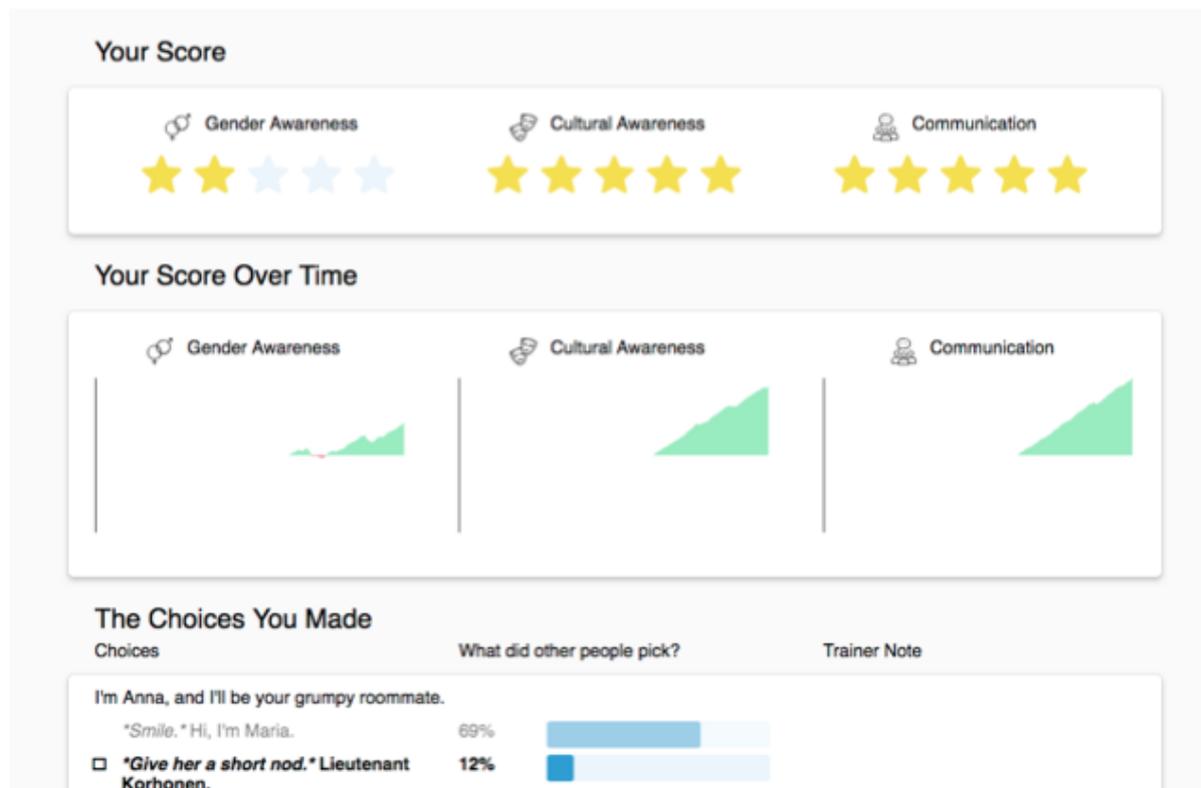


Figure 12: Assessment results (partial view)

Trouble shooting advice was given by Haunted Planet Studios.

If the assessment results are not visible the player was advised to first double check they have the right id. If the id is correct, check that the gameplay data has been sent to the assessment server. To do this, go to the game's main menu. If the menu displays a "SYNC NEEDED" button, the game still has data to send to the assessment server.

Before attempting to send any remaining data to the server, first check the device has an external internet connection by confirming <http://www.google.com> is accessible.

If an external internet connection is available, check the assessment server is running by accessing <https://gap.adaptcentre.ie/#/> and checking the page exists.

If it is confirmed an internet connection is available and the assessment server is running, press the "SYNC NEEDED" button. If the game manages to successfully send its data to the server, the button



Deliverable 5.3: Learning: Operational and Educational Effectiveness Report

will disappear within 30 seconds. If the button does not disappear, there may be some other problem with the assessment server. Please email gap@adaptcentre.ie with details of your problem.

Note that the game will always attempt to sync with the assessment server automatically, if it can, so if the “SYNC NEEDED” button disappears without you pressing it, this is nothing to worry about - it just means the game has synced on its own.



Figure 13: “SYNC NEEDED” button appears in the top right corner of the main menu if the game still has assessment data to send to the assessment server



3.7 Ethics

Two key documents guide ethics protocol for GAP Evaluators:

1. GAP Data Policy
2. GAP Incidental Findings Policy

The main points of these documents, as they relate to completing Work Package three interviews, are summarised below.

GAP Data Policy

1. Consent

Each participant was provided with the GAP information sheet and consent form. The information sheet explained the potential participant about the GAP project and was theirs to keep. If the person agreed to do the quizzes, play the game and to be interviewed, they were asked to sign the consent and return it to the GAP team leader. This form is kept in a secure location, away from other interview material (e.g. transcripts).

It was stressed that there was no way to perform poorly since softskills competence is a developmental process. The participants were also assured that their responses would remain confidential and would not be tracked to specific individuals. Their real world identity was not recorded at any point by those conducting the evaluation workshops.

2. Anonymisation

In order to ensure a safe learning environment and be in line with the GDPR-requirements, the users of the Out-Game assessment are anonymous.

Similarly, as seen in the Technical Description, the player in the game is anonymous. At the start of the player must press the “New Game” button in the main menu. It was explained that the game then displays a unique five word phrase, which is the player’s id. It is extremely important for the



player to remember their id, either by writing it down exactly, or by taking a photo of it. This id is used to obtain the player's assessment results at the end of the game.

The identity of interviewees were kept anonymous in the research materials generated from these interviews. The real names of the interviewees were not recorded. Only gender, nationality and sector (military, police or civilian) were recorded. Original audio-recordings are kept securely and in a different location from the transcripts.

Data storage. Upon completion of the each interview, the recording of the interview was uploaded from the recording device on to a password protect external hard drive. The interviews were then removed from the recording device.

Post Evaluation Segmentation of Game.

The rationale for segmentation is fully explained in Section 6. Feedback from the Evaluation sessions was that the quizzes and game are too long and intense to be done in one sitting. In addition, the majority expressed a desire to pause the game regularly, get their feedback, and discuss the results with a group. Consequently, the game was divided into 9 sections. However, the five word password is sufficient for linking each segment of game-play and associated scores with each other.



4. Results

4.1 Theoretical Framework

This section reports on the results of the evaluation of the operational and educational effectiveness of the curriculum, game and assessment. The goal of the Evaluation is to see if the GAP intervention can generate positive movement on the continuum of each of Communication Competence, Gender Awareness and Cultural Awareness. The methodology encompassed in-game and out-game assessment, both of which have been explained and described, and the combination of which allowed for measurement of changes produced by playing the game.

We use Cultural Historical Activity to examine how peacekeeping personnel use a digital role-playing game (GAP) to improve their soft skills, specifically Gender Awareness, Cultural Awareness and Communication Competency.

Cultural Historical Activity Theory (CHAT) is useful for understanding the impact of an intervention such as GAP on the personnel, training of peacekeepers and the peacekeeping context. It allows for the understanding of the dialectical relationships among people, tools, and goals as they influence and are shaped by social structures, culture, and history within the context of a community.⁷

In CHAT terms, GAP is an **activity system** that shapes the collective actions of peacekeeping personnel who are motivated to achieve the goals of improvements in levels of CPPB relevant soft skills and consequently more effective peacekeeping⁸.

The common elements within an activity system are: object, outcome, subject, tool and community. The **object or objective** is the target or product of the activity system.⁹ The **subject** refers to the people, either individuals or groups, engaged in the activity system.¹⁰

⁷ Cole, M., & Engeström, Y. (1993). A cultural-historical approach to distributed cognition. In G. Salomon (Ed.), *Distributed cognitions: Psychological and educational considerations* (pp. 1-46). Cambridge, United Kingdom: Cambridge University Press.; DeVane, B., & Squire, K. (2012). Activity theory in the learning technologies. In D. Jonassen, & S. Land (Eds.), *Theoretical foundations of learning environments* (pp. 242-268). New York, NY: Routledge.; Engeström, Y. (1987). Learning by expanding. An activity-theoretical approach to developmental research. Helsinki, Finland: Orienta-Konsultit Oy.

⁸ Cole, M., Engeström, Y., & Vasquez, O. (Eds.). (1997). Mind, culture, and activity: Seminal papers from the Laboratory of Comparative Human Cognition. Cambridge, MA: University Press.; Engeström, Y. (2000). Activity theory as a framework for analyzing and redesigning work. *Ergonomics*, 43(7), 960-974. <http://dx.doi.org/10.1080/001401300409143>; Leontiev, A. (1978). Activity, consciousness, and personality (M. Hall, Trans), Englewood Cliffs, NJ: Prentice-Hall.



In GAP, there are two levels of analysis. (i) At the level of the **individual player** (the subject), the object is an increase in the level of peacekeeping relevant soft skills as measured in quantitative scores in the pre- and post- assessment and in scores in the game, and qualitatively in the increase in understanding and ability to reflect and discuss the meaning and purpose of the training in soft skills. (ii) **Training:** for the trainers and their organizations (the subject), the object is to provide this training in a way that is effective in improving the organization's ability to cooperate with other organizations in the activity system of complex peacekeeping missions.

As subjects pursue their object, their identities and knowledge are shaped and transformed through their interactions with the other elements in the activity system.¹¹

The **tools** that mediate human action and experience¹² in GAP are the physical game of GAP, the online quizzes and the curriculum of soft skills.

(i)When the **individual** peacekeeper engages with the quizzes and game, this is to make progress in their level of competence in Gender Awareness, Cultural Awareness and Communication Competency.

(ii) **Training:** GAP can change the training process through the introduction of a blended learning (individual game play and quiz-taking, and group discussion) and experiential approach (practicing soft skills in the game) resulting in higher user capability in soft skills and satisfaction/engagement in the process.

The **community** refers to the group of individuals with a shared interest or culture that interact within an activity system. The community members negotiate the division of labour and the rules for

⁹ Nardi, B. A. (1996). Activity theory and human-computer interaction. In B. Nardi (Ed.) Context and consciousness: Activity theory and human-computer interaction (pp. 7-16). Cambridge, MA: MIT Press

¹⁰ Jonassen, D. H., & Rohrer-Murphy, L. (1999). Activity theory as a framework for designing constructivist learning environments. Educational Technology Research and Development, 47(1), 61-79. <http://dx.doi.org/10.1007/BF02299477>

¹¹ Davydov, V. V. (1999). The content and unsolved problems of activity theory. In Y. Engeström, R. Miettinen, & R. Punamäki (Eds.), Perspectives on activity theory (pp. 39-52). New York, NY: Cambridge University Press; Roth, W. M., & Lee, Y. J. (2007). "Vygotsky's neglected legacy": Cultural-historical activity theory. Review of Educational Research, 77(2), 186-232. <http://dx.doi.org/10.3102/0034654306298273>

¹² Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Cambridge, MA: Harvard University Press



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participation within the community.¹³ The community members in GAP are the individual peacekeepers, their type of organization (military/police/civilian), their organization (e.g. the Polish military), their professional network (e.g. civilian crisis management network/NATO /European Security and Defence College), and broader community (their peacekeeping (international) colleagues and the local population).

(i) Individuals participate in different roles based on their skills, knowledge, and interest.¹⁴ In GAP, the individual can see how their own role in peacekeeping, and their own level of skill and knowledge and interests, is tied to and impacts and is impacted by other with different responsibilities. Those others range from local community leaders through other professionals inside and outside their own organization.

(ii) Training: GAP provides a training opportunity by showing how their communication, gender awareness and cultural awareness mediates their interaction and relationship between the individual and others in their community.

In addition to the division of labour, each community has a set of collectively negotiated **rules**, or sociocultural conventions. These conventions are either explicitly stated or implicitly understood guidelines for acting, behaving, and interacting within the community. In GAP, these rules are formal protocols for dealing with colleagues from one's own and other organizations, and the local population, and also unspoken knowledge and application of knowledge (soft skills) for effective interaction with colleagues, other organizations and the local population. This knowledge and application of knowledge are codified in learning materials from international organizations which have informed the development of the curriculum and learning objectives of the game.

In sum, the role that GAP plays is as the central mediating artefact linking the users with their objectives and outcomes. This link is measured in two ways: 1) the change in performance as indicated by the in/out game assessment, and 2) changes to the process of soft skill training.

¹³ Jonassen, D. H., & Rohrer-Murphy, L. (1999). Activity theory as a framework for designing constructivist learning environments. *Educational Technology Research and Development*, 47(1), 61-79.
<http://dx.doi.org/10.1007/BF02299477>

¹⁴ Jonassen, D. H., & Rohrer-Murphy, L. (1999). Activity theory as a framework for designing constructivist learning environments. *Educational Technology Research and Development*, 47(1), 61-79.
<http://dx.doi.org/10.1007/BF02299477>



4.2. Quantitative

The in-game assessment and the out-game assessment provide an opportunity to ascertain, for the **individual player** (the subject), the degree of progress in Gender Awareness, Cultural Awareness and Communication Competency (the object). Peacekeeping relevant soft skills are measured in quantitative scores in the pre- and post- assessment and in scores in the game, discussed in 4.2 and qualitatively in the increase in understanding and ability to reflect and discuss the meaning and purpose of the training in soft skills, discussed in 4.3.

The Evaluation sessions were completed by personnel in a total of 6 locations, in the following order: Portugal, Bulgaria, Poland, Finland, Northern Ireland, Republic of Ireland. The scoring mechanism was described in Section 3. The scores from each Evaluation are reported in the individual Evaluation Reports in Section 5.

Quantitative results for in-game and out-game assessment indicated quite a high level of soft skills among personnel but also indicated that there is scope for improvement, for progressing along the continuum in Gender Awareness, Cultural Awareness and Communication Competency.

However, the conditions of play during the evaluations which involved playing the game in one continuous session had an impact on the extent of the quantitatively assessed learning. The crucial findings from the Evaluation sessions were the impact of time and language on game-play and assessment, both in-game and out-game. The game took much longer to play than anticipated, we had expected 1.5 hours but it ranged from 2 hours for native English speakers to up to 5 hours for those whose English is not their first language. Fatigue set in for almost all non-native English speaker participants, arguably impairing their ability to correctly complete the second half of the game and the post-game assessment quiz. For the in-game assessment, scores received by game players ranged from 2 stars to 5 stars (converted from numerical scores) for each of the soft skills.

It became clear as the Evaluations took place and results came in that not all decision points in the game were significant enough to warrant usage for rating/scoring purposes. Scores were also affected by contradictory ratings on some decision points, particularly around gender. Out-game scores were initially based on Pre- and Post- quizzes that used different items to access the same dimension and some items were deemed not relevant. For the final evaluation, the Pre- and Post-Quizzes were the same set of indicators but used in different order pre and post.

**Table 3. The scores threshold for each start point**

Stars	communication	Gender	Culture
1	3.6481	3.4562	3.538
2	3.7905	3.5556	3.5352
3	3.9133	3.3742	3.755
4	3.9771	3.8302	3.8158
5			

4.2.1 In-game Assessment

The GAP game provides a reporting presentation for each learner using the game. This report provides a summary of the learners' performance in the game by way of the start rating as well as a graph showing the student performance in each skill (competence) of Communication, Gender and Culture. Figure 14 show the summary performance of learner.

Your Score



Your Score Over Time



Figure 14 Summary of Learner scores for Gender Awareness, Cultural Awareness and Communication.

In this example the learner scored lowly in Gender Awareness and more highly in both Cultural Awareness and Communications. The graphs below the stars for each category, show the accumulated demonstration of each of the the three skills. In gender awareness the learner does not seem to be learning well where as in cultural awareness and communication shows a clear demonstration of cultural awareness and communications skills .



Niilo: Too bad they didn't bring any cutlery, at least we don't have to eat with our hands!

The option you picked:



The other options:



Figure 15 Presentation of Assessment Feedback to Learner

Figure 15 shows the score for a chosen response (in bold) chosen by the user and the rating for the other options (Poor, good or excellent). Also shown are the other options and the series for those options. An indication as to the popular it of a certain option being chosen allows the learners to see what distribution of users chose his or other options.

The assessment in the game provide the above feedback for each discussion point rated and taken but the learner. Thus the individual report provides the learner with an in-depth rating of each decision made within the game.

The in-game feedback also provides the trainer with an summary view of all student in his/her cohort. Figure 16 shows a partial snapshot of the student cohort view.



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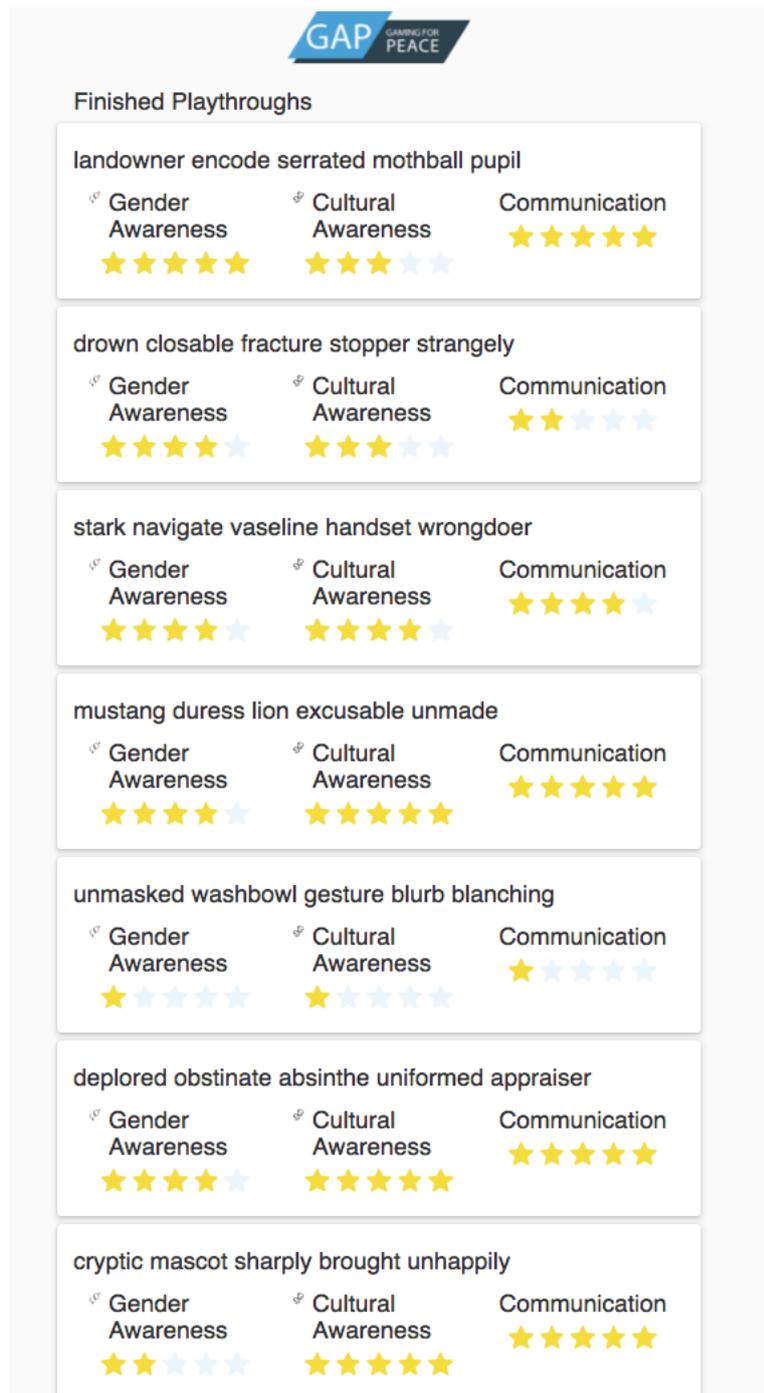


Figure 16 Trainer view summarizing each student performance

The game-generated user id has to be mapped to the real name of the learner. This mapping is not available to the game itself for privacy and data protection reasons but the train would have access to such mapping. Also each of these learner summaries is clickable so that the trainer can examine the detailed view of any particular learners (i.e. the system will show the trainer the detailed view similar to that seen by the learner him/herself).



4.2.2 Out-game Assessment: Pre and Post.

The Out-game Assessment was implemented in each of the 6 Evaluation locations as described in Section 3. The results were returned to the individual player in a PDF and were also available on the Web Dashboard created by Enquirya. They were given by Indicator (individual items) and Categories (Gender Awareness, Cultural Awareness, Communication. For the first five Evaluations, two sets of indicators were used for the Pre and Post Quizzes, making it possible to compare pre and post results at the category level, but not a reliable comparative measure at the Indicator level.

The results indicate small changes in the levels of Gender Awareness, Cultural Awareness and Communication Competency across the different Evaluation locations, with some increases, some no changes, and some increases. We quickly realized that fatigue was a major problem for the Post-Game Quiz, particularly for those with English as a second language. They all complained of being tired and struggling to complete the tasks after the Pre-Play Quiz and up to 5 hours of game-play in English in one day.

We expected participants to go through the Quizzes quickly but most of the participants enjoyed thinking about each item and while answering 'intuitively' as said by several, they took it as a serious task to give reflection on. Hence, the taking of the quizzes took much longer than anticipated also.

On foot of these experiences in the first four evaluations, and taking advantage of the additional time before the last Evaluation, we revised the Out-Game Assessment. So prior to the last Evaluation, with the Irish Defence Forces, the list of indicators for the Pre- and Post- quiz was compiled into one, and then the same list was used for pre- and post- quiz, but in a different chronological order. We also reduced the number of items based on the feedback from the first evaluations. Thus it was possible to measure learning more precisely. We can still keep the categories as an overall measure, but can now also display a drill down into the indicator level. This makes more sense to the player of the game, as he/she then can see and reflect on the assessment too.

The results of the final Evaluation demonstrate the improvement in the Quizzes as an instrument to measure changes in progress in levels of Gender Awareness, Cultural Awareness and Communication Competency.

	Communication	Cultural Awareness	Gender Awareness	Grand Total
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Row Labels	Post-Game	Pre-Game	Total	Post-Game	Pre-Game	Total	Post-Game	Pre-Game	Total	
Portugal	75	81	78	79	83	81	74	78	76	79
Police										
Female	75	82	78	80	84	82	77	82	80	80
Male	75	81	78	77	83	80	71	75	73	77
Bulgaria										
Military	63	73	68	63	66	65	61	55	58	63
Female	63	74	68	61	67	64	61	54	58	63
Male	64	73	68	65	66	66	61	55	58	63
Poland	68	79	74	75	81	78	72	65	68	74
Police										
Female	76	80	78	77	80	78	75	61	68	74
Male	65	78	71	74	82	78	71	67	69	73
Poland WSU	69	75	73	67	70	69	64	56	59	66
Civilian	78	81	79	73	80	77	79	70	74	76
Female	90	85	88	86	79	83	87	85	86	85
Male	65	78	71	60	81	71	71	54	63	68
Military	63	73	70	64	67	66	55	53	53	63
Male	63	73	70	64	67	66	55	53	53	63
Finland	74	77	75	80	82	81	77	75	76	78
Civilian	75	80	77	81	85	83	78	75	76	79
Female	75	87	81	82	88	85	77	79	78	81
Male	75	74	75	81	83	82	79	72	75	78
Military	73	73	73	76	74	75	73	79	76	75
Male	73	73	73	76	74	75	73	79	76	75
Police	70	65	68	76	79	78	75	71	73	74
Female	70	65	68	76	79	78	75	71	73	74
N. Ireland	71	78	75	78	83	80	79	75	77	78
Police										
Female	66	78	72	78	81	79	78	78	78	77
Male	75	78	77	78	85	81	81	73	77	79
Ireland	73	78	74	76	70	73	70	65	67	71
Military										
Female	72	75	72	70	60	65	63	67	65	67
Male	73	78	74	77	72	74	70	65	68	72
Grand Total	71	77	74	74	76	75	71	67	69	73

Table 4. Overall Results in Average Scores for Pre- and Post- Test Quizzes

4.3. Qualitative Analysis



In GAP, the object qualitatively at the individual level is to increase understanding of soft skills, and the ability to reflect and discuss the meaning and purpose of the training in soft skills. For the trainers and their organizations, the object is to provide this training in a way that is effective in improving the organization's ability to cooperate with other organizations in the activity system of complex peacekeeping missions.

Qualitative feedback indicated significant engagement with the soft skills and significant increase in understanding the meaning and effect of these soft skills among the individual personnel. Both individual players and trainers repeatedly expressed a desire for more time and for a more 'blended learning' approach, i.e. not as one isolated individual playing the game through and receiving assessment, but in a classroom context allowing for group discussion and engagement with a trainer and peers. The game and assessment was felt to be effective as it is.

However, the players frequently requested to be able to play the game in segments, i.e. opportunities to pause or stop after playing key scenes and ideally to receive assessment scores for that segment, and to have the opportunity to discuss the content of the segment. A minority of those who took part in the evaluations were already trainers and they emphasized this point for optimizing the learning from the game. All felt that the value of the game was the feedback received and the opportunity to converse and discuss topics that would be difficult to raise and discuss without the medium and support of the game.

The players experience of playing the game was analyzed in terms of the following categories:

- User engagement
- Aesthetics (including audio and visual aspects);
- Perceived realism (in terms of expected deployment contexts and scenarios, narratives, characters);
- Usability;
- Duration and fatigue;
- Effect on gender, culture, and communication awareness;
- Preparedness of working with other professionals;
- Usefulness for training and preparation for pre-deployment.



Based on the activity theoretical framework discussed earlier the overall effectiveness of the game is considered in terms of its impact on the desired outcome which is relative to the category of user (police/military/civilian), their role (division of labour) and their place in the broader community of professional and non-professional actors. Constraints such as legal, ethical, cultural and religious norms are also part of the context that the players participate in and therefore an integral part of their activity framework.

To conclude, the qualitative results seek to assess the experience of not only the gameplay but also the process of learning and we consider this a more fruitful resource than the quantitative scoring for understanding the impressions and experiences of game play and allowing them to pinpoint specific points of interest or problems and suggestions for improvement.

4.3.1 Structured Analysis

User Engagement:

User engagement was high across all evaluations. Most individuals enjoyed the experience and compared it positively to more traditional pedagogical techniques.

A trainer in Bulgaria noted:

I'm teaching a course in defence college exactly cross-cultural competence training. So it would be – takes about 2 hours, it is much better to see than to explain them and to show slides. [Bulgaria, military, male]

As for the lecturers, the truth is that we do not have the right team here. These are school teachers who have no mission experience who would really know what is going on. Simply put, what they say is from space. They do not realize the realities with which we are to meet. The cultural issue, gender balance. Not once were these topics touched, the first time I have such contact with something. And this is a very important issue. [Polish police female]

The game succeeded in raising awareness of relevant soft skills and how they could improve through playing the game and taking the assessment.

I can say that this game has a positive effect on the willingness to know what was previously unknown. Culture, gender, communication. [Polish police female]



In general, when it comes to this type of training through a game that is interactive, where we choose answers, changing scenarios is very cool, because you can practice some issues before they happen. [Polish Police male]

I actually like it because I didn't really know what to expect, I thought you know that we were coming over to play a game that was kind of military based or police or whatever like. That it was just going to be shooting and all that stuff but it wasn't. The fact that it was roleplaying, I could see what was going on in other cultures, what way they deal with things as well and especially the questions before hand, the pre questions, when you're reading them you have to think about it but then when you actually play it you see where those questions come in to it as well, so I found that that help as well then, ya know, reading through what way I could answer something as well.

[Ireland Military Female]

Aesthetics (including audio and visual aspects):

Most players found the audio background to aid with immersion and those who had been on deployment found it satisfyingly realistic. A small number found it distracting. The art was positively received though was not spontaneously mentioned by most. During the evaluations the minority of the participants who had some deployment experience were very appreciative of the attention to detail in the game and were repeatedly saying how the game reminded them of the time on the mission and how the art details and soundscapes were accurate. They were both surprised with that fact and really pleased.

My father was with military and we lived in Pakistan when I was a teenager, the sounds, the talking. The people saying "you want pashmina, you want", I can almost hear them. [A PhD student from the War Studies Academy]

A Finnish military participant with deployment experience stated:

What was actually surprising, I think especially for UN based mission represented what I experienced in Lebanon pretty accurately, so that was nice to see. I was really impressed actually... I think it was really good, I liked the graphics, and also the soundscapes, I was very positively surprised by that. I heard some sounds that could



associate back from deployment, like, what's the word, the air conditioning, bips, stuff like that.

Perceived Realism (in terms of expected deployment contexts and scenarios, narratives, characters):

The game graphics, the narratives, the characters and scenarios were considered to be well thought out and researched.

Usability:

The Pre- and Post- Quizzes and the game and assessment were implemented smoothly in all Evaluations, with usually only one, if any, person in an Evaluation having problems navigating through the technical platforms and steps as set up for the Evaluation.

The Out-Game Assessment was positively received as a way to get feedback and make sense of their performance in the game.

it did actually yeah. You know at the start you had to do the before game quiz, so I think I scored 76% for gender and then 80% after. Something like 80% on communication and like 85 after. I can't remember the culture but it was definitely higher. It does show you and it does make sense.[Ireland, military, male]

Duration and Fatigue:

The most common complaint was the duration and pace of the game considering that both Quizzes and the full game were completed in a single day. Both from an engagement point of view and for learning effectiveness, it would be better if it is delivered over a number of days, and that the game would be segmented into sections allowing time for group discussion as well as individual play.

Fatigue had a big impact on the performance of individuals as between the Quizzes and Game Play, those who were not native English speakers were sitting at the iPad for up to 7 hours. Even for native English speakers, it was deemed tiring and too much for one sitting. This could be mitigated by breaking up the game into sections and delivering GAP over a number of days.

pre-game was fifty...sixty five percent, post-game was fifty-five, I think. So, in that case communication pre is fifty-five, post is sixty-five. It's simply because I got distracted and I got a little bit maybe a little bit tired off course, after several hours.[Portugal, Male, Police]



A blended learning approach where the game is broken into segments and there is a balance between individual game play and regular discussion especially with a trainer moderating is seen as more effective.

I was quite tired, taking all these choices again and again, after 6 hours it was very frustrating. ...I think what was good was...it proceeded quite fast and quite smoothly. I think it is good to have a break, a good break. I would recommend it in that way that you do the first assessment then you have a break and discuss it and the next day you do the other.

[Finland, civil, female]

It's an application that can't take the place of a teacher, the conversation of the classroom. I was once in a gender training, it was an international training as a student, and surprisingly, it was the young female Red Cross representative who said women should stay at home with the children, and it was the classroom, the whole classroom. We had a long conversation but that is what you would not see in a test.

[Finland, female, civilian]

Have a discussion, that your answers emerged from this or that [Polish Police male]

The game definitely will be useful, because it makes you think. It would be good to have some classes about cultural differences, discussion. But it has to be more time. Have to divide, first story, then the second. And have a discussion, that your answers emerged from this or that. You shake hands, and do you know that in this culture you don't do it?

[Polish female Police]

The fatigue issue reflects not on GAP components but rather the contrived circumstances of a formal evaluation schedule, which served very usefully to highlight the optimum way to deliver GAP both for user engagement and learning effectiveness.

The language issue which is linked can be mitigated by time and in fact, GAP incorporates language training when taken by individuals who are not native English speakers, and can also be remedied by translation of the game into different languages.

Because I think we are, eh, reading in English, because if it was in Portuguese, you can do everything faster and but now I know we must know in English. I'm from France, my



language for missions is French so I know English but my comfort zone is French so for me I think we need more time to this kind of test but missions we know that everything is more difficult, we are more...I think that English from different countries is different too, some actions, some difference.[Portuguese Female Police]

Effect on Gender Awareness

Gender Awareness measures the awareness of gender by the player/protagonist. Most have limited lecture based training in gender awareness but said that GAP brought home to them what it is like to experience missions as a woman.

The individuals were aware of a progression in their levels of gender awareness after playing the game.

Oh yeah, I definitely did yeah, I could even see with the trafficking stuff with that part in the game, when I was answering the question then obviously with the women in it and it showed how they see things and how you'd deal with it. And that was one of things that I would have answered completely differently before the game, so I thought it helped anyway, I liked it. [Ireland, female, military]

The role-playing aspect engaged individuals and was crucial in raising awareness as experiential learning is particularly important for soft skills. The value of role-playing a gender different from one's own offline gender is particularly strong for men playing women.

yeah, it was actually interesting yeah, just gives you, more of an insight into how women feel over, overseas anyway. how they can help yeah. [Ireland, military, male]

*Gender awareness went up a bit. Uh, obviously cuz you know when you're playing the game it was ah, [.] you had to answer questions so I suppose they were like, - how would you put this, - just had to more think like a woman I suppose like, in – in those situations; and, what it was like for those women in the culture you don't really, get much opportunity to do that (*smiles) so it was good like you know. [Ireland, military, male]*



GAP raised awareness among male personnel of the challenges women face on mission, from sexual harassment and men taking over.

Well, the ...it was a little bit of a struggle that I mean as a male I tend to see uhm things a lot different but I have..it was a bit of a struggle to , to be able to think in a way that a woman should be able to think or as hard as I can to think like that, because at the end of the day I can never be harassed as a man in a sexual matter while there was such situation with the one , the butcher that was in a way sexual harassment. Uhm so I had to force myself to try as much as possible to ...to answer as a maybe as a...in a woman's perspective. To try to apply to my view, on the other hand being the male in the second part of the game, the struggle was to give the main role to the ...to Farah, because that was the purpose. I mean you are introduced as you are just a mentor, but the actually want to take the decisions and do all the talking and several times I had to think and say "okay, I'm the mentor. I'm not supposed to do everything", so there were several times answers that you just be silent and let her handle it and it was hard to give that answer. But I forced myself in a way to do it, because that's the purpose of the game and adapting this perspective, different perspective. So, yes. [Bulgaria, military, male]

Female experiences of the same issues of sexual harassment and professional discrimination would have made for useful discussion if GAP was delivered in a blended learning context with time for discussion.

the guy he talk to the army officer, trying to ask her for a date, it's really funny and I think good for the guys to see that too, because it is something they would not think. The answers here is hard too because you have to not say you will go on a date with him of course but also not make fuss and keep with him to get information. It's a good one. [Polish, military female].

- The one thing that made me laugh, and a smart man could find something interesting in that, even if a lady did everything they say 'oh, we made a big impression on her'. And it is important, because they still didn't recognise her as a someone on their level, even if she did a great job. So if some man who is going on a mission sees that maybe he will think it twice, before he says to another guy, maybe they will see and understand. Even if they are not



aware the game influences them. 'Maybe I shouldn't say that, maybe I should respect them'. [Poland, Police, Female]

Both men and women after playing the game recognized the value that having a mixed gender deployment can bring. The game raised awareness of local culture and simultaneously the additional value gender equity brings to peacekeeping missions.

Women have a role to play over there as well. There's certain situations, a woman can go into certain situations quicker than a man could. I wouldn't have thought that before. The scene with all the girls there [in the game] in the community centre and all, the way a woman can walk in and chat. That's a big impact there. [Ireland, male, military]

mm [...] um, the- the women can, can work with women, and its more, mm, it can be seen in the game that, the, the women are needed in this missions [Bulgaria, military, female]

Certainly, a thread related to the women's community, I was not aware that something like this exists in this culture. I did not know that women organize such secret meetings like this. It was interesting for me, just interesting and actually it caused that it widened my awareness of the problem. In a different way, you can look at the military or police issue, because now I know that if I was responsible for sending anyone to investigate this matter, I would know that I have to send a woman there, otherwise the man would not go to this place. [Poland, military, male].

Effect on Culture Awareness:

Although most personnel going on missions receive some form of cultural awareness training, the trainers and those who had been on missions who took part in the evaluations stated that it wasn't sufficient and there was a need for more cultural training. They welcomed the experiential training that GAP offers as it allows familiarity with the importance of culture, the role culture can play in mission contexts and the opportunity to practice responses.

I could see that yeah, even like gestures, how you approach people, how you'd greet people. I'm sure, I haven't been overseas yet, but I'm sure you're briefed on all that stuff before you go but it was good to see it put in to practice [Ireland, military male]



It's important to be aware of peoples cultures and religions and how they, say hello to each other and, what to do, and what not to do when you're greeting people. What not to say to, trigger people [Ireland, male, military]

Culturally shaped gender norms were an often cited problematic area in real life that the game allowed the individual to tackle. Cultural awareness of gender norms is awareness of the local population's gender norms which may be different from the player's own OR awareness of a colleague's from a different organization's cultural gender based on organizational culture or national culture norms which may be different from the player's own. Many individuals expressed a new realization that there are different gender norms in different countries, with several not having given much thought to it and responding with surprise, outrage, and consternation at how to respond to it as a peacekeeper.

It helped a lot with the culture side of things; there was a lot of stuff that I didn't know that I learnt on it, so that was helpful in a way. There was a lot about how it's not equal for women in the other countries, even if they are a higher rank than other male privates or corporals and stuff. That was a bit strange. I know it's their culture and all but its madness. [Ireland Military Male]

A common theme was becoming aware that gender norms differ in different places. It raised awareness of gender and its implications in one's own organization and country, and awareness of local gender norms where the mission is based. This is particularly true for military but also for police and civilians.

The game helps, after the game I'm more aware of those gender issues. That for example shaking hands...and when it's appropriate to go to field operations, and how about this woman needs a doctor. In our culture it's appropriate to go to the field, in that example it wasn't so taken for granted. On the basis of this game, women should go to the field.[Portuguese female police]



Balancing gender and culture was something the individual players wrestled with. Awareness of local cultural norms tells you HOW one should approach it, but the principle of equity in the organization must be respected, the female officer must be allowed to do her job. The game allowed the individual to consider, balance, and choose the option that upholds gender *equity*.

In that case, my decision was I am the mentor, she is the mentee, step into the devils mouth directly, to say I will support you, but you run the show. You know the muktar, he is the first barrier, but then he is changed, he sees we have a professional here.

[Finland, military, male]

Effect on Communication Awareness:

The game raised awareness of the meaning and purpose of communication skills. This was particularly the case for the appropriate understanding and use of verbal and non-verbal communication modes, and for understanding what is acceptable and non acceptable forms of communication in different cultural contexts. Again, the opportunity to practice distinguished this type of learning from traditional forms of lectures and text.

Yeah, I could see that yeah, even like gestures, how you approach people, how you'd greet people. I'm sure, I haven't been overseas yet, but I'm sure you're briefed on all that stuff before you go but it was good to see it put in to practice. And I know that it's only a game, but it's good to see what's acceptable and what's not acceptable with cultural norms when it comes to gender equality, how you'd greet men, how you'd greet women. The game conveyed that well so you could understand that.[Ireland, military, male]

how to be more aware of what you're gonna say before you say it. You know think about what you're gonna say, think about like, ramifications of what, you say and wh-like set people off and stuff [Ireland, Military, male]

Individuals reported being sensitized to implications of cultural difference, whether that is local culture or organizational culture of colleagues, in communications.

As a police officer, we think about how we communicate. This game helps me to think, not only about how I speak to someone, but it's important to take into consider all the tensions



and mistrust that can be there within different cultures. So, it's important to understand different cultures and backgrounds [Northern Ireland police male]

The personnel welcomed the opportunity to learn some phrases that could be useful.

But cultural awareness is something that is most important for me as a police officer I found many interesting words, phrases and it will be very helpful for me for another mission. This is the most important, the words, the feedback for behaviour, but about organisation I am not sure if this is important for this game. [Polish police female]

There was some critique of the limited bandwidth of communication in the game: communication was limited to text, and several personnel said the lack of body language and more contextual information made it difficult for them to make some of the choices of responses.

Preparedness of Working with Other Professionals:

The game allowed for role-playing a character who could have a different offline professional identity, which enabled individuals to learn practical aspects of their role and jobs.

And as I said during our break I find it very good this game, because there are many things for police officers. This game is not focused on military. I know that military missions are very important, but there are many books about, films about soldiers doing something good. But still we don't have enough information about for civilian missions and police officers who take part in civilian not military missions. And it is very good, it could be helpful for many people.[Female Poland police]

Players welcomed having the opportunity to play a military or a police character, but also expressed a need and desire to play a Civilian role. A military male in Finland said that he liked the opportunity to play different roles, but would have liked more of the NGO role, as this is more alien to him than the military or police role. He felt the NGO role in the game was too limited as the military and police role was more dominant in the scenarios.

Individuals from a civilian perspective realized from playing the game that the military has resources and connections that can be useful for the overall mission, and also the importance of understanding local cultural norms and its impact on missions. There was a new awareness that



capacity is there from the internationals but has to be balanced with awareness of local culture, particularly for women.

In a way yes. It was also interesting to note that in this first episode there was this lady. What can you and she in her role, what can she actually do? It was very important not to promise anything we can't keep, it was very interesting to see help in building that road? Is it possible to have this lady in the social centre who has hurt her lip. What are the possibilities? In terms of what this young girl was planning? What are the limits in real life?.....if we can help, also these connections, networks, that they can use to help the local people, we can advise you these or next steps, what are the limits in real life, how much they have connections or network that they can use to help local people. That was new to me. [Finland, female, civilian]

There was discussion about the interaction and cooperation, actual and potential, between different organizations and different nationalities within the same organization. The common ground as well as the differences for military and police in missions was raised.

The military participants, especially the Defence Forces commented on how the police work is differs from their own, even when they work in the same area.

I realise it's actually like, kind of the same role, it's just, when you're in the military, you kind of forced to stay in the military side. Not interact as much, but with the police you can actually, interact with the public a lot more. [Ireland, military, male]

They saw how the police can do more working directly with people:

As the police yeah it was alright. It was ok, it was less interesting. But um, at the same time it had pros and cons, it was a bit interesting as well, because the police work differs, they can actually do more on the ground, in regards to the military. See the way like he, he stopped the sex slaving going on and stuff like that. Like I thought that part was cool, (about?) the way they found out, but they didn't work together, in either – I know there was two different, two different parties but, yeah would have been cool if they worked together. [Ireland, military, male]

On the other hand the police participant saw how military are not always in a base but on some mission they have opportunities to engage with people too.



Engaging in the markets was a bit like community policing for them. It reminds or informs you that they do a bit of that as well and it isn't just all military. [Police, Northern Ireland, male]

Usefulness for Training and Preparation for Pre-deployment.

The general impression was that the game has a lot of potential for use and development towards the goal of improvement of the overall process of soft-skills training for pre-deployment.

I think it is very effective, I think it gives a possibility to learn about how it is on a mission, especially for the people who haven't been there so far. It also gives some knowledge to the people who have already been there. It is a great source of information. Also in terms of the language, it is a very useful source of information. Lots of things can be done with this game, after finishing the game. Someone did a great job. [Polish female Police]

A Finnish military trainer mentioned that he had a long experience in missions, being deployed four times, twice in a national contingent and twice as part of a multinational deployment. He felt that pre-mission training is improved over time but that the main learning takes place in the mission. The core of the pre-training concept is very lecture based, where a so-called experts tells about his/her missions. He saw the game as a way to incorporate lessons learned by a larger audience and turn it into a knowledge base that can be used for training. He also likes the individual component of it, playing by oneself and internalizing the learning. He sees this as a complementary tool, next to the pre- deployment lectures, that can be played before the training sessions.

The game was effective in preparing individuals for peacekeeping missions.

To make some big opinion about it I would like to have more time to think about it, but the idea about this game is very good. I took part in a mission in Kosovo, I was there for almost one year, and would be grateful and happy if I could have played this game before my mission, because it improves your cultural awareness and shows you how you should or you could speak with the others, cooperate with them. The situation with the riot is pretty well shown, so my opinion about this game is very good.

[Polish Police Female]



However, a note of caution was expressed in terms of its long-term impact, which could be mitigated by having the opportunity to replay.

I don't know if you could teach something in three hours, but it is good to check yourself, how your skills are and in a couple of months check it another time or something like that, because. It could teach you something, but in three hours, I don't think it is enough. I will remember it tonight but in a week or two I could forget something. Maybe if I could do it a couple of times. [Polish Police Male]

All of the individuals who took part in the Evaluations felt it prepared them for peacekeeping missions.

like, if I went over there, if I hadn't played that game when I went over there probably would have made a lot of mistakes with the, with the locals but after playing that game, I have a bigger range of understanding, of how to, say hello, how to treat people, how to be just cautious when you're talking to other people, different religions and cultures like you know. [Ireland, military, male]

The potential of the GAP method was recognized by trainers across different countries.

Yes, definitely and it would be perfect if it could be personalised even more for certain positions, certain parts of the world with certain religions, culture and so on. Although I think that sometimes cultural differences sometimes in today's world overemphasised as well, sometimes, but there are differences still of course. You have to be aware of those differences, although individuals are always individuals.

[Finland, military, male]

5. Individual Evaluation Reports

5.1 Portugal

The Portuguese evaluation took place on the 11th of September 2018 at the PSP headquarters building and was hosted and facilitated by Inspector Tiago Ventura Bras Sales, and was the first



evaluation session of the series. The session was run by Dr. Michael Cooke and Ms. Melanie Labor from NUIM and Ms. Sara Singleton and Mr. Kieran Devlin from TCD. It involved a total of 10 police personnel (5 male; 5 female) playing the whole game from start to finish in sequence following the planned evaluation structure. Due to aforementioned issues associated with the timing, the actual sequence was as follows:

1. Briefing;
2. Pre-test;
3. Game play session 1;
4. Break;
5. Game play session 2;
6. Post-test;
7. Debriefing and interview.

The session was held in a small auditorium with ample space between players. Each one had their individual iPad and headphone set.

Two trainers also took part in the session as instructors but did not take the in game or out-game assessments. They were interviewed for their views on the nature, effectiveness and potential of the GAP game and curriculum after having played it throughout.

The interviews were of approximately 10-20 minutes duration and were intended to address the players experience of playing the game in terms of the categories outlined in the summary 4.3. Qualitative Analysis.

5.1.1 Quantitative results

In-game assessment

Group	Player	Communication	Gender	Culture
Portugali	yearling coma grunge judiciary container	3 stars (3.9)	4 stars (3.78)	3 stars (3.75)
	slaw turbojet flagship delivery reset	3 stars (3.83)	4 stars	3 stars



			(3.68)	(3.64)
	persecute penalty sandworm hangup giblet	5 stars (4.13)	4 stars (3.65)	5 stars (3.85)
	oven unison depravity unstopped repulsion	2 stars (3.76)	1 star (3.43)	4 stars (3.76)
	outflank molecular anything volatile flashily	3 stars (3.81)	4 stars (3.77)	1 star (3.54)
	manned grazing strongman resort departure	1 star (3.57)	1 star (3.37)	1 star (3.51)
	imaging divisibly mulch finite cautious	5 stars (3.98)	4 stars (3.72)	4 stars (3.81)
	habitable obtain renderer affected skeletal	4 stars (3.92)	4 stars (3.75)	3 stars (3.75)
	flattery railing catlike margarine daybed	2 stars (3.72)	4 stars (3.59)	3 stars (3.62)
	facility hexagon rebate twirl kennel	2 stars (3.75)	2 stars (3.52)	3 stars (3.64)
	exodus erased unleash jargon swiftness	2 stars (3.79)	1 star (3.45)	3 stars (3.65)

Table 5. In-game assessment scores Portugal

Out-game assessment

The average scores are 74% or higher, which shows that the participants were already competent in the soft skills tested. Female players scored higher (80.37%) than their male (76.86%). In communication female participants scored in average 78.25% and male 77.75%, in cultural awareness female participants scored 82.12% and male 79.75% and in gender awareness the female participants scored in average 79.55% and male 72.94%. The pre-game assessment scores are listed below:

- Culture pre-game overall average: 83.25%
- Gender awareness pre-game overall average: 78.23%
- Communication pre-game overall average: 81.25%

After playing the game the scores for gender awareness were higher and the scores for communication and cultural awareness lower than before playing the game. The decrease was most



probably caused by fatigue as the participants were tired after several hours of playing the game, particularly if their first language was not English. The scores after playing the game:

- Culture post-game overall average: 78.62%
- Gender awareness post-game overall average: 74.26%
- Communication post-game overall average: 74.75%

5.1.2 General Impressions of the Game

The general impression held was that the game has a lot of potential for use and development towards the goal of improvement the overall process of soft skills training for pre-deployment. The game graphics, the narratives, characters, and scenarios were considered to be well thought out and researched, and in particular, the trainers who had previous deployment experience remarked how the situations were realistic and representative of what has been encountered on prior missions.

Int: so, you would also have a lot of expertise with regards to the scenario that was in the game?

Trainer1: yes, it was like to, like a remind again, recall again all those experiences.

Particularly in Timor (?) and Bosnia, it was Croatia initially with displaced persons and riots and everything. People enter this fight, it was interesting

Int: okay so similar enough to the scenario in the game in terms of dissatisfaction among and riots. So how effective would you say the game is in terms of training?

Trainer1: As I was saying...it's a very interesting game because you it's like a reproduction of scenarios, that's why I asked you if you have been in missions or because this is quite ...picture of what happens in missions. Regarding gender, regarding security, regarding cultural awareness, interacting with the locals and violent people and so on...it's quite similar. it's very, very good. It was a very good idea with very good project.

...



Trainer: it's really good, I told you this morning... that it was a really good idea. That's what I asked your sources or if you had been in missions. Because I think you got some information from somebody who was in the missions for this interview because for that to be created you cannot guess all that happens in the missions, I think

Int: No, the data or the game was created based on experience.

Trainer: experience that's why...

5.1.3 User engagement.

Portuguese users had good overall impression of the game in terms of the characters, contexts and scenarios but the most common complaint was the duration and pace of the game considering that it was performed in a single day. Users felt that had they would not ordinarily expect to spend such an extended, concentrated period of time on that activity but that both from an engagement point of view and that learning effectiveness (including time for reflection) it would be better had it been broken up into a number of separate session over a number of days. For example:

PSP1: it's a little bit too...short period of time... so, I think that the game is too long, it takes all day.

...

PSP2: So the game shows that I have better scores before the game...but yes

Interviewer: So this is for the tests before and after the game. Why do you think that was?

PSP2: Because maybe I am a little tired, it's a long time and at the end of the day I'm with, with less attention to the exercise

There is a sense from the above statement that the issue of fatigue influenced the performance during the day as is the case with others. However, this would be greatly mitigated by the gameplay experience being spread out over time.

PSP3: I think the game, it's a little bit longer and I felt tired with the pace of the game. I like the parts that they expressed their behaviours and the conversations, corporal expression is very important in the game but, well I like the game, I like the questions, the questions are very well done and it's interactive, and yeah I think it's useful for training for the mission. But



a little long, I think you can do a long version and a short version, more compact, I think it's useful.

...

PSP4: Yes, I think it was interesting, I get out of my comfort zone, because in my daily work I am a commander but in this kind of field I think I'm learning because it is the first time that I have contact with some issues, some needs, to understand the culture, the communication, so sometimes it was new rules to me to understand.

...

Participatn4: I think it was maybe too long but maybe in the real situation it would be like that so we must train too for long moments and we must stay calm and we stay in with all skills in the moment but some questions maybe I don't understand quite well.

As we can see, one participant did feel that the duration of the game was not unrealistic considering the course of a normal real day, but there are clearly issues related to the pacing and the fact that the player is sitting in one position for the duration, as another player suggested:

"...the two days, I think would be the - the result would be better".

The issue of fatigue is not only associated with being in continuous gameplay mode but also the effect of looking at a screen for an extended period which is commonplace for many people. However the prospect of breaking it up into smaller segments and also engaging in different surroundings would be expected to realise the intrinsic benefits of the game itself including the results.

I have to say the game eh was a little bit extended eh...sometimes I have trouble to look at the screen, because I spend all of my day eh looking at screens. eh...but it's a good game. I have talked to my colleagues, it's a good game to work it...like half an hour, then go grab a coffee or have a cigarette and then play it again. and also, I have to say if this game was made eh...in two days, in two different days, the first part and the second part eh... perhaps the results would be better but it's quite good, it's quite good.



It is acknowledged that learning is more effective when there is an interval between learning sessions, which was the original plan for the course of the evaluation day but the timing made this difficult. Considering the nature of the feedback received however, this would be an easily remedied issue and reflects more the contrived circumstances of a formal evaluation schedule than the intended learning environment that GAP would normally integrate into.

5.1.4 Usefulness for learning soft skills

And the game is another tool that you give and the important tool, to be aware of some of the risks that you will face.

I think it's a good idea for people who go to international missions and uhm really help. It's my first impression

The overall perception of the intended purpose of the game in terms of facilitating the learning of soft skills was remarked by all interviewees as a positive aspect with a significant potential. We have already seen examples of this being mentioned before but despite the issues around duration and fatigue, the educational value of the game was acknowledged by all participants. This is also reflected in the interviews with trainers, who unlike the players, have experience of deployment and can compare what it offers with their own pre-deployment training and deployment experiences. For example, one trainer stated:

That would be very useful for us if we could get this, that would be very useful, because no matter what you say in pre-deployment...You are talking to them. Especially if it's the first mission because we have training for each mission. If they go...Central African Republic, so they get the specific training if they go to south then they get other training. There are some you know...same training but considering the mission where they are going to be deployed...we give particular attention to those countries. But these scenarios you make them instead of talking, you make them interact with the game and it's better for them to understand. It's really interesting, I didn't know about this program but it's really nice. Congratulations.



5.1.5 Gender

The issue of gender awareness resulted in varied responses indicating the issue itself is a problematic one in general and as such it is represented in the game accordingly. By problematic we mean as a real-world problem rather than a difficulty with the game which succeeds in placing the participants in these problematic scenarios.

But, for them the women it's if... In a very small degree comparing to men for everything, for a female police officer in here she won't understand easily why this will happen and the game shows her why. Why this is happening, because it's a different culture and in that aspect, I think the game is good.

In this case we see a male police officer indicated his awareness that women have a different experience, i.e., that of being compared to men.

The game also successfully allowed players to meaningfully take on other gender roles, that there is a different mode of thinking involved as a man playing a woman:

Int: when you played the Maria, the Finnish soldier?

Part: Yes, so ...in that part of the game I have to stop and think if it was me I would do it this way but if I'm a female military in this situation I cannot behave like myself because I have other things to consider. Like in the game one of the things that, in the end of the first part it says you should not do this, you should not do that you know.

The gender issue was also apparent with the scenario about whether or not to lie about being married. It is a positive aspect of the game that there is not a simple answer to this as it does give rise to some discussion. This as part of the blended learning approach where these issues would also be discussed outside of the gameplay context.

Part: In one of the parts it says that you should not tell a lie even if it's a small lie, because in the part that the butcher was being a little bit frisky with her and he asked her like so "you are single" or I don't remember exactly what was the question but I know that it's asking if she is single or not but my answer was "No, I'm married" even if it's a lie, precisely because in that kind of environment for a female it's much easier if she says that she is married to the locals, not to the other personnel who is working with her. But to the locals, because she has to



maintain certain distance, if she says that well any other ...any of the other answers "Oh no I'm ...I have enough of Finnish guys", the other guy will always try to gain some ...some

The game also demonstrates a reflexive aspect in that not only does it allow for experiencing the role of another gender but also reflecting on how your own gender is experienced by the other.

Part: yes, it's different. Uhm I realised that I'm being ...what is we say...(inaudible)...really soft, warm and eh as a woman

Int: and as a man....so you're being extra soft?

Part: yes, and while a woman I'm more ...independent and like myself.

Int: So, when you, just so we understand, so when you were a male police officer you were kind of treating the women you were thinking of them more as soft. uhm...anything else about the kind of being male, a male police officer?

5.1.6 Culture

The idea of being a cultural other is apparent also in the gameplay, and in this example it is not separated from the gender experience:

Part: yes, off course. It's a bit different. We tend to see the world as we are educated in our culture. Off course I can put myself in the woman's shoes, a woman can out herself in a man's shoes but yeah there are some real questions that was the one I liked the most.

In this case the player is referring to the experience of having learned through the gameplay irrespective of the score (which was the same) as she states she is more aware of the differences in culture between her own and those of international colleagues and locals.

PSP (female): Uh, in the, the percent it's the same but I think yes the, the game helped to, be more aware of a cultural differences and, um, to- to understand the cultural differences and dealing with people. ...

There was a recognition that the need for understanding the cultural other was important and that this is supported by the game



PSP (male): yes, uhm yes, I think it's a good way to prepare ourselves to to go outside to deal with the foreign things, foreigners in other people, other cultures it's quite good in that way.

5.1.7 Communication

The issue of communication was addressed specifically at least five times through the interviews, which is not to say that it was not discussed indirectly elsewhere. It is recognized that communication is an essential skill and that the game does provide the opportunity to develop that.

PSP (female): Every day I need to know how to communicate with the population with my police officers so I think I developed these kind of skills, the communication, the leadership, not only to be a chief but leadership, so I think communication is very important for the population and inside the police. I think culture is important to, to understand the population and the police too. So I think these kinds of skills I develop along with my career. My experience, the gender, maybe because I work in the field of mens haha maybe I am too male, too much male hah. But it was very good I enjoyed a lot this game. I think it's important because we don't know what to expect when we go there and this give us a possible image what can happen there.

5.1.8 In game assessments

The players did not have much time on the day to review their in-game scores along with the other out-game results but there was generally a sense of surprise in terms of the results of the gameplay which is material for further discussion and reflection

Part: I noticed in the first one I have better scores tan in the second one

Int: so that's for the quiz. Why did you think that was?

Part: because maybe I'm a little tired. It's a long time and at the end of the day ...I... I'm with less attention to the exercise

Int: And then with the game itself you would have gotten scores for gender, for communication and for cultural awareness. How do you think, what did you think the scores you got for gender...for example?

Part: I was...uhm...my worst score is for gender. I think it's very strange



The sense of fatigue was perceived to have been a contributory factor, but it is interesting that in this case a male who considered himself to be strong on gender awareness because of lots of experience working with female colleagues is surprised that he did not score better in this regard.

5.1.8 Recommendations from Portuguese Experience

Overall the Portuguese police officers (players and trainers) valued the game's potential if it could be used within a more realistic timeframe and broken into smaller chunks with time to process and rethink actions and responses. The ability to revisit certain situations that were ambiguous would also be important. While some valued the ambience offered by the soundscape, others did not appreciate the use of the beeping sound as text scrolled.

5.2 Bulgaria

The Bulgarian assessment took place within the same week of the Portuguese evaluations. The session was hosted at the BDI HQ by Col. Nik Stoianov and the sessions were run by Dr. Michael Cooke and Ms. Melanie Labor from NUIM and Ms. Sara Singleton and Mr. Kieran Devlin from TCD. In this case there were some deviations to the schedule due to the availability of some of the personnel. The sessions were run with four participants from the air force and 7 from the navy. The air force personnel were only available for an afternoon session preceding the full day session with the naval personnel. This meant that while there was time for them to complete about half of the game we do not have in-game assessment scores from them. It is also the case that due to language difficulties they preferred to respond to the debriefing session in the form of focus group discussion rather than individual interviews.

5.2.1 Quantitative results (navy only)

In-game assessment

Group	Player	Communication	Gender	Culture
Bulgaria	talon bullion spotty drainable obedience	3 stars (3.9)	4 stars (3.6)	3 stars (3.74)
	salad agonizing direness geriatric	1 star (3.58)	2 stars (3.5)	1 star (3.49)



canister				
only dreamland rival mandarin suitably	5 stars (4.25)	5 stars (3.94)	5 stars (3.83)	
embroider barometer wharf unhearing playful	3 stars (3.89)	4 stars (3.6)	4 stars (3.79)	
disband amulet studio body ripcord	3 stars (3.82)	4 stars (3.58)	3 stars (3.72)	
chair prepay trousers provider framing	4 stars (3.94)	4 stars (3.67)	3 stars (3.65)	
carrousel case from seclusion mousy	3 stars (3.8)	4 stars (3.56)	3 stars (3.69)	

Table 6. In-game assessment scores Bulgaria

Out-game assessment

In average the female players scored marginally lower (62.76) than their male (63.38%).

Female players scored higher (80.37%) than their male (76.86%). In communication female and male participants scored the same 70%, in cultural awareness female participants scored 62.5% and male 64.06% and in gender awareness the female participants scored in average 54.41% and male 61.02%. The pre-game assessment scores are listed below:

- Culture pre-game overall average: 66.47%
- Gender awareness pre-game overall average: 54.54%
- Communication pre-game overall average: 73.18%

After playing the game the scores for gender awareness were higher and the scores for communication and cultural awareness lower than before playing the game. The decrease was most probably caused by the different questions before and after asked and also the fact that the participants were tired after a few hours of playing the game in English and their concentration wasn't as good as in the morning.

- Culture post-game overall average: 63.29%
- Gender awareness post-game overall average: 61.36%
- Communication post-game overall average: 63.40%



5.2.2 Qualitative results

The combined interviews and focus group discussion with all Bulgarian personnel indicated that they, as was the case with the Portuguese Police, also recognised the potential and value of the game for pre-deployment training. However, the experience of gameplay on the day was also influenced by the issue of timing and duration. Fatigue was reported to be a factor in influencing their overall experience but having said that, again, under different circumstances they would be happy to use the game as a means to develop their skills in this regard. The cultural environment between military and police is also a point of distinction as they have different operational roles.

5.2.3 Overall impressions and engagement

The first remark was usually in reference to the length of the game and duration. This however does not necessarily mean that the game is not enjoyable but rather that the conditions of the assessment stretched duration. In different circumstances the game would be an enjoyable experience, particularly with frequent breaks.

Part: the game is good but is very long time to ...to...play with, the game is too much but is very good because uhm... (communicates with colleague in Bulgarian)

Part: maybe the more of the questions and the tastes are...my English is not very good and uh maybe first you asking for our organization maybe to meet the ...with speaking English well. Buy uhm...it's treasure to me...

Int: you enjoyed it?

Part: I enjoyed yes yes, but it's too long

...

Navy (male): uhm I think that it's very useful for people for going to be on mission, I'll go in november in Israel and the only disadvantage is uhm that the game is too long for one day and uhm I lost my concentration.

Again this experience of the duration and concentration of the game will have influenced the performance overall but also the issue of language was apparent. Some players expressed that their route through the game would have been more efficient and their overall understanding of the content better had it been in Bulgarian. However, given that the language of international missions will be English this is an important skill to practice in the context of the game given its multicultural design.



Deliverable 5.3: Learning: Operational and Educational Effectiveness Report

The expectations in terms of scenarios and narrative are also relatable to broader experiences, including the media (film, documentary, etc.).

Navy (Male): well obviously the game is an interesting thing to do and it's valuable in a way. At first answering the first questions I was kind of familiar with what is expected of me, to give as a good answer because I have watched several movies about the peacekeeping operations and things like those movies like how it's to...there's some truth in that. About the game, it's definitely beneficial because it gives the truth about different situations that ...mainly if I had given other answers than the ones, I gave I would have had different outcomes which is quite valuable. If you are going through the scenarios and stuff, so it's a big depth to base and kind of scenarios, variety of scenarios...it will be extremely beneficial. I'm sure of that.

The fact that there are multiple different possibilities available for each situation is regarded as positive as this reflects the vagaries and ambiguities of reality. This also indicates the extent to which the GAP game is not an isolated or siloed experience for players as they do bring their broader experience to the context of gameplay in order to make sense of what is going on within the game.

5.2.4 Usefulness of game for learning soft skills

The general sense from the Bulgarian participants is that the game is useful for its intended purpose of training soft skills.

Navy (male): I think this game will help me if one day I go to mission somewhere and I really like the way the game is made because I really like the books with choices and they are very similar and it was interesting to me.

This participant is linking his experience of playing the game with reading books that have non-linear narratives which links to a broader aesthetic appeal also. We can see below as well from the perspective of someone who is not accustomed to playing games of this nature that it was a worthwhile experience.

BDI (female): It was an interesting game for me, this kind of game, it was my first time. I never played a game like this. The topics were interesting. Because I was a woman, the first part was very interesting for me, the topics, and the situations.



5.2.5 Gender

Some of the views on gender range from recognising its importance, especially as it is presented in the game but also there are indications of the role of professional roles and culture being brought to the gameplay experience. The game contextualises broader discussions of issues such as gender.

Nowadays we talk more and more about gender so I would think that a person who goes in the military too does have this information about gender but it was useful in the game.

Sara: So still on gender, part of the game is that you play as different people...

BDI (female): Yes, it was very good I think before I am a women and I try to think like a man in the part of the policeman. I learn maybe from the text that I can't be a man. The policeman was a woman in my game haha

Sara: What was so different, why do you think that you can't be a man?

BDI (female): If the policeman was a woman maybe it would be easy for me but men have this kind of thinking, I don't know but they are strict and they don't have these shades of thinking but women have. I think we see all the position of the situation for example.

Sara: And do you think that the game would be good for a man playing, do you think that the experience of being a women?

BDI (female): Yes, I learn about the man many things.

In this example, it is important to note that the issue of gender awareness is not only about men learning the experience of being a female professional but also reflects situations where women gain the perspective of the male.

In some cases the idea of professional identity superseding that of gender to the point of potentially eliminating the distinction was discussed, from the point of view of one military male participant who reports being indifferent or blind to gender differences in operational situations.

BDI (male): I never saw anything about gender. My opinion about gender is man or woman if they do their job it's no matter for me, if they don't stop them to do their job I don't care. Gender r should not stop their working. Gender is not important I think. Maybe in special situation when you need strength, this is the only way we are different.



Sara: So another part of learning is roleplaying, so in this game you play as two different people, you play as female military and male police man. So for example when you are playing as a female military is there anything you noticed that was different?

BDI (male):: I played in the same way, I didn't do anything differently and I didn't...there is no difference for me if I play as a man or as a girl. I answer honest about the situation and what I do in this situation.

In this case it is difficult to say categorically that gender awareness has or has not been influenced by the experience of gameplay but it indicates the potential role of other narratives in terms of mediating the understanding of gender such as the aforementioned professional culture. There is acknowledgement however of special circumstances where different genders relate to different strengths. This is not a universal view however as the following example shows a male who acknowledges attempting to actively understand the differences.

Part: Well I have talked about what would be like for female colleague but uhm...maybe when talking to women, military women I tend to try to understand what they go through because they see the things differently and I don't try to see the service and the life as they see it but I try to understand that the way ...the problems I face in my everyday work are not the same as theirs, the way they face the problems. And the problems are not the same and mainly I try to understand that and to force myself to think that their military women are a little bit more emotional, so they take things a little bit harder and a little bit more worrying and that's as far as I can get. I have never played the ...the female perspective I guess in a bigger scope

In the above example there are indications that while on the one hand certain emotional characteristics are distinguished between the genders, it is also something that needs to be explored through the context of gameplay (or training more generally).

5.2.6 Culture

The role of the game in terms of developing culture awareness for deployment was also acknowledged:



BDI (female): Yes I think it would be useful because I am going to a mission next year and I will be working in this setting with many, many cultures I think so. The other person will be calm when I know what are his needs.

The fact that the participant refers to the need to address the emotional experience of the other to be encountered reflects the importance of culture as linked with communication. The importance of the game for teaching the customs and habits of locals is also acknowledged.

BDI (male): Such games could teach the habits for local people I think it is helpful and it could be helpful for people who are going to certain areas to meet local areas and local customs. It is an easy way to understand locals. I think sometimes it is difficult to understand local cultures but this game roleplaying was really good.

The issue of culture is also relevant to professional culture in terms of the differences between policing and military roles and perhaps recognising the similarities between one's self and the professional other.

Sara: So you think you learned some things from playing like police officer?

BDI (male): Yes, it was new for me. I haven't been on missions so it's new for me. I think police are similar; you just have to be aware customs and have to know the local community state in this time. To be CIMIC from to be military as you interact with locals also so is like police, the job is about knowing people.

5.2.7 Communication

The scoring for the Bulgarian military personnel (Navy) indicated a general improvement in all categories but this is generally not reflected in the qualitative self-reports on the ability of the game to teach useful skills.

Sara: And finally the area of communications, do you think that it is good teaching communications in any particular way?

Sara: And when you saw your scores and I know that you have only seen for the game, were you surprised by them, did you understand why you got the scores like you did?

BDI (female): to be honest I didn't understand the scores very well. There was the graph and not full graph and I didn't get very well.



The players generally felt that along with the other categories including cultural awareness the game is useful for improving communication skills in general, including the fact that foreign languages and cultures are part of that communication context. For example,

Sara: And finally the area of communications, do you think that it is good teaching communications in any particular way?

BDI (female): Yeah, I think it was great, the whole game is good for me, as I already said it is the first game like this for me.

5.2.8 In-game assessment

The issue of performance in in-game assessment and compared to out-game scores gave surprising results to most participants. These were only available for the Navy personnel on the second day but players were conscious of the role that language had to play also along with the broader issue of fatigue.

Interpreter: She, we were discussing that probably should have been better post game than pre-game in the results, but she mentions that in conversation post game she was a little bit worse

Interviewer: Gender Improved...by over twenty percent so that and then yeah culture decreased a little bit by five percent and communication also decreased a little bit. Uhm yeah you also said that you felt quite tired after playing the game, is that right?

Interpreter: Maybe...it is, it is a possibility that she may not have understood everything correctly and that some of that differences...maybe is main part that has affected her results

Int: so, might it have been easier if both the game and those questions had been in Bulgarian?

Part: yes, absolutely. If I had known English better...

5.2.9 Recommendations and improvements

Apart from the broader points about the duration and timing of the game play there were some remarks about how the game could be improved in terms of realism. These included the use of more sophisticated animation of facial expressions, body language, hand gestures, etc. For example:

Part: well maybe it would be more realistic. I mean to have some movement, I mean like...some kind of better visualization because nowadays I mean different kinds of games are



quite improved and stuff, you feel like you're there and you're doing stuff. So, it can improve I mean in that sense. And make it a little bit more realistic, maybe because there is several times when the verbal communication was mentioned...maybe something about that can be talked of like different situations, different questions and characters to be ...

Int: like more three dimensional as opposed to two dimensional?

Part: yes, yes. With some kind of verbal communication moving hands and stuff...but

Int: you feel that would have made it more realistic than it was now?

Part: yes, and quite more. Because realistic means that you'll be in the game and you will not be able to get distracted because once you get distracted, I mean, in my result post game questions gave me my result in communication I think was

5.3 Poland - Police

5.3.1 Execution of methodology. Specific issues that emerged.

The Evaluation session in Poland followed two sessions in Portugal and Bulgaria. When possible the lessons learned from the first two evaluations were implemented.

The first issue was the range of times that it took the participants to play through the game. It largely depended on their level of English and to a smaller extent on their familiarity with computer games. Initially there were breaks planned after each part of the evaluation, so after doing the pre-quiz everyone would wait for the last person to finish and then everyone would start playing the game. The decision was made to let the participants to do the pre and post quizzes and play the game at their own speed, taking short breaks when they were tired.

This approach significantly improved the timing and although still tired after the sessions, the participants who finished earlier were able to give the interviews shortly after finishing the post-game game quiz. That also meant that they were not waiting while others were interviewed. The ones that took longer to play and do the quizzes didn't feel pressured by the group waiting for them and could concentrate on reading instead of rushing to complete.



The planned start of the session was adapted to the Police course schedule and the evaluation started at 8am, when they would normally start their lectures or lessons.

Setting up the iPads at each session was easier and smoother for the evaluators with each session. All the devices were prepared the day before, charged and checked, ready for the morning session.

For most participants the game was very intuitive and they didn't have any problems navigating through it. One of the participants with no gaming experience wasn't sure when she got to the market scene and was waiting for several minutes, expecting that 'something was loading'. Once she was instructed how to swipe the screen she didn't have any further problems.

The in-game assessment scores in most cases appeared after the end of the game on the screen, but in a few, the player ID had to be typed to the ADAPT website before they got the results.

5.3.2 Site Specific Information - Description

The evaluation with Polish police took place on the 18th September 2018 in the Police Academy in Szczytno (WSPol) and was conducted by Dr Justyna Pyz and Sara Singleton (TCD). Dr Aleksandra Nowak and Dr Walentyna Trzcińska (WSPol) organized the participants and venue for the evaluation. Kamil Kuć (WSU) conducted four of the interviews.

There were 10 participants at the evaluation, 6 male, 4 female, all taking part in a month-long pre-deployment English course based in the Police Academy in Szczytno. They welcomed the evaluation as a different day than their normal lessons. The interviews were conducted with all the participants and the instructor running the English course for police preparing for peacekeeping missions. The evaluation took place in the Polish Police Academy campus, in the classroom where the English course would normally take place. The interviews were conducted in separate rooms in the same building.

5.3.3 Results - Quantitative

In-game assessment

Group	Player	Communication	Gender	Culture
Poland Police	transpire activist qualified capped hurling	3 stars (3.86)	4 stars (3.67)	3 stars (3.69)
	shakiness unfrozen fraying foster persuaded	4 stars (3.98)	5 stars (3.95)	4 stars (3.79)
	revision urologist senator unwomanly nicotine	3 stars (3.86)	4 stars (3.74)	3 stars (3.57)
	relatable lake showbiz valium banana	4 stars (3.94)	4 stars (3.73)	5 stars (3.84)



pupil applied uncouple spruce unrushed	2 stars (3.79)	5 stars (3.85)	3 stars (3.68)
plentiful haunt bulgur astronomy cause	3 stars (3.82)	4 stars (3.56)	1 star (3.52)
kiwi aspire marlin agreed eloquence	3 stars (3.91)	4 stars (3.59)	5 stars (3.83)
flyover twitter unselfish relapsing pretzel	1 star (3.65)	2 stars (3.48)	3 stars (3.62)
exclusion proofing fabric pegboard monoxide	2 stars (3.71)	2 stars (3.48)	3 stars (3.58)
borax overhaul affair mop slideshow	3 stars (3.83)	1 star (3.46)	3 stars (3.62)
bondless copied sensitize reputably eldercare	4 stars (3.96)	4 stars (3.81)	4 stars (3.77)

Table 7. In-game assessment scores Poland Police

Out-game assessment

In the WSPol evaluation session the female players scored higher (74.29%) than their male (73.35%) participants. In communication female participants scored in average 77.91% and male 71.45%, in cultural awareness female participants scored the same 78.12% and in gender awareness the female participants scored in average 67.64% and male 68.87%. The pre-game assessment scores are listed below:

- Culture pre-game overall average: 81.25%
- Gender awareness pre-game overall average: 64.70%
- Communication pre-game overall average: 78.88%

Similarly to the previous evaluation sessions after playing the game the scores for gender awareness were higher and the scores for communication and cultural awareness lower than before playing the game. The decrease was most probably caused by the different questions before and after asked and also the fact that the participants were tired after a few hours of playing the game in English and their concentration wasn't as good as in the morning.

- Culture post-game overall average: 75%
- Gender awareness post-game overall average: 72.22%
- Communication post-game overall average: 68.33%

5.3.4 Results - Qualitative



The interviews conducted with the Polish police personnel indicated that they, as was the case with the respondents in the previous session, also recognised the potential and value of the game for pre-deployment training.

5.3.5 General impression of the game

The participants were overall very positive about their experience. They had never taken part in a similar training before and they were pleasantly surprised by many aspects of it: “I was surprised by her [game] complexity and the fact that she was reflecting a situation that could happen on a mission (Police officer 4)”. They didn’t think they would find it so immersive and involving, especially the ones who rarely or never played computer games: “It was really interesting and I didn’t even think I would be reacting in that way and I would be involved so deeply” Police Officer 6

Participants who hadn’t been on a peacekeeping mission and were intending to apply to go overseas thought that the game gave them a picture of a peacekeeping mission and examples of situation that they would potentially experience. “It was a great experience for me, I have never been on a mission, so I feel I can imagine what happens at the mission.” (Police Officer 7)

Participants with some peacekeeping experience commented how they would like to have had a game like this incorporated into their pre-deployment mission. “I took part in a mission in Kosovo, I was there for almost one year, and would be grateful and happy if I could have played this game before my mission, because it improves your cultural awareness and shows you how you should or you could speak with the others, cooperate with them.” (Police Officer 8)

It was very good having both participants with and without deployment experience and seeing that both groups found it useful and enjoyable, and they all expressed an opinion that the game is a good training tool.

5.3.6 The medium of the game

The participants had various experience of pre-deployment training. As mentioned earlier they were half way through their language course for improving their English before going on international missions. None of them had experienced anything similar to GAP by way of training before and they found it was a positive change from the ways of learning they were used to.

The players responded positively to the interactivity of the game. They were comparing it to lectures they have, that are: “normally very boring, very boring. Here is good because it is interactive, not just bla, bla, bla that it’s totally boring and normally you don’t hear anything after twenty minutes”. (Police Officer 5)

Some of the participants were familiar with computer games and some weren’t. For the latter, it was also novel how the game was constructed: “It surprised me that depending on which answer



I choose, the second player reacts. It was surprising, that I choose and I have a reaction. They were my decisions” (Police Officer 6) They saw it as a very positive thing, that they had an influence on what was happening in the game and it made them think even more carefully about their choices and decisions.

As much as participants enjoyed playing the game the policewomen and policemen also saw a need for blended learning. “The game definitely will be useful, because it makes you think. It would be good to have some classes about cultural differences, discussion. But it has to be more time. Have to divide, first story, then the second. And have a discussion that your answers emerged from this or that.” Police Officer 10. They seemed very excited and were very eager to talk about the game and project during lunch break, ask questions and give their opinions. This further demonstrated the need for discussions between and after sessions.

5.3.7 Learning outcomes

All the participants saw the benefits of playing the game as a training tool. They thought they learned something and some thought they would like to play again after some time to see what would happen if they chose differently: “I am wiser now, I have better knowledge and I would do it maybe in a different way” (Police Officer 6).

The participants with no mission experience understandably benefited the most “The issues that most probably I have no idea about before going on a mission are raised. I have some idea about the mission and I think that this type of training is useful” (Police Officer 1). The same interviewee communicated readiness to learn more about the soft skills targeted in the game: “I can say that this game has a positive effect on the willingness to know what was previously unknown. Culture, gender, communication.” (Police Officer 1)

None of those who were on a mission found the game boring, it was in fact the opposite “It’s like one of the guys, saying at the beginning ‘This is great, I like it so much’. And he was on two missions, as far as I know, also he was serving in Scotland Yard in London, so he said it is something great for him, another experience.” (Police Trainer)

The instructor / lecturer teaching the group English in the context of foreign missions also mentioned additional benefits of playing the game for people with English as a second language. There was a feedback from the end-users during the process of writing the storyline to ensure the vocabulary was accurate. “I think that for people going on missions when they can have some image of how it is like, they can have an image also of the language being used.” (Police Trainer)



5.3.8 Culture

As with the interviews conducted at the beginning of the project, the need for cultural training was clear. People who came back from foreign missions realized how big cultural differences can be in various countries. Regardless of how much training in the area they got, they felt the need to learn more.

During the evaluation the same opinion was expressed and the interviewees saw the benefit of learning through the medium of the game: “I think it is a good idea, because you can learn lots of things from this kind of game. You can improve your cultural skills. You can know about other culture, another place. I think it is a very, very good idea” (Police Officer 7)

One policeman also recognised their limitations, saying that coming from a country that isn’t very multicultural it is a steep learning curve going on a mission to a very diverse environment and that the game can help with that: “I think that it is because a person does not realize many things during a trip, because we live in Poland in a homogeneous society every day, hence problems arise, which we cannot even realize how this cultural or religious sensitivity. I think that here these matters have been greatly touched.” (Police Officer 4)

5.3.9 Gender

The opinions about gender topics showed how little, if any, gender training is provided in the Polish police service. Expecting to learn about soft skills they didn’t realise that there would be a big stress on gender. Police Officer 2, when asked if anything surprised him answered: “A strong gender issue. A lot of attention is paid to the role of women on missions.” Police Officer 3 answered similarly: “a larger number of questions about gender, the role of women in missions and in general”

Despite the stress in the game on gender topics not everyone saw that gender issues remain a problem. The men had generally positive opinions about women in police and didn’t necessary see gender as still an issue. One of them saying: “Women have been working in the Polish Police for many years and are appreciated employees.”(Police Officer 4), and another: “I think we as police, we realize that in police there are lots of situations where a woman can do something that a man can’t”. (Police Officer 10)

The female participants noticed different things in the game and appreciated that “gender topic is really well described” (Police Officer 8). The same person realized during the interview that maybe even more could be done in the game with regards gender:

Why wasn’t the woman the mentor? Because it still shows women as a little bit weaker. Because she was the one who was looking for a mentor. Why didn’t a young man get the



mentor and why not a woman? It is very difficult and many countries wouldn't agree to get a woman as a mentor, especially to a country when law and religion are as important, but it is a kind of challenge. Maybe there should be an opportunity if you want be a male mentor or a female mentor. It is a high time for women to take important places as well, so the game could create reality when they could take that place. (Police officer 8)

Generally female policewomen are used to working in a male environment and although their male colleagues say that it is not an issue at all and they are needed in the service, they are still not that common, especially in higher posts, where policemen are surprised to see women in charge: "I am the only woman bomb expert and I am the commander of the group, so my guys are used to it. But here in Poland whenever we work with other guys, I am like 'sorry, I am the commander' (laughing)." (Police Office 5)

5.3.10 Communication

The female participants noticed more communication topics in the game. One said that in the game "we see maybe a slightly different point of view, because they were made by someone else" Police officer 5. Another noticed, "I am person who has sense of humour and I noticed that in such situations I shouldn't use my sense of humour. I shouldn't behave like me, but like a woman on a mission" (Police officer 6). This is thinking about her own behaviour after playing through situations in the game when one person's jokes are not seen as funny by another person. Yet another one reflected that 'communication with people who stay on a mission' is a problem and the game "shows you how you should or you could speak to the others" Police Officer 8

5.3.11 Contribution to Development of In-game and Out-game Assessments In-game and Out-game.

(i) Out-game Assessment

The out game assessment was also received positively. There were comments that sometimes there is no clear answer to the questions/statements and there should be an option of 'depends of circumstances'. This is not practical to implement.

One participant thought that: "The quiz was constructed in such a way that it forced such intuitive responses, I did not have to think deeply about them." (Police Officer 2) This was a valuable opinion, as the statement should be answered to reflect how the participant really feels about the issue and not the correct and expected answer.

Participants were not sure if their answers changed after playing the game, which is understandable as at that stage of the evaluation the statements in the pre- and post-game assessment varied.



When asked if they had noticed a difference in their answers one remarked: “I don’t know, because the questions were a little bit different.” (Police officer 5). This issue was later resolved during evaluation to good effect.

There was not enough time to have the recommended break between completion of the game, and taking the post-game quiz. The police schedule didn’t allow for this break and it was noticed by participants: “Maybe it would show better if there was any difference, if we did the same test in a few days, if there was some time for thinking after the game. But with the same questions.” (Police officer 5) This shows their awareness of the methodology used during the evaluation.

They saw the need for the quizzes and despite them adding to the time they spend on the iPads none of them complained about it. They also wanted to see the score and check how they were evaluated after playing the game.

(ii) In-game Assessment

The in-game assessment results caused some confusion with low gender scores (two stars, except one person, who scored three out of five). Some of them felt that it wasn’t fair and they should have scored more. Looking at the assessment in detail they didn’t understand why in some situations they got a ‘very good’ score for communication and culture, but ‘poor’ gender awareness.

The participants were assured that the assessment is still work in progress and the goal for the evaluation is to check what can be improved in the game itself, but also in the out-game and in-game assessments.

Similarly to the out-game assessment they wanted to see their scores for decisions they made in the game. Most of them didn’t only look at the stars, but spent time reading thought the more detailed assessment of the particular scenes.

5.3.12 Experience of the Game - lessons learned.

The general response was very positive, though one major complaint was about the length of the game. Suggestions to divide the game into two parts were made by almost all participants. Although it was pointed out that the game holds participant’s attention for longer than a lecture” (Police Officer 3)

“If I want to focus 100%, I did it only with the first part and then after the middle of the second part I started to count the time till when it was going to finish. Maybe it would be better if it was separated into two days. ” (Police officer 6)

The game played with short breaks took up to 3.5 hours for some participants. As with the previous evaluation sessions, language was an issue. Although all the WSPol had a good level of English and didn’t have any problems in reading and understanding the game, and giving the interviews, it has to



be taken into account that people with English as a second language will take longer playing the game and will be more tired before starting the post-game quiz.

5.4 Poland WSU

5.4.1 Execution of methodology. Specific issues that emerged.

The Evaluation session in War Studies Academy in Warsaw followed one undertaken with the Police. The schedule from the previous sessions was implemented again and the participants did the pre and post quizzes and played the game at their own speed, taking short breaks when they were tired.

As most of the participants were senior military officers and couldn't stay any longer after playing the game, the interviews were conducted in the following week.

5.4.2 Site Specific Information – Description

The evaluation with the Polish police took place on the 20th September 2018 in the War Studies Academy and was conducted by Dr Justyna Pyz, Sara Singleton (TCD) and Dr Małgorzata Gawlik-Kobylińska (WSU). Prof. Ryszard Szpyra (WSU) recruited the participants and Kamil Kuć organized the venue for the evaluation and logistics and conducted all the remaining interviews. One of the participants refused to give an interview.

The participants were male senior military officers, except for one academic, who was familiar with GAP and had taken part in the testing of the game in the early stages of development in March and a female PhD student, who had spent time on missions as a child with her family.

5.4.3 Results - Quantitative

In-game assessment

Group	Player	Communicatio n	Gender	Culture
Poland Militar y	undying lanky t-shirt bottling rigor	3 stars (3.82)	4 stars (3.59)	3 stars (3.71)
	swan container yeah these open	3 stars (3.83)	1 star (3.45)	3 stars (3.68)
	strudel pension earful reluctant hatbox	1 star (3.58)	1 star (3.26)	1 star (3.48)



squad italicize appetizer married judgingly	1 star (3.47)	1 star (3.37)	1 star (3.25)
seizing clavicle turban trodden tweed	2 stars (3.76)	4 stars (3.57)	3 stars (3.63)
sadness gratify slapping viral living	2 stars (3.78)	4 stars (3.6)	3 stars (3.63)
dandy prayer obedient coma upheaval	3 stars (3.91)	4 stars (3.57)	4 stars (3.77)
bronze mortally pointed aspect sliding	2 stars (3.66)	4 stars (3.82)	3 stars (3.63)
boil sympathy unframed mocha quit	5 stars (4.)	4 stars (3.67)	4 stars (3.81)
amplifier cobweb pending captivate elevation	3 stars (3.88)	5 stars (3.95)	4 stars (3.78)

Table 8. In-game assessment scores Poland Military

Out-game assessment

Male military scored the lowest (62.52%), male civilian higher (67.81%) and female civilian got visibly highest score (84.84%). In communication the female civilian participant scored in average 87.5%, the male civilian 71.25% and male military 70%, in cultural awareness the female participant scored 82.5% , the male civilian 70.62% and the male military 66.35% in gender awareness the female participant scored in average 86.02%, the male civilian 62.5% and the male military 53.20%. The pre-game assessment scores are listed below:

- Culture pre-game overall average: 69.87%
- Gender awareness pre-game overall average: 56.02%
- Communication pre-game overall average: 74.5%

Similarly to the previous evaluation sessions after playing the game the scores for gender awareness were higher and the scores for communication and cultural awareness lower than before playing the game. It was most likely caused by different questions before and after the game and tiredness of the participants.

- Culture post-game overall average: 67.29%



Deliverable 5.3: Learning: Operational and Educational Effectiveness Report

- Gender awareness post-game overall average: 64.41%
- Communication post-game overall average: 68.5%

5.4.4 Results - Qualitative [from transcripts of interviews]

Each of the evaluation sessions was organised according to the same schedule, but the sessions were different as the groups of participants differed.

The session in the War Studies Academy was interesting in the way that the participants were senior military, and some of them lecturers in the Academy. Some of them had a very traditional view of pre-deployment training and were not convinced by the game. On the other hand, the academic/researcher and the PhD student were very positive about their experience.

5.4.5 General impression of the game

The military were interviewed during the week following the sessions and their answers were very succinct. One of them said that: "It's a good game, but as I say you have to have a lot of time to play this game well" (Aviator 3). Another to complained that the answers were 'too limited' (Aviator 1) and the range of them could have been much larger' (Aviator 2).

One participant with a poorer grasp of English admitted that he couldn't understand the game fully so he is not able to say if he could recommend it (Officer 1). Another one would recommend and suggested "it can be interlaced between lectures. The lectures how we know, that quickly bored participant and his consciousness after a few minutes, and with this game, you can stay longer 'active' and learn from this game" (Officer 3). That mirrors opinions of the respondents from the Polish Police, who were saying that lectures are usually dull and listeners can't concentrate for an extended length of time. The need to use the game in a blended learning environment was also repeated both by participants and noticed by the evaluators.

The academic, who participated in the session wasn't directly involved in the GAP project, but took part in a first testing session back in March 2018, when the technical issues were tested and there were still wireframe place holders for the art. The participants were shown then only a small fragment of the storyline. He didn't have any more contact with the project until the evaluation and was impressed how the game had developed the since the first test. He was very positive about using it during the training and said he would definitely recommend it.

The PhD student in the Military Academy also enjoyed playing the game and found it a useful form of training:



I think it's intuitive, friendly and I think it's a good idea for people who want to go on international missions and it will help a lot. It didn't matter to me so much the outcome, I felt happy that I knew I was learning. I would like the opportunity to go back and follow different paths. With the headphones it is very absorbing. (Ola)

Spending time in Pakistan as a teenager she had an experience of living in a mission from a different perspective. She thought the game was very accurate, the scenes were well constructed and the sounds took her back; she could almost hear people selling pashminas at the market.

5.4.6 The medium of the game

The academic teacher was definitely the most positive about using the game as a training tool. He thought that in the time spent playing the game, a lot can be learned and it still leaves the time that could be dedicated to training for more detailed discussion or a lecture about particular topics.

The use of a tool in the form of this game is definitely a good solution. Considering that we need about 2 - 2.5 hours to complete this game, it is a very condensed dose of information on a given topic, region or culture in the region, which gives us the advantage of being able to do other trainings as well. My point is that by managing the time up to 3 hours we are able to pass a huge dose of knowledge, and the remaining time we can devote to developing specific topics. (Academic)

Another participant who is a military officer, but also an academic teacher stated, that “the game has a positive aspect and could be an introduction to further activities” (Aviator 2). Both of them saw the game rather as a part of blended learning activity than a stand-alone training tool.

5.4.7 Gender

With a majority of male participants in this session, it was interesting what the only female participant, with an experience of living, but not working, at the mission had to say about gender related topics showed in the game:

I think I remember this scene when the guy he talks to the army officer, trying to ask her for a date, it's really funny and I think good for the guys to see that too, because it is something they would not think [about]. The answers here are hard too because you have to say you will not go on a date with him of course but also not make a fuss and keep with him to get information. It's a good one. (Ola)

The female participant asked if it is good for a male peacekeeper to play as a woman peacekeeper answered: “Yes definitely! Here we are so few women and it such a male place to work, it would be good to have to think as a women but maybe I think they don't like it.” and



explaining why “I think they would think it was pointless because probably they haven’t worked with women before so much so they don’t need to know about their experience.” (Ola)

And indeed a male participant said that “for me it was a shock that I as a man had to speak as a woman” and he also gave an advice that “playing such a game a man should perform in the role of a man and likewise for a woman” (Aviator 3) when asked if he would recommend the game as a part of pre-deployment training, he answered “I think so, although I would dedicate it to women”. Other participants didn’t find too difficult to play a woman.

Another one said it was hard for him to imagine himself as a woman and expressed the same opinion, that “a person of a given gender plays a person of the same gender. I felt completely uncomfortable in the role of a woman” (Officer 2)

The academic participant thought that he learned something new from the game about gender:

Certainly, a thread related to the women's community [centre], I was not aware that something like this exists in this culture. I did not know that women organize such secret meetings like this. It was interesting for me, just interesting and actually it caused that it widened my awareness of the problem. In a different way, you can look at the military or police issue, because now I know that if I was responsible for sending anyone to investigate this matter, I would know that I have to send a woman there, otherwise the man would not go to this place. (Academic)

Although some benefits of the gender training were seen in the group, the concept of role-playing to understand someone else’s situation wasn’t understood by everyone. Particularly the fact that senior militaries were so opposed to the idea of playing a female role was rather significant. One of the points the game was making, was to ‘walk in someone else’s shoes’ to understand what problems the other person was encountering. It was particularly important for male participant, who can’t often imagine what issues their female colleagues were encountering during missions.

Another opinion expressed was that gender doesn’t make a difference, “whether it is a woman or a man, the officer must make the same decisions.” (Officer 3)

5.4.8 Culture

As per views expressed in the interviews conducted at the beginning of the project, cultural awareness is generally seen as a skill needed at peacekeeping missions

I would definitely recommend it. The game widens one’s horizons mainly with these cultural threads. It gives very synthetic information about culture and how to navigate in this culture. What phrases to use, what behaviours to use and what to avoid. (Academic)



Another participant said that he would recommend the game, but it should be set up in the country to which the player is going, to take into account cultural differences. Cultural issues were often connected with gender ones in their opinions as it is in reality.

5.4.9 Communication

As mentioned previously the interviewees in this session were men of few words and they didn't mention the issue of communication either.

5.4.10 Contribution to Development of Assessment In-game and Out-game.

The need for the in-game assessment was noticed in this session again. The knowledge that the game influenced their answers after the game gave the participants a feeling that they gained knowledge by following the storylines and they can apply it.

It was certainly easier to answer some questions. I would answer the questions before the game in a different way. [...] that seemed right before the game, it turned out to be incorrect when I went through the whole game and I understood that this answer would be wrong. (Academic)

5.4.11 Experience of the Game - lessons learned.

The evaluation session in the War Studies Academy certainly showed how the GAP game and curriculum is needed and important, especially in a military setting. There were positive opinions about the game and a number of participants said they would recommend it for pre-deployment training as a part of blended learning setup. At the same time there were opinions that a man shouldn't play a female role in the game. This shows how little understanding of the purpose of the game some of the participants had. Definitely as people who teach and train others rather than being taught and trained, they didn't have the curiosity and the learning mindset that people who are in training have.

5.5 Finland

5.5.1 Execution of methodology. Specific issues that emerged.

The evaluation workshop in Finland was held on 25 September 2018 at Laurea University of Applied Sciences. Ten individual players did the pre- and post-game assessment. Of these four were female and six were male. All three groups were represented: civilian, military and police. Seven were



civilian, two were military and one was police. The military representatives were all male, the police representative was female as well as three civilians representatives. After four previous sessions the methodology was already tested and no changes were needed. There were no new issues emerging.

5.5.2 Site Specific Information - Description

The evaluation took place on the 25th September 2018 in the Laurea University of Applied Sciences and was conducted by Prof Anne Holohan and Dr Justyna Pyz (TCD) and Mascia Toussaint (Enquirya). Petteri Taitto (Laurea) recruited the participants and organised the venue and Kirsi Hittinen (Laurea) supported the session and conducted some of the interviews.

The participants were a mixture of military, civil service and civilians. Four were female and six male.

5.5.3 Results - Quantitative

In-game assessment

Group	Player	Communication	Gender	Culture
Finland	vision conch hazing culpable coaster	5 stars (4.11)	4 stars (3.72)	5 stars (3.87)
	undying lanky t-shirt bottling rigor	1 star (3.44)	1 star (3.25)	1 star (3.35)
	squad italicize appetizer married judgingly	1 star (3.65)	1 star (3.36)	1 star (3.34)
	seizing clavicle turban trodden tweed	5 stars (4.1)	5 stars (4.)	3 stars (3.71)
	retaining strength uncanny monthly rerun	4 stars (3.94)	4 stars (3.8)	4 stars (3.78)
	quaking goatskin unsteady record trickily	4 stars (3.95)	4 stars (3.61)	3 stars (3.72)
	presuming frisk decompose acquire thicket	3 stars (3.91)	2 stars (3.47)	3 stars (3.74)
	enunciate wrongdoer decibel elves automated	3 stars (3.85)	4 stars (3.78)	4 stars (3.79)
	enlighten kabob grievance vicinity enlarged	4 stars (3.96)	4 stars (3.83)	3 stars (3.75)
	dipped finale dollop tried coke	4 stars (3.98)	4 stars (3.68)	4 stars (3.82)
	busily blush grub street armed	2 stars (3.75)	4 stars (3.58)	3 stars (3.64)
	basics oblivious flashily arrange marsupial	4 stars (3.93)	4 stars (3.79)	3 stars (3.73)

Table 9. In-game assessment scores Finland



Out-game assessment

In terms of the pre- and post-game outcomes, one caveat has to be made, i.e. the questions pushed in the pre-game questionnaires are not identical to the ones pushed in the post-game questionnaires. This makes a comparison at general and detailed level hard. In any case, the first observation is that overall the scores for the three areas are high, i.e. that the soft skills areas of cultural awareness, gender and communication are well developed in Finland. The pre-game assessment scores for each area are 75% and higher, as shown by the data below:

- Culture pre-game overall average: 82,25%
- Gender awareness pre-game overall average: 75,29%
- Communication pre-game overall average: 76,75%

Basically, the observation is that participants were very proficient in these soft skills before starting to play the game.

The drill-down of this data in the three groups show that for the soft skill culture the strongest scoring group for the pre-game questionnaire is the civilians (85,17%), followed by police (78,75%) and military (73,75%). Of course, caution is needed as only one participant from the police was observed in the Finnish workshop and two from the military. Also, it is observed that female players score higher in the pre-game questionnaire on culture (85,62%) than male players (80%).

As for the soft skill gender awareness, the pre-game questionnaire highest scoring group is the military (79,41%), followed by the civilians (74,78%) and police (70,58%), again with the same caveat as in the previous paragraph. Furthermore, it is observed that in terms of gender awareness, female players score slightly better in the pre-game questionnaire (76,83%) than male players (74,26%). However, the difference is minimal.

Finally, in terms of the soft skill communication, the pre-game questionnaires show that the highest scoring group is are the civilians (79,64%), followed by the military (72,50%) and police (65%). Also, it is observed that female players score higher in the pre-game questionnaire on communication (81,25%) than male players (73,75%).

Also, the post-game assessment scores are relatively high, but show only an increase in the score for the soft skill gender awareness and a minimal decrease in the scores for the soft skills culture and communication, as shown by the data below:

- Culture post-game overall average: 79,62%



- Gender awareness post-game overall average: 76,61%
- Communication post-game overall average: 74%

Considering the minimal variations, it is most probable that this decrease is caused by the different questions asked and fatigue, as the post-question set was asked in the afternoon, after having played the game for a couple of hours.

The drill-down of this data in the three groups show that for the soft skill culture the strongest scoring group for the post-game questionnaire is still the civilians (81,07%), followed by police and military (both at 76,25%). Of course, caution is needed as only one participant from the police was observed in the Finnish workshop and two from the military. Also, it is observed that female players score higher in the pre-game questionnaire on culture (80,31%) than male players (79,16%).

As for the soft skill gender awareness, the post-game questionnaire highest scoring group is now the civilians (77,94%), followed by the police (75%) and military (72,79%). Furthermore, it is observed that in terms of gender awareness, male and female players score evenly in the post-game questionnaire (76,71% for male and 76,47% female players).

Finally, in terms of the soft skill communication, the pre-game questionnaires show that the highest scoring group is again the civilians (75%), followed by the military (72,50%) and police (70%). Also, it is observed that male players score higher in the post-game questionnaire on communication (74,16%) than female players (73,75%).

5.5.4 Results - Qualitative

5.5.5 General impression of the game

All the participants in Laurea were positive about the game and they thought it would be a good pre-deployment training tool. The ones who have many years working experience and went through a lot of training during their career thought that the game wasn't that useful personally for them, as they were aware of the ideas that the game was teaching. Although they had never been on missions, their previous training included soft skills targeted in the game and working with variety



of different people and this gave them practical experience in that field. At the same time, they thought it would be a good tool for people at the beginning for their career and before going on a mission, A correctional officer asked if he considered the game a useful tool for training, said “Yes, certainly. It can be eye-opening to start thinking out of the box.” (I2)

They expressed the opinion that the game was long, and some found it tiring, but they still liked it: I enjoyed it, it was fun. Very tiring, yes, I really did it 100% and really tried my best, so I enjoyed it. (GAP03)

“I felt comfortable playing, the narrative basis was really good, and it took me along. So it was of course a long test, but it didn’t feel like it, because the story went on, and it was easy to play into the situation. The background noise made it better to concentrate, you could exclude other things, getting deeper into it.” (GAP02)

A participant who was on two missions and also said he played a lot of computer games was very positive about the experience: “It was actually, surprising how, I think especially for a UN-based mission it represented what I experienced in Lebanon pretty accurately, so that was nice to see. I was really impressed actually.” (Finland 1) Later in the interview conducted by Harri Ruoslahti for the GAP Newsletter. He stated: “It is great that this type of project gets funded”.

5.5.6 The medium of the game

The participant, who said he played a lot of computer games commented on the game: “I think it was really good, I liked the graphics, and also the soundscapes, I was very positively surprised by that. I heard some sounds that could associate back from deployment, like, what’s the word, the air conditioning, bips, stuff like that (Finland 1).

Another player expressed how involving the game was. “It was quite intense, I was totally unaware of the real life, I was totally immersed.” (Finland 2)

The role playing was considered a useful learning tool: “Now that I work for the Red Cross I would behave differently. If I were to be a local police officer in that country, I would think differently. Always when you put yourself in their shoes, you have to consider things you don’t have [normally] to consider.” (GAP03)

Similarly to previous sessions there was a feel that the game should be followed by a discussion. There was a lot of food for thought in the game and the participants wanted to share their experience with the others in the group. “I think it would be a good idea to have discussion, from the learner’s point of view. I am pro collaborative learning.” (GAP02)



5.5.7 Learning Outcomes

“We have such a long session I don’t have time to consider what I have learned.” (GAP02) (FINLAND MIL MALE 04)

Someone with lots of experience and training said: “I didn’t feel there wasn’t anything new. I understood different religious, gender issues and culture.’ (I1), but she saw the potential and usefulness of the game for younger people.

One user really liked the use of native languages in the game and mentioned that these phrases stayed in her mind, that she really learned these. She sees it as a different way of learning and as a useful way to share tips on how to act on deployments. (User#:6)

5.5.8 Gender

A female civilian trainer expressed her opinion how complex the issues of gender were and how gender was connected with culture: “These gender issues...it’s not easy to be a woman police officer. I didn’t change my mind about gender; I think that women are as capable as men to be part of these missions. Of course, there are some limitations, cultural issues... “ (Female trainer1Finland)

Some of them denied the importance of gender in the police or military. Their view was that once on duty women and men are the same: “For me, when I put this police mode on, there is no gender, there is nothing, just the uniform of the police. And it’s always like that [...] I wear the uniform and I don’t think I am a police woman. It doesn’t matter they say to me, I keep on acting as a police.” (I1)

One of the male participants stated, that “it was also refreshing to be, to play a female role. There were situations that I have never thought about really before.” (FINNISH MIL MALE 03)

[FINLAND/MIL/FEMALE/04] felt that the game included too much gender

5.5.9 Culture

The participant with mission experience expressed the need for much more intercultural training than he was given during his pre-deployment training. “I remember when I was in training, back before I got deployed, we only had one class on the cultural themes, of the place where we were going.” (Finland 1) and there was also very little on gender. He also said that all the troops wanted more of this kind of training.



One participant reflected on the fact that people in countries where missions are based often have different views on public institutions and services. They don't often have trust in them the same way as citizens of well-functioning, democratic countries.

This all happened in different culture far away from here. The role of police there is a little bit different. Here the police are our best friend, we have a very high trust in our police force. In some other countries, that is not the case. The worst thing that can happen to you is that you involve the police. So the country's so much different, how they use police forces. So much corruption in many countries in the police forces and of course, police are not so trusted. (FINLAND/MIL/FEMALE/01)

Participants noticed that culture and gender issues were very often connected and also institutional culture was important, as military, police and NGOs functioned in different way: One user indicated that it was nice that the game gives the opportunity to take another role, e.g. police and to see that point of view. She could also imagine expanding that concept and playing as a female the role of male and vice versa. She also felt that as a military she would have liked to have played more the role of the NGO as that is really different. The police role was still considered as similar to the military role. She never became an NGO in the game, but she would have liked to explore that role.

5.5.10 Communication

The civilian trainer said the communication topic in the game was really important and universal: "Communication – to be honest. Honesty is everything. Like saying she was married even if she wasn't, as the man said, in this community, they will find out." (Female trainer1Finland). Reflecting on some of the dialogues in the storyline she also said: "It was very important not to promise anything we can't keep"

5.5.11 Contribution to Development of Assessment In-game and Out-game.

"I think the after-game questionnaire was easier for me. Some way. I don't know what exactly was the reason." (I2)

Asked about the quizzes one of the participants said: "I think it is the only way. We must try to find out somehow the impact." (GAP02)

I thought what was very interesting about it, there was an assessment at the beginning, and there were some answers that I didn't recognize, did I change opinion about that? Did I touch



the wrong one? I didn't recognize myself. Some of the answers, I would have wanted a discussion. (GAP03)

There were some terms I didn't understand well in the pre-game quiz. And I realized what did they mean after playing the game. So there can be some differences in my answers because of that. (I1)

5.5.12 Experience of the Game - lessons learned.

The evaluation session in Laurea confirmed what was learned from the previous sessions. The reception of the game was very positive and it was considered as a useful tool for pre-deployment training. The length of the play-through was an issue, which caused tiredness and lower concentration levels at the end of the session. Playing the game in smaller segments was recommended along with discussion about the topics that the game was aiming to teach.

5.6 Northern Ireland, PSNI

5.6.1 Execution of methodology. Specific issues that emerged.

The Evaluation session in Northern Ireland followed three sessions in Poland, Portugal and Bulgaria. When possible the lessons learned from the first three evaluations were implemented.

The first issue was the variety of length that took the participants to play through the game. It depended of their English skills and in smaller extend on familiarity with computer games. Initially there were breaks planned after each part of the evaluation, so after doing the pre-quiz everyone would wait for the last person to finish and then everyone would start playing the game. Decision was made to let the participants to do their quizzes and play the game at their own speed and take short breaks when they were tired.

That significantly improved the timing and although still tired after the sessions, the participants who finished earlier were able to give the interviews shortly after finishing the post-game game quiz. That meant also there were not waiting while others were interviewed. The ones that took longer to



play and do the quizzes didn't feel the pressure of the group waiting for them and could still concentrate on reading instead of rushing to the end.

The planned start of the session was adapted to the Police course schedule and the evaluation started at 9am, when they would normally start their lectures or lessons.

Setting up the iPads at each session was easier and smoother for the evaluators with each session. All the devices were prepared the day before, charged and checked, ready for the morning session.

For most participants the game was very intuitive and they didn't have any problems navigating through it.

5.6.2 Site Specific Information - Description

The evaluation with the Northern Ireland police took place on the 4th October 2018 in Ulster University, Belfast and was conducted by Dr Justyna Pyz, Prof. Anne Holohan. Dr. Jonny Byrne and Dr Máire Braniff organized the participants and the place for the evaluation. Ulster University staff conducted the interviews.

There were 10 participants at the evaluation, 7 male, 3 female, full time officers of the PSNI. The interviews were conducted with all the participants. The evaluation took place in the Ulster University campus, in a private classroom.

5.6.3 Results - Quantitative

In-game assessment

Group	Player	Communication	Gender	Culture
Northern Ireland	pranker purposely barricade tank	3 stars (3.85)	4 stars (3.65)	3 stars (3.72)
	carpentry			
	exorcism joystick ashamed daringly unleash	5 stars (4.03)	4 stars (3.74)	5 stars (3.91)
	ducky occupancy steam geriatric unstirred	5 stars (3.98)	4 stars (3.79)	5 stars (3.84)
	doornail stucco unturned reshuffle	5 stars (4.01)	4 stars (3.75)	5 stars (3.87)



rubber			
cupcake action aloof staple saddlebag	4 stars (3.94)	4 stars (3.65)	5 stars (3.84)
cuddly skid borax ferry ferocity	3 stars (3.85)	2 stars (3.53)	3 stars (3.62)
clarinet fringe freeway hunchback panther	5 stars (4.2)	5 stars (4.6)	5 stars (4.6)
absolute grimy imaging pancake onto	5 stars (4.02)	4 stars (3.79)	4 stars (3.81)
ablaze mom mousy smudgy payer	3 stars (3.84)	4 stars (3.72)	3 stars (3.73)

Table 10. Table: In-game assessment scores Northern Ireland

Out-game assessment

Male participants scored slightly higher (78.67%) than the female (77.26%). Female players scored higher (74.29%) than their male (73.35%) %. In communication female participants scored in average 72.18% and male 76.5%, in cultural awareness female participants scored 79.06% and male 81.25% and in gender awareness the female participants scored in average 78.12% and male 76.91%. The pre-game assessment scores are listed below:

- Culture pre-game overall average: 82.77%
- Gender awareness pre-game overall average: 75.49%
- Communication pre-game overall average: 78.5%

Similarly to the previous evaluation sessions after playing the game the scores for gender awareness were higher and the scores for communication and cultural awareness lower than before playing the game. It was most likely caused by different questions before and after the game and tiredness of the participants.

- Culture post-game overall average: 77.77%
- Gender awareness post-game overall average: 79.41%
- Communication post-game overall average: 71.11%



5.6.4 Results - Qualitative

5.6.5 General impression of the game

The overwhelming majority of participants enjoyed the game. They found it both interesting and challenging and felt that there had been a significant amount of effort put into designing both the game and content. There were a number of particular elements, which they noted:

- The fact that it was a game and not a traditional lecture made it more interesting;
- The game goes a long way to trying to explore different cultures;
- It is good that you can learn at your own pace and take time to reflect on the decision-making processes;
- The outcome of the game is largely irrelevant, the emphasis is on the learning processes;
- The game is extremely long and convoluted at times and you have no idea where the end point is.

Each of the participants recognised the benefits of learning in this format and felt that the game format allowed for an in-depth analysis of the operational issues one might experience on a deployment. It was also noted that the format allowed for flexible learning and was therefore aimed at those in employment who lacked the time/opportunity to attend a physical training centre:

it has advantages...you can learn at your own pace, rather than a set timetable or by a lecturer (male, PSNI)

I thought it was really, really good. I think it was really innovative. It was engaging and I really liked the immersiveness of the platform. As far as I was concerned I was quite well in it with the surround sound and all, I really liked that (female, PSNI)

5.6.6 Changes in test scores

There was general consensus from the participants that the game 'did not necessarily' change their score from the pre and post-tests. There was a sense that this was because officers here (in Northern Ireland) had been exposed to lengthy classes and tutorials on issues pertaining to culture, diversity and identity:



The subject matter is not something new to me. In the PSNI we have been fully tested in this stuff, we are at a more advanced stage

I was trying to be open minded about the entire thing and draw on my experience here so nothing changed

Overall, the participants suggested that the game was an opportunity to reflect on previous learning and experiences and could be used to refresh previous learning programmes. It was also noted that the game could possibly be of more use (as a learning tool) in countries/regions where police and army personnel have limited experience of dealing with these issues.

New developments

There were mixed results from the participants in relation to whether the game had generated any new experiences or learning. For some, the discussions and exchanges around Ramadan were both new and extremely interesting:

I knew nothing about it...initially I thought it just related to food but it is actual water as well from dawn to dusk (female, PSNI)

However, others felt that the ability to play different characters (often of different genders) was an interesting development and one that increased interest in the game. This challenged the participants and meant that they were 'taken out of their comfort zones' and made 'to think about issues that would not necessarily be part of their daily routine'. Furthermore, one participant stated:

Surprisingly, I felt more comfortable playing the female military role, because that wasn't me. I was free to learn more. However, when I played the police officer I felt I had to conform to that role. I was less free (female, PSNI)

Clearly, it improved their understanding of complicated and sensitive issues, and made them consider the implications of their own approaches to decision-making.

5.6.7 Learning tool

It was noted on multiple occasions that the game was an excellent way of increasing one's learning on issues that were often considered sensitive, emotional and difficult to discuss. One participant noted that the exercise 'evidenced the importance of language and illustrated how people can



interpret things differently'. It was also suggested that there should be less text and more of the material provided verbally:

The biggest challenge is trying to read and think about what you are doing. There is a lot of reading and not everyone enjoys reading (male, PSNI)

Overall, there was a lot of support for the game as a learning tool. The participants indicated that this would be something that they would support in their work environment and was a tool that had the potential to introduce 'recruits' to some of the complex issues around identity and culture:

It's engaging and gets you thinking so that is good. But check the length, for me it was an endurance test for the last half hour (male, PSNI)

5.6.8 Concerns

The participants were also asked to consider whether there would be anything they would change about the content and/or structure of the game. Although everyone was very supportive of what it was trying to achieve, a number of participants were concerned about the 'stereotyping' of characters within the game. On several occasions, the participants felt that some of the characters in the game were based on lazy stereotypes that actually affected its overall credibility. This view was best characterized by one participant:

The other thing is in an exercise about cultural awareness, gender and communication some of the stereotypes were a bit, you know, I'm not so sure. Indians like their food and eat with their hands. The Irish are having a laugh, stealing and then handing out the beers. I would really be cautious about that. It is reinforcing stereotypes based on nationality which I'm fairly certain defeats the purpose of the whole thing. You can have characters acting in certain ways but I wouldn't necessarily highlight their nationality in any of them. The only American in it is the guy who goes to the sex worker place and, you know, he's the brash looking American NGO guy and it is just a stereotype. In terms of the narrative of it I don't like football but for the female police officer who is being mentored in it she wins over the trust of her colleagues by talking about football. At the end of it talks about how she won over the trust by being professional and engaging but getting chatty and talking about football isn't actually the way you should be doing it. It is just a really bad way to give an example of how to win over your colleagues. There is loads of different ways that could be



portrayed. I would be hesitant to do that if that was the example. By trying to educate people about stereotypes we are stereotyping men and football and making a female join that stereotype to gain that trust, it's not the way I would do it (male, PSNI).

It was also suggested that the game was very long and that there was a lot of reading material that could make it difficult for someone with dyslexia. A small number of participants felt that the sound was not necessary. However, it should be noted that all of the participants had positive comments about the overall content and playability of the game.

It is also important to note that there was some concern about the options available to participants in relation to some of the tasks. On occasions they felt that the menu on offer was lacking and they would have welcomed more options, or at least the facility to add:

There were occasions I was being rail-roaded into saying things that maybe I wouldn't have because there was option for what I wanted to say. There were occasions that I was thinking, um, this answer is the best of a bad bunch. (male, PSNI)

5.7 Defence Forces, Ireland

5.7.1 Execution of methodology. Specific issues that emerged.

The Evaluation session in Dublin with the Defence Forces was the last of the series and followed sessions in Portugal, Bulgaria, two in Poland, Finland and Northern Ireland.

It was expected that the length of the game would still be an issue, but less so as participants with English as their first language, would play through it significantly more quickly. The same rule was applied as in all the sessions since the Polish Police evaluation, i.e. that participants did their quizzes and played the game at their own speed taking short breaks when they were tired.



The following major change was implemented after evaluation of the in-game and out-game assessment. The pre- and post-game quizzes were shortened, with questions that didn't reflect the situation in the game taken out along with others that didn't seem suitable. For this session the same questions were used before and after playing the game, but they were placed in a different order.

The issues with the in-game assessment were: scores that were low and lacking range in the gender category and high and lacking range in the culture category. The ratings were revised as per the description in Section 3.

The solutions were implemented before the session with the Defence Forces.

5.7.2. Site Specific Information - Description.

The evaluation with Irish Defence Forces took place on the 17th October 2018 in the conference room of the ADAPT Centre in TCD and the interviews were conducted in a small room upstairs in the same building.

It was conducted by Prof Anne Holohan and Dr Justyna Pyz, Sara Singleton and Ciaran Devlin (TCD). There were 10 participants at the evaluation, 9 male, 1 female with no experience of deployment. They all arrived from the Cathal Brugha Barracks in Rathmines, Dublin in full uniforms. That unusual sight at the university campus caused many curious looks from the students and academics. Lieutenant Colonel Seán Murphy, who is responsible for GAP in Defence Forces was also present to see the evaluation.

5.7.3 Results - Quantitative

In-game assessment

Group	Player	Communication	Gender	Culture
Ireland	drown closable fracture stopper strangely	2 stars (3.67)	4 stars (3.57)	3 stars (3.56)
	stark navigate vaseline handset wrongdoer	4 stars (3.95)	4 stars (3.65)	4 stars (3.8)



mustang duress lion excusable unmade	5 stars (4.02)	4 stars (3.58)	5 stars (3.86)
unmasked washbowl gesture blurb blanching	1 star (3.41)	1 star (3.26)	1 star (3.22)
deplored obstinate absinthe uniformed appraiser	5 stars (4.01)	4 stars (3.7)	5 stars (3.93)
cryptic mascot sharply brought unhappily	5 stars (3.98)	2 stars (3.55)	5 stars (3.85)
spokesman tapping thud viper lemon	3 stars (3.85)	4 stars (3.62)	3 stars (3.74)
grandson kinetic purge turmoil ergonomic	2 stars (3.73)	2 stars (3.51)	3 stars (3.55)
feline bouncing rebuttal tissue landmine	3 stars (3.82)	4 stars (3.58)	3 stars (3.73)
grumbling grumble surgery dastardly primp	3 stars (3.82)	4 stars (3.74)	3 stars (3.67)

Table 11. In-game assessment scores Northern Ireland

Out-game assessment

The female participant scored lower (66.60%) than the average on the male participants (71.99%)

Female players scored higher (74.29%) than their male (73.35%) %. In communication the female participant scored in average 72.22% and the male 73.91%, in cultural awareness the female participant scored 64.91% and male 74.14% and in gender awareness the female participant scored in average 64.58% and male 67.76%. The pre-game assessment scores are listed below:

- Culture pre-game overall average: 70.32%
- Gender awareness pre-game overall average: 65.31%
- Communication pre-game overall average: 77.91%

At the session with Irish Defence Forces the improved pre-game and post-game quiz was implemented with the same questions before and after the game. The difference from previous sessions was visible as both scores for cultural awareness and gender awareness improved and only scores for communication decreased. That could be still caused by tiredness of the participants.

- Culture post-game overall average: 76.12%
- Gender awareness post-game overall average: 69.58%
- Communication post-game overall average: 72.91%



5.7.4 Results - Qualitative [from transcripts of interviews]

This was the sixth and the last in the series. The revised and improved in-game and out-game assessment was tested, with good results. Analogically to PSNI it was a group that had English as their first language, so they did the quizzes and played the games more quickly than other groups. There was a guarantee that they didn't have a problem with vocabulary, and they were also more comfortable giving interviews. They were young recruits, eager to learn and familiar with new technology.

5.7.5 General impression of the game

The participants were very positive about the game. From saying "I liked the whole game. I liked everything about it" (Orla) to pointing out the specific value of scenes that they remembered and making connection to the fact that playing the game made them change their answers in the post-game quiz. The fact that both were revised and improved also had a positive effect.

It was really good at showing the gender and cultural differences and communicating when there is that barrier with other nationalities and that so it was very good in my opinion because all the training I've had is just stuff about weapons systems, nothing like this about talking and dealing with people, nothing whatsoever and that's the main thing you do when you go overseas. (Mark)

The length of the game was mentioned, but as they were the group that finished the quickest it wasn't such a major complaint as after other sessions.

5.7.6 The medium of the game

The participants enjoyed playing the game and said they were learning more by playing than by traditional ways:



Yeah you would get more out o- cuz you're actually, you're enjoying it and you're taking a lot more in. You're actually, ah, making your own decisions, you're not like, watching someone make them for you. (Simon)

The same participant said that he played games himself, so the medium of the game was the favourite thing about the session:

Interviewer Grand, so then I guess was there anything in particular that you liked about the game?

S: Um, just the fact that there was a game, like, and not a lecture, yeah. I- I'm into games meself, so.

5.7.7 Learning Outcomes

The participant thought that the game gave them a picture of what they could encounter on a mission: "brought situations to the forefront that I probably wouldn't have thought you'd come across overseas but it was good."

The cultural issues were important for the participant and, as none of them have been on a mission before, they found a lot of new information about customs of countries of potential missions.

Could see that yeah, even like gestures, how you approach people, how you'd greet people. I'm sure, I haven't been overseas yet, but I'm sure you're briefed on all that stuff before you go but it was good to see it put in to practice. And I know that it's only a game, but it's good to see what's acceptable and what's not acceptable with cultural norms when it comes to gender equality, how you'd greet men, how you'd greet women. The game conveyed that well so you could understand that.

5.7.8 Gender

The female participant noticed the game is good "for the fellas that are playing it as well, it shows them because people always say 'oh yeah, there's no gender in the army' but 100% there is, there is with everything. (Orla) Her male colleague also thought he had some picture of "challenges that you faced [as a woman] in a different country altogether or in a different society, so it was good." (Paul)



They appreciated the opportunity to experience a woman's perspective: "it was good to see it through the eyes of someone else or a different gender. Um, yeah you don't really, get much opportunity to do that, so it was good.

The game made some participants think about issues they hadn't before. "There's a certain situation, a woman can go into certain situations quicker than a man could. I wouldn't have thought that before." (GAP05) They also saw that for a female peacekeeper the life on a mission can pose more challenges than for her male colleagues.

Probably you have to prove yourself a bit more if you were a female officer overseas. You probably would come up against a lot more friction in everyday tasks, whether that's at the markets, like it showed in the game. I'm just imagining it would be easier for a man over there but the game kind of brought up challenges that you would face if you were a female officer.

5.7.9 Culture

The importance of 'tea drinking' with local people for fostering good relationships came up in many interviews with military, police and NGOs at the beginning of the project. It was decided that it should be incorporated into the game as a very important custom in many countries. This facet of the game was appreciated by members of the Defence Forces:

One of the first questions I got I didn't know how to answer, it was about stopping and having tea with someone but then in the game when it came up but for him to be able to communicate with you, to make friends with him or whatever then you had your tea with him and you were talking then. So if you had the tea he would talk again but if you didn't it's a really abrupt answer to you back again.

The participants noticed not only the importance of learning about the local customs and cultural differences between peacekeepers and local population, but also between different military:

Yeah, to be honest, it was yeah. I haven't been yet myself, not for another year but yeah the people I did speak to in the place I work they be saying that it's not very equal, not even just



with the local populace but other soldiers, the Finnish like. The Irish are known for joking like all the time like, using a lot of offensive language that wouldn't really be offensive to their own people but then they would say it to another Finnish soldier for example just insult them over something that would be funny but they take real offence to it but the Irish wouldn't really so it's really all the different cultural stuff and that with the soldiers.

5.7.10 Communication

Some details of the storyline that no one had noticed before were remarked upon in the interviews, for example interactions between different organisations: “between the military and, the local police and stuff like the way they don't communicate”.

Another participant, when asked what he learned, replied: “I definitely learned communication skills from it, 100% like, especially customs and stuff like, how to be more aware of what you're gonna say before you say it.”

5.7.11 Contribution to Development of Assessment In-game and Out-game.

This was the first session when the revised and improved in-game and out-game assessment was implemented. The issues in the assessment were noticed earlier during the evaluation, but the longer space of time between the PSNI and DF evaluations allowed for making changes in both assessments.

As mentioned previously, the quizzes of the pre- and post-game were shortened, with questions that didn't reflect the situation in the game taken out along with others that didn't seem suitable. It was decided that the responses to the statements that apply directly to the scenes in the game are the most important as they can show the effectiveness of the game most accurately.

For this session the same questions were used before and after playing the game, but they were in a different order.

In this session it was the first time that a number of participants were talking very positively about the quizzes. The connection of the pre- and post-game test with the game was noticed as well.

Especially the questions beforehand, the pre questions, when you're reading them you have to think about it but then when you actually play it you see where those questions come in to it as



well, so I found that that helped as well then, ya know, reading through what way I could answer something as well.

They were visibly happy seeing when they got higher scores after the game and they knew that it was because they had role-played situations that were connected with the statements.

You know at the start you had to do the before-game quiz, so I think I scored 76% for gender and then 80% after. Something like 80% on communication and like 85 after. I can't remember the culture but it was definitely higher. It does show you and it does make sense.

One of the participants when asked to share a positive aspect of the game mentioned the quizzes first of all:

Probably the pre questionnaire and post questionnaire, I would have had my own ideas of what I thought before the game and then playing the game probably changed my perception of the way I would answer a few questions so it was nice to see the before and after, the impact that it had on me.

The participants were interested in their scores in both in-game and out-game assessment. They liked seeing the stars, but also looking at detail into what they did well and what they could improve:

I did better overall but there was a slight decrease in culture, I don't why that went differently. But the feedback was good yeah. I saw the star ratings and all. I kind of felt like when I was answering you kind of know what's right to say, or about body language, they are quite straight forward but other ones you had to think a bit more. I think the results conveyed really well how I did and I could see where I went wrong. It was all clear; when I scrolled down through it I could see easily what was good, what was bad.



6. Emergent Issues: what we learned from the Evaluation.

This deliverable has reported on the evaluation of the operational and educational effectiveness of the curriculum, game and assessment. The goal of the Evaluation- to see if the GAP intervention can generate positive movement on the continuum of each of Communication Competence, Gender Awareness and Cultural Awareness – had a positive outcome. This was evident in the results of the out-game and in-game assessment. But the clearest and most compelling evidence was in the discussion data, with all the interviewees acknowledging the increase in awareness of the soft skills, and in the meaning and purpose of those soft skills in peacekeeping. The trainers interviewed corroborated this view expressing a clear need and demand for GAP to fit into and add to their current training curriculum and tools.

The key issues that emerged from the Evaluation which when addressed, improve the operational and learning effectiveness of GAP are the necessity of offering GAP in a blended learning format - a time frame that allows for individual and group work; and improvement in ratings assessment both in-game and out-game, which when done together ensure the learning objectives underpin the assessment through the three stages of Pre-, Play- and Post-. Changes were also made to the in-game ratings, the indicators and game script to ensure the decision points in the game allowed for clear ratings on levels of Gender Awareness, Cultural Awareness and Communication Competency.

6.1 Emergent Issues learned from the Out-Game Assessment evaluation.

The key issues that arose from the Out-Game Assessment were firstly, the need to provide time to take the Quizzes and time to discuss them afterward. Also, ideally the Post-Game play Quiz should be taken the day following the completion of game-play, to allow for time for the individual to process the experience.

Secondly, there is a clear preference on the part of individual personnel and the trainers, for a blended learning approach, which combines individual quiz taking and game play with group discussion. They also had a clear preference for taking the quiz with time for discussion afterwards, and playing the game in segments, allowing time for processing individual feedback and having group discussions after each segment.



Deliverable 5.3: Learning: Operational and Educational Effectiveness Report

Thirdly, the results of the evaluations indicated a need to ensure that the same indicators are used (just in a different order) Pre- and Post- in order to ensure comparability and a reliable measure of progress/change in Gender Awareness, Cultural Awareness and Communication Competence.

Fourthly, as a result of the re-rating of the In-Game Assessment, and the mapping of each decision point to Learning Objectives and sub-objectives, the Out-Game Indicators are also being revised and mapped to Learning Objectives and sub-objectives in Gender Awareness, Cultural Awareness and Communication Competence. Thus ensuring, as one person in the Evaluation noted, continuity in the Quizzes and Game so that she could see what she was learning and why.

6.2 Emergent issues learned from in-game assessment evaluation

A number of issues arose with evaluating the use of the in-game assessment. Firstly, it is clear that the rating can be calibrated to produce more positive or negative scores for the learners. There was considerable discussion as to whether the scoring (stars) and feedback were more useful to stimulate observation and discussion about the competency performance and to highlight difficult situations in the game corresponding to real life learning (ie. more as a learning tool rather than an assessment tool), or as a summative assessment of the learners competency (i.e. more as a pure assessment tool). There is value in both approaches and it is probably a decision for the trainer or training organization using the game as to how it is deployed for learning and assessment. It is clear that it can play a role in both. It is also clear, as some decision points and competency performance are quite nuanced, that the game can provide a number of discussion points to allow learners contemplate more deeply the value & consequence of different actions or utterance.

A second issue is that with so many decision points still possibly useful in rating the learners behaviour, it was felt that feedback on each and every relevant decision may be overwhelming for the learner. A better approach would be to provide feedback on a smaller set decision drawn from a pool of predetermined 'significant' decision points. The game assessment can still use a broader set for calculations but scaffold the feedback by highlighting a smaller set of key learning points.

A third issue was the correlation between the in-game and out-game assessment. To fully explore this, there needs to be more usage of the game (and associated pre- and post- game questionnaire



completed). With a suitable data bank set up for analysis, different alignments between ratings and pre- and post- tests can be investigated.

Finally the assessment, like the game, needs to be capable of being generate segments or individual ‘sessions’ at a time. This means, if a user only plays some scenes in the game, the assessment engine should generate feedback on that partial play of the game. This would allow learners to ‘practice’ certain scenes/episodes in the game and get instant feedback on their performance. This feature is being implemented in the current assessment engine.

6.3 Actions Taken from Issues Raised in Evaluation:

1. Ratings Revised through Step 2, 3 and 4 of the In-Game Assessment (See Section 3).
2. Out-Game Quizzes revised in line with Ratings Revision of In-Game Assessment to ensure indicators are tied to Learning Objectives across Gender Awareness, Cultural Awareness and Communication Competency.
3. Segmentation of Game
4. In-Game Text Edits.

1. Maria, Day 01 - 1. Maria's Arrival	4	Section 1
1. Maria, Day 01 - Niilo's Canteen Faux Pas	12	Section 1
1. Maria, Day 03 - First Day in the CIMIC Office	15	Section 2
1. Maria, Day 03 - Market Walk and Village Assessment	46	Section 2
1. Maria, Day 05 - Face-off in the Canteen	16	Section 3
1. Maria, Day 10 - Cafe Meeting with Syed	15	Section 4
1. Maria, Day 10 - Market Walk	21	Section 4
1. Maria, Day 16 - Canteen Japes	6	Section 5



1. Maria, Day 17 - Riot!	9	Section 5
2. Adam, Day 15 - Meeting the Local Police	12	Section 6
2. Adam, Day 17 - Riot!	8	Section 7
2. Adam, Day 18 - Station Regroup	17	Section 7
2. Adam, Day 24 - Evening at the Cafe	9	Section 8
2. Adam, Day 24 - Return to the Market	19	Section 8
2. Adam, Day 26 - A Meeting with the Mukhtar	7	Section 9
2. Adam, Day 29 - Mentee Review	17	Section 9

Table 12. Post Evaluation Segmentation of GAP game

Changes to text in game:

Line 20: It's hard to say. I need some time to see what the place is like. CHANGE TO: It's hard to say. I need some time to see what this country is like.

Line 29 I don't care how they're eating it, it smells delicious CHANGE TO: You eat pizza with your hands - why not curry and naan? Anyway, does it really matter how you eat it when it smells *that* good!?

Line 35: Anna's right, Niilo. Maybe you should think about apologizing? CHANGE TO: Anna, I think you have a point: an apology wouldn't hurt

Line 44: I thought she should have ordered Niilo to apologise she is his superior officer CHANGE TO: I thought she should have taken Niilo aside later and ordered him to apologise.

Line 48: Looking forward to it, Sir. CHANGE TO: Hey, I'm happy to be here.

Line 54: Ah...I just wanted to apologize for my colleague before CHANGE TO: Remove line.

Line 56: Look, I just want to say I'm sorry for what Corporal Johola said at dinner. CHANGE TO: Look, I just want to say I'm sorry that Corporal Johola was rude last night.

Line 57 and 58 deleted because Line 54 was deleted.

Line 60: I understand, I just wanted to say something. CHANGE GO: I understand it's Niilo's responsibility, but it's not good for any of us to hear 'jokes' like that.

Line 67: I'm taking it slowly and trying not to judge. CHANGE to: I'm still exploring and taking it slowly.

Line 68: It's not so different. People are the same everywhere. CHANGE TO: Culturally it's new to me



but there are a lot of similarities in the people.

Line 70 As...what? CHANGE TO: As-sal... sorry, can you say it again, please?

Line 87: Yes, I think so CHANGE TO: I hope we're not out here too long today.

Line 88: Is it always this busy? CHANGE TO: Wow, this is a bustling market.

Line 94: I'm doing great thanks.CHANGE TO: No, I feel good. People seem happy to see us.

Line 96: Actually I wanted to ask you that - how does it look like I'm doing? CHANGE TO: I don't think I know what I'm doing here.

Line 97: Looking for someone you know? CHANGE TO: Looking for someone in particular?

Line 119: No, I have to pay for it. CHANGE TO: That's very kind of you but I have to pay for it.

Line 121: It is one of the things we are here for, yes. CHANGE TO: Yes, we are peacekeepers.

Line 126: I will look into it. I'm certain we can get to the bottom of this. CHANGE TO: We will look into it, investigate what is going on.

Line 128: Everyone shares the water, including the Sunnis. CHANGE TO: But doesn't everyone share the water, including the Sunnis?

Line 130: We're here to provide peace and stability, not to take anything from anyone.

Gender Key scene: Line 165.Hello beautiful, this place is much too nice for a flower like you CHANGE TO: Hello beautiful, this place is not so nice for a beautiful flower like you.

Line 165: I'm here to do my duty, that's all. CHANGE TO: I'm here to do a job – peacekeeping, that's all.

Line 170: I'm not married and I'm not looking for a husband either. CHANGE TO: I'm here as a peacekeeper and I'm not looking for a husband.

Line 174: Listen, that is just not appropriate CHANGE TO: Listen, I'm just not interested.

Line 176: Is that rare? Can you not speak freely at home? CHANGE TO: Can you not speak freely at home?

177: That sounds like a really healthy outlet. CHANGE TO: This sounds like a safe place.

Line 181. I understand that this doesn't feel fair right now – but you could be a soldier CHANGE TO: I undersrtrand that this doesn't feel fair right now – but things can change.

Line 186: It's wonderful! It can make you feel powerful but it is also a serious responsibility. CHANGE TO: It can make you feel powerful – but it is also a serious responsibility.

Line 225: I've tried to ignore it, mostly. CHANGE TO: As a tactic, I've tried to ignore it, mostly.

Line 226: Yeah, I really hate it. People should have some respect. CHANGE TO; Yeah, I really hate it – no respect at all.



Line 244: : **Jump up and try to grab him** Nilo, this is not the time or the place. CHANGE TO: **Jump up and try to stop him** Nilo, this is not the time or the place.

Line 266: It seems quieter today maybe ? No children? CHANGE TO: It seems quieter today? No children?

Line 297: My husband is none of your business CHNGE TO: Look, I'm here to do my job, my marital status has nothing to do with it

Line 299: I'm sorry, that's really not appropriate CHANGE TO: Look, I'm just not interested.

Line 325: Then why do you have a problem with the repair project. CHANGE TO: Then can we talk about your concerns about the repair project?

Line 336 The future's what's important now, for your children CHANGE TO It's been really hard, but the future's what's important now, for your children.

Line 392: If you don't like it here you can go back to your work. I promise I will not follow you. CHANGE TO: If you don't want to talk to me, you can go back to your work. I promise I will not follow you.

Line 412: Good to meet you Umer, but you should not talk to your colleague like that. CHANGE TO: Good to meet you Umer but it's better not to talk about your colleagues like that.

Line 417: CHANGE TO: No offence intended, but isn't the UN about having standards for men and women to be treated as professional equals?

Line 447: It's very similar really. People are the same everywhere CHANGE TO: It's very similar. It's simple – people are the same everywhere.

Line 455: Push your way through the crowd to your colleagues CHANGE TO: **Make your way through the crowd to your colleagues.**

Line 602: Do you know anything about the riot? CHANGE TO: It wasn't pleasant. Do you have any idea what started it?

Line 622: She is my colleague, and she asked you a question CHANGE TO: She is my colleague. It would be good if you answered her questions.

Line 629: CHANGE TO: I think it was worth it. I saw the looks on the faces of those women when you brought them in.

Line 632: That's true, but you should still feel proud to have been part of it. CHANGE TO: That's true, but you led it successfully!

Line 648: Quietly step back and let her continue CHANGE TO: **Quietly step back and observe from a distance.**



Line 648: pedagogical – don't hang around.

Line 660: What can I say – you are perfect CHANGE TO: What can I say – the way you're handling things perfectly.

Line 663: You still need the respect of your coworkers. CHANGE TO: You gained the respect of Umer and Kareem by being strategic and professional – build on that.

Table 13. Changes to text in game

Appendices

Appendix 1: Interview Guide for Evaluation



Appendix 1: Gaming for Peace Project Evaluation Interview Guide



Interview Guide

Evaluation Sessions, September/October 2018

Ask: 1) gender 2) whether they are military/police/civilian 3) if they are a trainer or not.

No other identifying information.

20 minutes approximately. Record and Transcribe. See transcription guide document.

Ask few questions and listen carefully.

Nod to encourage.

When they stop talking, pause to give them an opportunity to continue or elaborate.

Follow up anything that the person felt strongly about, with probing questions. E.g. can you tell me more about your feelings or thoughts on that?

Guiding Questions for Research Subjects who are NOT Trainers:

Do you feel your answers in post quiz (compared to pre-quiz) are different after playing the game?

[Probe to get answers on each one: a) gender b) culture and c) communication]

Was there anything new or thought-provoking for you in the game? E.g. if you are military/police, did it help you understand better the police/military?



How was it to play a person different from your real-world self? (in terms of gender AND culture AND work organization?)

Guiding Questions for Research Subjects who are ARE Trainers:

How effective do you feel the experience of GAP is in terms of training?

Was there anything new or thought-provoking for you in using GAP?

Would you use it to train potential peacekeepers? Why?

Appendix 2: Trainers Manual





Trainers Manual

Pre/post Game Testing

Version: 2.2

Date: 28 August 2018

Author: M. Toussaint, Enquiry B.V.

Workpackage Task: 5.3

PURPOSE OF MANUAL

The GAP-project, funded by the European Union's Horizon 2020 research and innovation programme, develops a Serious Game for Conflict Prevention and Peace Building (CPPB) personnel. The game lets them experience scenarios through role-playing and thus increase their understanding, creativity and ability to communicate and collaborate with the other organizations in the network organization that is a CPPB mission.

In order to measure and evaluate the learning effects of the serious game, the training audience will receive before and after the game a number of questions to answer. These aim at understanding existing unconscious biases of the users, the baseline in terms of intercultural behaviour and learning effects.

A key role is envisaged for trainers, as they will ensure that the question sets are made available to the training audience at the right time. Also, the outcomes of the tests are feedback to the trainers, as a tool to understand what learning has happened and what learning points need further attention.

In order to be compliant with the GDPR and in creating a safe learning environment, the test will be administered anonymously.

This manual explains how the testing process will be implemented and is a reference guide for the trainers. The manual will be tested in the workshops and further iterated.

OVERVIEW AND PURPOSE OF TESTS

To measure the learning outcomes of the GAP serious game two separate tests are implemented, i.e. the pre game questionnaire and the post game questionnaire. Also, an interview will be held with the participants. The purpose of each one will be explained below.

Pre Game Questionnaire

The Pre Game Questionnaire is tailored per audience, i.e. civilians, military and police. It consists of three categories:

- Cultural Awareness



- Gender Awareness
- Communications

For each category, statements are presented, and users can rate these using the Likhert Scale, i.e. Strongly agree, Agree, Don't Know, Disagree and Strongly disagree. The test is given before users play the game.

Post Game Questionnaire

The Post Game Questionnaires is set up in a similar way to the Pre Game questionnaire, with identical categories and using the Likhart scale. However, it is administered after the game.

Annex 2 includes examples the questions in the Pre and Post Game questionnaires.

Post Game Interview

The interview will be recorded and transcribed and mailed to TCD within 3 weeks. Both recording and transcription will be mailed. Each one of the trainers will interview a person. The interview will be around 20 minutes maximum. At the start of the interview you remind the person of the informed consent. You ask them their gender and affiliation (police or military).

The interview will ideally allow participants to see their results in front of them and reflect about them. What do they think about the scores.

PRACTICAL IMPLEMENTATION

During the training the trainer will be engaged in creating a safe learning environment. In order to prepare for this, you will find below some practical information.

Before the training day

The week before the training, the trainers should prepare by reading this manual. Also, the day before the training, the trainers should check the physical space where the evaluation takes place. More specifically, the following checks should be done:

- Is the room sufficient for the number of people attending?
- Are there powerpoint facilities?
- Is there a PC available?
- Is there a working internet connection?
- Are there breakout rooms for the interviews?

The trainers should also ensure that he/she have the following:

- The powerpoint introducing the evaluation, with the names of the trainers on it
- The iPads, with the GAP Game and Enquiryra application, each one with on the back a sticker with identification (user01, user02 ...)
- 20 paper versions of the Informed Consent Forms (Annex 1)



At the start of the training session - before the game

At the start of the training session there are a number of key moments, which are detailed below:

- The training will start with an **introductory round**, with a tour de table, where all participants state their first names. Also the trainers will introduce themselves by first name, in order to underline the informal nature of the meeting.
- The **Powerpoint** introducing the evaluation (Annex 3) will be presented after the introductory round. The first page should include the names of the trainers, location and date. The essence here is to explain that the game and the pre/post testing is part of a safe learning environment. Users are anonymous and the only wrong answer is no answer.
- The **Informed Consent Forms** will be handed out at the end of the powerpoint. Please make sure that you have a signed form of each participant.
- The **iPads will be distributed** to each participant after the Informed Consent Forms are collected. Users will then login and start with the pre game questionnaire. Important notice: users should not press on 'Create Report', this should be done by the trainers at the end of the session. So users should continue see 'green dots'.
- The playing of the game can only start after each user confirms to have answered all pre-game questions. As a trainer you can verify this answering by seeing a green dot next to the three topics:

Before Game - Cultural Awareness
Before Game - Gender
Before Game - Communication

At the end of the training session - after the game

After the game is played, the trainer should ask users to fill in the questions marked as 'After the game'. The trainer should ensure and verify that each user has done so and tapped on 'Create Report' in the application. This will finalise the data capture and generate a report per user that will be mailed to the trainers.

After the post-game questions are answered, the trainers will first check their inbox to fetch per user (user01, user02, ...) the pre-post game report, with three collective scores per category (gender awareness, cultural awareness and communication).

Then the trainers will each interview one users, recording the conversation for research purposes. Key goal is to discuss with the user his/her understanding of whether the game has changed their soft skills and what this change is (i.e. understanding of the change). To this purpose, the BARS rating in the game will be discussed together with the aforementioned report showing the collective scores per category (gender awareness, cultural awareness and communication).



After the training session

After the training sessions the recorded interviews will be transcribed and mailed to TCD and analysed as part of the work of workpackage 5.3.

CONTACTS

The trainer manual is currently in beta-version. If you have any questions about the tests and methodology, please contact TCD, [Anne Holohan](#) or [Justyne Pyz](#).

If you have any questions about this manual, the platform and user access, please contact Enquiryra, [Mascia Toussaint](#).

REFERENCES

To learn more about the GAP-project and its goals, please visit the [website](#). There you will find also the publications and other relevant information to understand the goals of the project.

ANNEX 1: USER CREDENTIALS

Organisation name	User Name	Password
gap01	user01	u4psdKidYXUN
gap01	user02	S5PLnSmrimti
gap01	user03	nymIKgMRk4sY
gap01	user04	7bafcSjqBfsj



gap01	user05	4fFvgJrPrmip
gap01	user06	uiD2fmNkkTaT
gap01	user07	vpex47tm
gap01	user08	r6UHZbW7
gap01	user09	cZAXWy8e
gap01	user10	4XM8Avsf
gap01	user11	NV7bFDBK
gap01	user12	amK4R8Zr
gap01	user13	3PEqH2dD
gap01	user14	HFpab6nB
gap01	user15	zdD7Ar9d
gap01	user16	n74QE5BL
gap01	user17	85vzKaRc
gap01	user18	KCv7Frkd
gap01	user19	cU82SgLP
gap01	User20	yv3DE3T4

ANNEX 2: EXAMPLES OF PRE AND POST GAME QUESTIONS

- It is important to know customs of the country where a mission is based.
- Part of being an International humanitarian/NGO worker is to understand the cultural differences between me and my colleagues from other nationalities.
- I recognise that the work of interpreters is important for the mission.
- I understand that religion, spirituality and other beliefs may influence how local populations react to International humanitarian/NGO worker humanitarian/NGO worker.
- I understand a person's cultural norms may influence communication in many ways, including: eye contact, interpersonal space, use of gestures, topics of conversation, greetings, interruptions, use of humour, decision-making roles.
- Civilians and NGOs are not essential for achieving the goal of for any UN peacekeeping mission.
- Working with other nationalities is the hardest thing about working on overseas assignments.
- It is important for International humanitarian/NGO workers to understand the impact of cultural identities in creating tension.



- International humanitarian/NGO workers need training in cultural awareness to help de-escalate cultural clashes in missions.
 - I try to see each person as an individual, not as representative of their nationality or religion.
 - It is important to accommodate religious practices of colleagues, including interpreters.
- Taking part in social rituals (e.g tea-drinking) with locals is important for building trust.

Appendix 3: Pre-play Sample Indicators for Military



Appendix 3: Pre-play Sample Indicators for Military

PRE-GAME QUESTIONNAIRE
CULTURE
It is important to know customs of the country where a mission is based.
Part of being a peacekeeper is to understand the cultural differences between me and my colleagues from other militaries.
It's only necessary to deal with the formally recognized (usually male) leadership in the local populations.
I understand that religion, spirituality and other beliefs may influence how local populations react to peacekeepers.
Civilians and Non Governmental Organizations are not essential for achieving the goal of for any UN peacekeeping mission.



I attempt to learn phrases in local language to help with communication and show respect to local people.
Working with other nationalities is the hardest thing about going on deployment.
It is important for peacekeepers to understand the impact of cultural identities in creating tension.
Peacekeepers need training in cultural awareness to help de-escalate cultural clashes in missions.
It is important to accommodate religious practices of colleagues, including interpreters.
Taking part in social rituals (e.g tea-drinking) with locals is important for building trust.
I enjoy the opportunity of eating other militaries' national cuisine.
Peacekeepers must accommodate the local sense of punctuality.
It's important to figure out who are the informal as well as the formal leaders in the local population.
Working with police (local or international) is essential to figure out the security needs of the local population.
I intervene when I see behaviours that show cultural insensitivity, bias or prejudice.
Mission goals can only be achieved with cooperation between the military and civilian/NGOs.
Working with militaries from other nations means we have a greater range of resources to draw from.
Female officers must give authority to a lower-ranking male colleague to avoid offending local cultural norms.
Religious practice should not interfere with work schedules.



It's only necessary to deal with the formally recognized (usually male) leadership in the local populations.
Being business like with locals is the best way to get locals to trust you.
I understand a person's cultural norms may influence communication in many ways, including: use of gestures, topics of conversation, greetings, use of humour, decision-making roles.
It is not acceptable for locals to be late for meetings.
Other militaries can have resources that are valuable to the mission, e.g. an understanding of local culture.
GENDER
Women and men can do the same jobs during peacekeeping missions.
Women are useful for engaging with local women.
Having a low proportion of female to male peacekeepers can be a problem on missions.
It's important to access influential women who are not formal leaders in the local populations.
It is important to aim for gender balance among personnel on peacekeeping missions.
I would not be comfortable being deployed with LGBTQ+ colleagues.
I am driven to respond to other's insensitive comments and behaviours regarding women.
To be masculine can include being caring and empathetic.
Women are as suitable as men for daily patrols on peacekeeping missions.
A desirable quality in a peacekeeper is emotional sensitivity.
It is important to explain to locals that female officers' authority must be respected.
Gender discrimination is about power not sex.
Empathy and understanding another person's perspective is irrelevant to peacekeeping.
I prefer being in a mixed gender deployment.
It's only necessary to deal with the formally recognized (usually male) leadership in the local populations.
Women can go on missions, but should do desk jobs.
Women have a good influence on males among peacekeepers.



Peacekeepers awareness of gender differences in a mission setting increases the overall effectiveness of the mission.
Peacekeeping is a man's job.
It is not an issue for me to work alongside LGBTQ+ colleagues.
There should be family friendly deployment length for peacekeepers.
To be feminine can encompass assertiveness and rationality.
Female peacekeepers are more likely to be less steady in violent situations than male officers.
It's not my job to intervene if someone is making a colleague the butt of a joke about their gender or sexuality.
Female officers must give authority to a lower-ranking male colleague to avoid offending local cultural norms.
Men and women peacekeepers bring different, yet equally valuable, resources to the mission.
COMMUNICATION
I consider cultural barriers when planning my communications.
It is important to make sure you listen to all local populations and factions in a peacekeeping mission.
It is important to vary the use of language and behaviours to appeal to people from other cultures.
I avoid the use of jargon and technical language.
A weapon is the most important tool in de-escalating potentially violent situations.
I recognise that the work of interpreters is important for the mission.
I use silence rather than interrupt when listening to others.
I find out the thoughts and views of others through the use of open questions.
I understand a person's cultural norms may influence communication in many ways, including: use of gestures, topics of conversation, greetings, use of humour, decision-making roles.
I vary my body language to gain rapport with people.
I attempt to learn phrases in local language to help with communication and show respect to local people.
I use easily understood everyday words and expressions that everyone is familiar with.
When introducing change I work with others to create jointly owned solutions.
I try to anticipate and predict possible causes of confusion in communication, and I deal with them up front.



I use local greetings when interacting with local populations on peacekeeping missions.
I can tend to say what I think, without worrying about how the other person perceives it. I assume that we'll be able to work it out later.
When people talk to me, I try to see their perspective.
When talking to people, I pay attention to their body language.
Before I communicate, I think about what the person needs to know, and how best to convey it.
Before I send a message, I think about the best way to communicate it (in person, over the phone, in a newsletter, via memo, and so on).