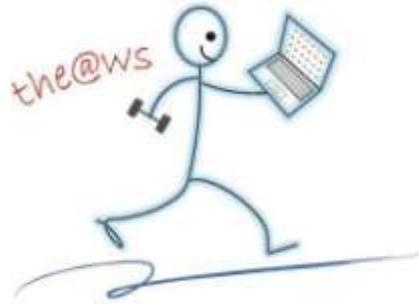




Short Report F



THEWS Output 7

Evaluation of piloting the Learner's Pack: The E-learning Period

Quantitative and qualitative approach

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1. Introduction

THEWS project output O7 concerns piloting of the Learners Pack/ learning material and consists of two parts. The first part was the Intensive Study Program (ISP) conducted one week in Norway, November 2015. The second part is a four-month e-learning period following the ISP. This short report concerns the student's evaluation of the e-learning period. The evaluation of learning outcomes and learning effectiveness of ISP is reported elsewhere.

The aim of the e-learning period was to follow up the eight-module learning program from ISP week. The students were introduced to a web-platform developed in the project for communication at all levels. The platform addresses all participant levels in THEWS; the office workers with muscle pain, the teachers/ researchers, the health instructors and the students. It is an essential part of the project and an important tool for interactive learning, communication, practical exercises and testing. Unfortunately, the development of the platform was delayed of several reasons, and the students work was affected by this.

1. Material and methods

In the Output O7 twenty-seven students participated, 10 from Greece and Cyprus, seven from Norway. Most of the students were health-exercise students, five studied physiotherapy all from Cyprus. About 70% (19) of the students has completed all tasks and assignments.

The e-learning program lasted for four months (January – April 2016). Lectures, assignments and curricula connected to the eight modules in the THEWS program were uploaded to the web platform. In addition, an interactive pain questionnaire was developed and uploaded as a screening tool for health instructors, patients, and office workers etc to select proper exercises from the THEWS exercise program. Every fourth week students had to solve an individual assignment connected to the related module. The assignments contained: (1) a case study concerning neck-shoulder pain and correct exercises (appendix 1), (2) analysis of a review article related to occupational stress management interventions (appendix 2), (3) and (4) functional muscle anatomy and physiology related to neck and shoulder muscles (appendix 3). (5) The final assignment was a more extensive group work (appendix 4). The students in each country collaborated as teams.

Quantitative data: The learning outcome and effectiveness was evaluated by a questionnaire constructed for this purpose. It consists of 15 questions with answering ratings from 1-6, where (1) is "not at all", (6) is "very much so".

Qualitative data: Twelve of fifteen items has qualitative questions following the scales to express comprehensive meaning and intentions of content.

The quantitative results are shown in figures and the qualitative expressions in direct statements.

2. Results

3.1 Expectations for the e-learning period and problems experienced with the platform.

Expectations expressed or experienced are most often associated with learning outcome. For this reason, we asked both for degree of achievements and content of expectations.

In this part of the project, the expectations met were average, and closely related to two factors (1) problems experienced with the web-platform and (2) lack of feedback from the teachers connected to the assignments. The majority of the students reported major problems managing both the pain questionnaire and upload/download files. For that reason, all of them reported low activity connected to the platform (see figure 1). Also, they expressed a desire for more feedback on tasks/ assignments and more collaboration with fellow students.

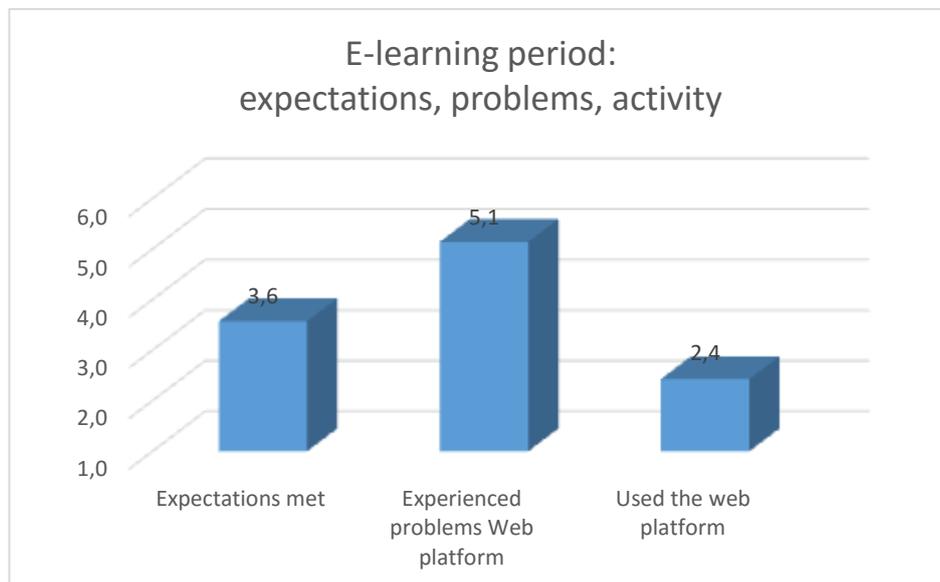


Figure 1: The bars show the students answers rating from 1 – 6. 1 indicating a low score, 6 high scores.

Qualitative results: What was your expectations?

“My expectations was to learn how to cope with symptoms caused by chronic neck pain to office employees. We managed to do that through

theory and practical lessons. But generally I would like more time concerning the practical part and for the students to take more initiatives”.

“It was very difficult to get access to the platform. It is inconvenient to use a lot of time to try to get access. I would be happy to get comments and feedback on the assignments we did. It would probably also be a good idea to go through the assignment together as well, discuss it”.

“My expectations were met. I participated in the intensive program as well and thought there would be lots of learning. However, I never anticipated learning all the stuff I did learn. And especially not as fast as we did. I really enjoyed the whole THEWS program”.

We asked for specific problems the students experienced with the platform, and the following statements describe pretty much the situation:

“At first I couldn’t sign in to the platform and then connect to it. Finally it was hard to us to learn how to use it, upload assignments or watch other moves in the platform”.

“The web platform was not operational during our e-learning period so I experienced difficulties logging in, entering the “national health number”, and navigating to wherever we were supposed to turn in each e-learning assignment”.

2.2 The students’ knowledge and use of the pain form and exercises.

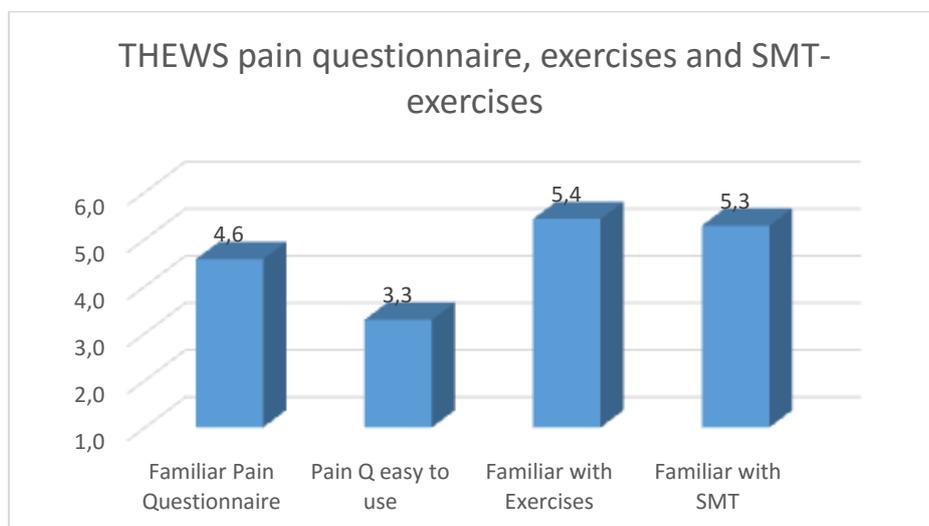


Figure 2: The bars show the reports concerning the pain questionnaire and to what extent the students consider the questionnaire easy to use for selecting proper physical exercises.

The results showed that most of the students were familiar with the pain questionnaire, but found it difficult to use. They were familiar with the THEWS - and stress management exercises. They have, however, different comments that show their experiences.

“Yes, the pain questionnaire is reasonably easy to use”.

“I think the language and pronunciation may be confusing for the regular office employee. Scapula might be a difficult word for most and it is not easy to visibly show the motion that is explained”.

“Yes, I think they (THEWS exercises) are understandable and also easy. Moreover, you realize after having done the exercises several times, you are getting better at doing them right. I also think it is more convenient for the office workers to learn from an instructor also to calm down, relax and realize it not dangerous to do the exercises.”

“I believe the SMT exercises are also good. I think they are easy to learn, easy to teach and that most people would have a great effect of using stress management techniques”.

3.3 The chosen topics in the assignments relevance for learning outcome.

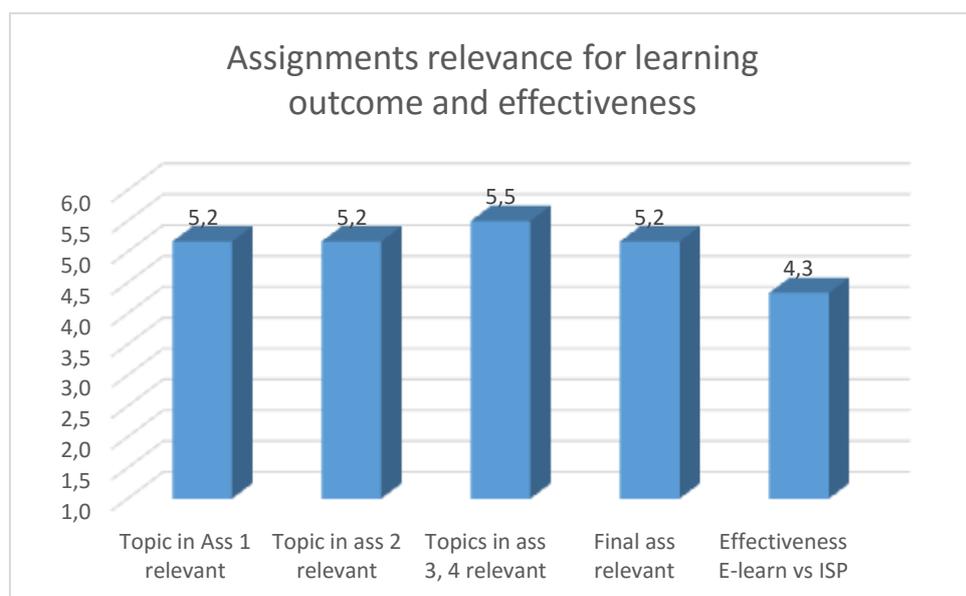


Figure 3: The bars show to what degree the content of the assignments were experienced relevant for learning outcome.

Most of the students were satisfied with the assignments given and the chosen topics. However, they evaluated the learning outcome in the ISP more effective than the e-learning period (see figure 3).

“The intensive study program was much more effective as a learning outcome; the e-learning program was just a way to recap what you learned, which is valuable but not effective as a learning outcome in itself”.

None of the students had suggestions for improvements, but called for more feedback:

“I suggest you would learn even more if you got feedback on your assignment. We could also have got questions on an open forum where all the students had access and had to answer and give reasons for the answers. It would be a discussion to learn from”.

3.4 Final comments

In this paper, the evaluation of the THEWS output O7 shows that e - learning is an important learning method and motivating for students. They have repeated and discussed important theory and practice in the field of exercise training for muscle – skeletal pain in a thorough manner. It is reasonable to conclude that technical problems and heavy time pressure for the project group reduced learning outcome to some extent. The e-learning program, however, contributed to enhanced learning and fortified prior knowledge in the field.

The project group has now solved the problems connected to the web platform, which is operational and functional. In addition, the students have feedback on their work. Comments and critical remarks that emerged in the evaluation, will be taken into account if later education or training in the field.

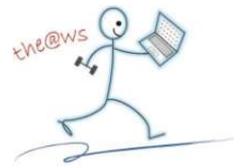
There are many aspects contributing to the total learning experience in a project like this. Final comments below from two of the students are examples of this:

“The THEWS project was really helpful and useful one. It is going to result and advantage for the students who attended. Besides the learning part,



travelling to Norway and meeting different people, places and cultures, was a one of a time experience, which I'll never forget. Thank you for everything»

“I am grateful to having been a part of this program. I think it is very important to get this knowledge out to the office workers, and wish to work intensively with this in the future. Thank you!”



Appendix 1

Assignment 1

Read the paper given (“Patients with chronic neck pain demonstrate altered patterns of muscle activation during performance of a functional upper limb task by Falla et al”) in order to answer the following questions.

Question 1

You have a patient with local, bilateral, neck pain with radiation in the upper trapezius. He is a 33 years old office worker who sits at his desk approximately 7 hrs a day working in a computer which is positioned in a 20° angle to his left. Describe the changes in muscular activity (of the neck muscles) you expect to find on this patient. Which model explains these changes and what is the main premise of this model (Hint: read introduction carefully)? (Answer in 8-10 lines)

Question 2

Based on your answer above describe what kind of interventions (exercise based and others) you would suggest to this patient. Tailor the intervention program to the working needs of the patient. (Answer in 8-10 lines)



Appendix 2

Assignment 2

Read the paper given (“Effects of Occupational Stress management intervention Programs. A meta-Analysis” (Richardson & Rothstein 2008”)) in order to answer the following questions.

Question 1

How Stress Management Intervention (SMI) is explained/defined in the present paper and what is the intention with secondary intervention programs? Give examples (short).

Question 2

Cognitive-behavioral interventions produced larger effects than other types of interventions. Explain why (short).



Appendix 3

Assignment 3

IMPORTANT NOTE:

Please try to upload your answers to THEWS Platform and also send them by email to ampeneka@phyed.duth.gr

Module 6: Development of THEWS protocol

Read the paper given in order to answer the following questions.

Muscle control-Pain control. What exercises would you prescribe?

C.A Richardson, G.A Jull

Manual Therapy (1995), 1, 2-10

Questions:

- Considering the functional differences between the global and local muscles of the spine which type of muscle contraction is needed in re-education of the local system? Please justify your answer.
- According to the specific functional demands of the spine which type of exercise is indicated as most beneficial for re-educating the stabilizing role of the deep local muscles of the lumbar spine? Please justify your answer.

Assignment 4

Module 7: Application of THEWS protocol to office employees

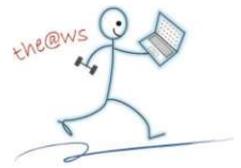
Based on your answer above and considering the paper given describe 2 exercises for re-educating the stabilizing role of the deep local muscles of both cervical and thoracic spine.

Suggested article:

Neck pain and office workers. An exercise program for the workplace.

A.Beneka, P.Malliou, A.Gioftsidou

ACSM's Health and Fitness Journal, vol.18, n.3,pp 18-24.



Appendix 4

Final Assignment

THEWS online training program

40 year old female works as personal assistant to the CEO of a multinational finance company. She works 8-9 hrs /day in front of a computer and also uses the phone a lot. She works under a lot of stress and under strict deadlines.

She experiences intermittent, central neck pain with occasional radiation over the right upper trapezius. Occasionally her neck and scapula muscles feel very tight and sore. She is reasonably fit and she exercises 3 times per week in the local gym using resistance machines and occasionally attending aerobic classes.

She had an x ray and her GP said there are moderate degenerative changes in her cervical spine. Her medical record is clear of any serious pathology in the neck or otherwise. *She is afraid the pain will get worst and it will start to interfere with her work/performance. Pain gets worse before important deadlines and this increases her anxiety. She is afraid she will miss an important deadline and she will be fired.*

- Describe the cognitive and psychological profile of the patient relevant to her problem. Describe how cognitions and stress can interfere with her recovery.
- Prescribe a holistic intervention as instructed in the THEWS program to address the problem of this lady. Possible aspects of the intervention might include stress management, ergonomics, exercises and education.

We can have each country designing one aspect of the program or each country giving a different program and then compare them all. Program can contain multimedia features like video and audio instructions, pictures, drawings, etc.