Continuing/Higher Education in Research Methods Using Games

CHERMUG

Project Deliverable Report

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Work package 4: Develop and Run Teacher Training Courses

The partners involved in the Work package 4 were UMFCV, UWS and OUNL.

The main aims of work package 4 were to:
1. Identify the teachers to be trained.
2. Develop pedagogic guides for the use of the games in the classroom.
3. Develop training courses to train teachers how to effectively use the educational games developed in WP3.
4. Run the training courses for teachers to show them how the educational games developed in WP3 can be used to engage and motivate students.
5. Evaluate the training course.

The deliverables for work package 4 were as follows:
WP4: Deliverable 18: Pedagogic Guides
WP4: Deliverable 19: Materials for Training Courses
WP4: Deliverable 20: Analysis of Training Courses

Deliverable 18: Pedagogic Guides
Deliverables 18 and 19 aimed to develop materials to support staff and students as they learn about research methods and statistics. Two pedagogic guides were developed, one for staff and the other for students. The staff guide was developed to provide guidance to teachers of research methods and statistics modules about how they could integrate the game most effectively into the teaching of their module. The student guide was developed to provide background information for students about the how games fit into their learning and to assist students in using the games.

Deliverable 19: Materials for training course

The aim of deliverable 19 was to develop materials for the teacher training courses that cover the use of the educational games and, more generally, some of the key concepts behind games-based learning and associated pedagogies. In addition to the staff and student support guides, four YouTube videos were prepared for potential users of the CHERMUG games tutors which describe the CHERMUG games and explain how teachers might use the games in teaching research methods and statistics. The CHERMUG videos were developed by OUNL and the YouTube links are as follows:

1. CHERMUG Games Introduction  http://youtu.be/BDc1bUEjHbc
2. What are CHERMUG games? [视频](http://youtu.be/cB-JS4wntd0)
4. How to use CHERMUG games [视频](http://youtu.be/GVbO2zqnm0w)

The videos provide a means of encouraging teachers to use the games and the materials were developed for both a face-to-face delivery and an online delivery. The training courses were developed for Higher and Vocational education. The target was to train 750 students and nurses and 100 teachers and teacher trainers across these sectors.

**Deliverable 20: Analysis of Teacher training courses**

Together the materials developed in Deliverables 18 and 19 provided detailed guidance about why a teacher might choose to play the CHERMUG games and how to integrate the games into their teaching. The aim of Deliverable 20 was to run a training course using the developed materials and obtain teacher feedback on the games and their potential use in a teaching environment.

The pilot of the Teacher Training Course was held at UMFCV, Romania on 19 and 21 February 2013 and was attended by 7 teachers. The Teacher Training Course was held between 22-29 March 2013 with 3 tutors and with 28 teachers. 80% of teachers were from the Faculty of Nursing (age range 25-55) and 20% (age range: 24-29) from the Faculty of Medicine.
Method

The teacher training course consisted of a presentation on the characteristics of nursing research and the CHERMUG project and a games session where teachers were invited to play the 3 qualitative and 8 quantitative games (as shown in Table 1) and complete an evaluation questionnaire.
The questionnaire consisted of demographic questions, e.g., their age and experience of gaming in a teaching environment. There were also Likert scale questions about their game experience, e.g., whether the games were simple to use and their potential usefulness in a teaching environment.

Table 1. The Quantitative and Qualitative CHERMUG Games

<table>
<thead>
<tr>
<th>The Quantitative Games</th>
<th>The Qualitative Games</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender and Reward</td>
<td>Level 1: Differences between the Qualitative and Quantitative Approaches.</td>
</tr>
<tr>
<td>Skipping Meals and Obesity</td>
<td>Level 2: Study Design and Coding</td>
</tr>
<tr>
<td>Nationality and Mediterranean Foods</td>
<td>Level 3: Study Design and Coding</td>
</tr>
<tr>
<td>Type of Diet and Weight Loss</td>
<td></td>
</tr>
<tr>
<td>Media Consumption and Obesity</td>
<td></td>
</tr>
<tr>
<td>Exercise Program and Drop-out</td>
<td></td>
</tr>
<tr>
<td>Nationality and Body Image</td>
<td></td>
</tr>
<tr>
<td>Gender and Protein</td>
<td></td>
</tr>
</tbody>
</table>

Results

The results of the feedback from teachers were extremely positively and while the majority of teachers rated themselves as having a good knowledge of research methods (83%) only a minority were responsible for
teaching research methods (17%). Interestingly, none of the teachers had experience of using serious games as part of their teaching process. However, as Table 2 shows, 86% of teachers found the games were easy to use and would be useful in a teaching environment, and a similar number (86%) felt the games were a nice way to learn about research methods and that the feedback feature in the game helped them to improve their own understanding.

Table 2. The results of UMFCV Teacher Evaluation

<table>
<thead>
<tr>
<th>Teacher game experience of the qualitative and quantitative games</th>
<th>completely agree</th>
<th>agree</th>
<th>bit of both</th>
<th>EXPLANATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessing and starting the game is simple</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>The game has a logical structure</td>
<td>32%</td>
<td>68%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>The user interface is consistent and supportive</td>
<td>68%</td>
<td>32%</td>
<td>0%</td>
<td>“the design of the qualitative could be better”.</td>
</tr>
<tr>
<td>It is not difficult to understand the explanations</td>
<td>43%</td>
<td>43%</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>The exercises are clearly expressed</td>
<td>43%</td>
<td>29%</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>The exercises are not too difficult</td>
<td>43%</td>
<td>43%</td>
<td>14%</td>
<td>“it is needed the Romanian translation of the game; qualitative stage 3 it is enough difficult to match the affirmation at ‘drag and drop’”.</td>
</tr>
<tr>
<td>I really learned something.</td>
<td>43%</td>
<td>43%</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>I could completely concentrate myself on the game</td>
<td>68%</td>
<td>16%</td>
<td>16%</td>
<td>“between each game you have to develop other activities; better: one game at one classroom”.</td>
</tr>
<tr>
<td>This is a nice way to learn about research methods</td>
<td>86%</td>
<td>0%</td>
<td>14%</td>
<td>“it is for sure challenging”.</td>
</tr>
<tr>
<td>The feedback given in the game did help me to improve my understanding</td>
<td>83%</td>
<td>17%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>The game motivates me to learn about research methods</td>
<td>43%</td>
<td>43%</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>The game play is motivating and challenging</td>
<td>43%</td>
<td>28%</td>
<td>29%</td>
<td>“better support than motivate”.</td>
</tr>
</tbody>
</table>
I would like to be offered more games alike the ones used to support my learning | 57% | 43% | 0% | “It is useful but not so easy, because you have to watch and offer explanations to students never working with games in didactic process”.

It is easy and useful to use games in teaching process | 86% | 14% | 0% | “It is useful but not so easy, because you have to watch and offer explanations to students never working with games in didactic process”.

Teachers were also asked to comment on what they considered to be the strong points of the game and a few of the responses were as follows:

1. “Make the transition from abstract to concrete”.
2. “Mind learns somehow to use basically what had to learn theoretical”.
3. “Give sense, utility to research”.
4. “The systematization of the information”.
5. “Clear instructions, clear formulated (2 times)”.
6. “Instructive, detailed”.
7. “New as teaching method”.
8. “Definitions”.

Teachers were also asked what they would like to see different in the game and some of the comments made were:

1. “background of the two types of games (QUAL and QUANT) to be similar”.
2. “more attractive interface” (7 times)
3. “to have possibility to turn back”.
4. “the points obtained to be explained and evidenced where the mistake I have done is”.
5. “the scenario is better to be introduced in the game”.
6. “in drag and drop there is not a clear delimitation of the two columns”.
7. “to have audio”.
8. “more moving at the images, more color”.
9. “have the possibility to print the results”.

When asked how they would use the games as part of their teaching, the following two scenarios were suggested:

1. “interrelated discussions with students, teaching theory and electronic games”.
2. “to hold small competitions between teams of 2-3 students type ‘most efficient researcher’”.

When asked for any additional remarks or suggestions for improvement:

1. “more attractive graphics”.
2. “is needed to have also sound on background”
3. “to run faster”.
4. “to return easy to the previous window”.
5. “image on full-screen”
6. “gamein Romanian (it is mandatory)”.
Lifelong Learning Programme

7. “an application in which students introduce by themselves data”.
8. “have a similar game for teaching family and community nursing”.

Conclusions
Overall the teacher training feedback resulted in:
1. Using serious games in teaching research in nursing and medical higher education being favorably appreciated by the teachers.
2. General appreciation of teachers who have not used so far this teaching method is very good.
3. Using games will be implemented as soon as the Romanian version becomes available.