



FAMT&L

FORMATIVE ASSESSMENT IN MATHEMATICS

FOR TEACHING AND LEARNING

Work Package 7 - Dissemination

Deliverable D7.3– Promotional materials

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Lead organisation for this deliverable: University of Cyprus

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| Description | | | |
| This document outlines the promotional materials used for increasing FAMT&L' external awareness and disseminating of results, including: brochures, posters, and project presentations (provided in the language of each partner's country). | | | |

Deliverable fact sheet

| | |
|-------------------------------|-----------------------|
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Executive summary

This document will outline the project promotional materials that were used for promoting and disseminating FAMT&L results. Brochures and posters were designed and shared in different places (i.e conferences, universities etc.) in order to increase the awareness about the FAMT&L project and its actions. Project presentations were also conducted in order to share some of the project results

The FAMT&L (Formative Assessment in Mathematics for Teaching and Learning) project has been funded under the Lifelong Learning program. This publication reflects the views only of the author(s), and the Commission cannot be held responsible for any use that may be made of the information contained therein.

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About the document

In this document the project promotional materials are presented. In these materials brochures, posters and presentations are included, which are further described below.

1. Posters


A poster (Figure 1) was prepared which presented a summary of the projects' main objectives and steps in English. In the poster the project title and logo are included, as well as the logos of all the partners' universities. The logos regarding the type of the project and its funding are also found in the poster, together with the project website, in order the public to have access to further information about the project. Finally, in the poster the process of formative assessment is represented by a figure created by Luca Mantecchini, entitled "*The cyclical planning and upward progress in the teaching-learning process*". The posters were exposed by all the partners in different places in the buildings of each University and in the buildings of the corresponding University Departments, in order to be visible to all people who visit the Universities and Departments in each country.

Regarding the University of Cyprus, the poster was also exposed in the "18th Cyprus Conference on Mathematics Education and Science" held on the 13th of February 2016 in Paphos (Cyprus), so as the participants of the Conference to become aware of the project.

Additional posters to the general poster of the project were used by the partners for promoting a part of the results of the project.

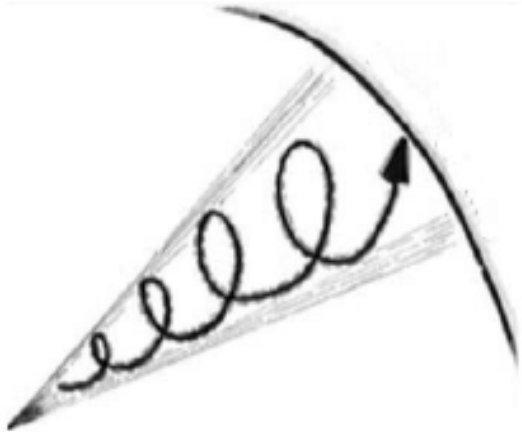
- The University of Cyprus presented a poster (Michael–Chrysanthou, P., Christodoulou, T. & Nicolaou, S. (2015). Formative assessment in the teaching and learning of mathematics) within the actions of the "Cypriot-French Summer School on Mathematics Education", held in Paris (France) between the 2nd and 10th of July 2015 (Figure 2).
- SUPSI set up posters permanently at SUPSI-DFA in May 2015, which were visible to all people who visit the department. These posters (Figure 3) synthetically describe the motivations and objectives of the research, analyzing the first phase results of the questionnaires administered to students and teachers in Ticino. In addition, in August 2016 posters (Figure 4) were set up permanently at SUPSI-DFA that synthetically describe the training model implemented with the teachers in training, stressing the role of the video within the formation.
- France, also, has prepared two posters for promoting the project (Figure 5) and the competition (Figure 6), in December 2015 and in May 2016, respectively.
- In addition, InHolland has prepared two posters for promoting the project (Figure 7) and the training course (Figure 8).

FORMATIVE ASSESSMENT IN MATHEMATICS FOR TEACHING AND LEARNING



Purpose of the FAMT&L project


- To provide a **methodological model** and some **valid materials** for a **quality proposal of mathematics teacher training in Europe**.
- To promote in-service training of mathematics teachers through the design and implementation of an **online repository**: an online resource for training activities addressed to mathematics teachers in the schools involved, and implementing each training teachers' national system.




Main steps of FAMT&L project

- Survey on the mathematics teachers' and students' beliefs and practices concerning formative assessment in classroom.
- Designing and implementing a web repository for the mathematics teachers training about the proper use of formative assessment in teaching-learning situations.


Image created by Luca Mantecchini - "The cyclical planning and upward progress in the teaching-learning process"




Scuola universitaria professionale della Svizzera italiana




University of Cyprus
Department of Education




SUPSI




iNholland
university of applied sciences



UNIVERSITÉ de Cergy-Pontoise



Lifelong Learning Programme



comenius

www.famt-l.eu

Figure 1. The poster of the project

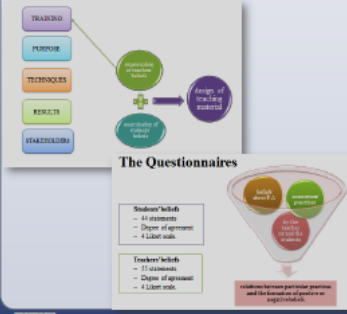
RESEARCH TEAM

- Italy - Alma Mater Studiorum Università di Bologna
- Cyprus - University of Cyprus
- France - Cergy-Pontoise University
- Switzerland - University of Applied Sciences and Arts of Southern Switzerland
- Netherlands - Inholland University of Applied Sciences

OBJECTIVES

- Survey on the mathematics teachers' and students' beliefs and practices concerning formative assessment in classroom.
- Designing and implementing a web repository for the mathematics teachers training about the proper use of formative assessment in teaching-learning situations.
- Elaborating a training model (or methodology) for mathematics teachers training in secondary school.
- variety of tools and objects / guideline for in-service secondary schools teachers training courses.
 - improve teachers' skills to the use of formative assessment in mathematics.

RESEARCH AXES



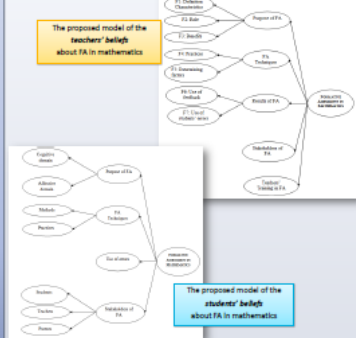
TEACHERS' BELIEFS

| RESEARCH AXES | EXAMPLES OF STATEMENTS |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Purpose | <ul style="list-style-type: none"> Formative assessment identifies the students' strong and weak abilities in mathematics. Formative assessment should assess the students' ability to apply mathematics in unfamiliar everyday situations. Different mathematical capabilities (e.g. Argumentation vs Computational capability) need different assessment practices or tools. |
| Techniques | <ul style="list-style-type: none"> Formative assessment means giving ungraded mathematical assignments (negative statement). The quality of feedback increases when providing feedback right after a submission. Feedback about the students' progress in learning mathematics gives hope and positive expectations for themselves. Errors are associated with lack of knowledge. Errors are due to the limited capabilities of students. |
| Results | <ul style="list-style-type: none"> Students can develop a deeper understanding of their learning when they are given opportunities to discuss the learning process with their teacher and their peers. Formative assessment provides a tangible product that the teacher can share with students and parents. |
| Stakeholders | <ul style="list-style-type: none"> Students can develop a deeper understanding of their learning when they are given opportunities to discuss the learning process with their teacher and their peers. Formative assessment provides a tangible product that the teacher can share with students and parents. |
| Training | <ul style="list-style-type: none"> Given assessment workshops in the future, please indicate which topic(s) you would like to attend: Methods to assess students' achievement. Using assessment methods to provide students with feedback. |

STUDENTS' BELIEFS

| RESEARCH AXES | REPRESENTATIVE STATEMENTS |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Purpose | <ul style="list-style-type: none"> Assessment helps me identifying my good skills in math. Some assessments serve to verify only what I have understood on a mathematical subject and not for our grade report. |
| Techniques | <ul style="list-style-type: none"> How important do you think are the following methods of assessment in math? Correcting my mistakes helps me to understand better a mathematical concept. My mistakes in math discourage me. My teacher uses our mistakes and interests to plan the next mathematics lesson. If I make mistakes in math I deserve a low grade. |
| Use of errors | <ul style="list-style-type: none"> After a classmate marking my test or work in math, I can acknowledge my mistakes easier – STUDENTS My teacher's goal of assessment is identifying my learning difficulties in math in order to help me to overcome them. – TEACHERS My parents make comments about my corrected tests or works in math, even if I get low or high grades. – PARENTS |
| Stakeholders | <ul style="list-style-type: none"> My teacher's goal of assessment is identifying my learning difficulties in math in order to help me to overcome them. – TEACHERS My parents make comments about my corrected tests or works in math, even if I get low or high grades. – PARENTS |

EXPECTED RESULTS



DEFINITION OF FAMT&L

| PURPOSE | TECHNIQUES | RESULTS |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> assessment FOR teaching and learning process establish a dialogue between teacher and student | <ul style="list-style-type: none"> teaching methods which can respond effectively to different learning times for each student their different learning styles their zones of proximal development Feedback Feed forward | <ul style="list-style-type: none"> allow teachers to reflect on and modify their own practices, educational interventions the outputs of teacher's choices (transposition of mathematical content, interface between contents and methods) |
| <ul style="list-style-type: none"> students to acquire the basic skills of a discipline identify the strengths and weaknesses of students learning to give information, feedback and feed forward – in and outside of the classroom – related to the development of mathematical life-skills | <ul style="list-style-type: none"> promotes students' ability for self-assessment and peer-assessment | <ul style="list-style-type: none"> learning for all students through differentiated teaching (different rhythms and different teaching and learning strategies) students' active participation in the teaching-learning process Involving the student in the analysis of own errors / weaknesses |

Figure 2. The UCY poster of the project results

SUPSI

Progetto europeo FAMT&L

La valutazione formativa nella didattica della matematica

Silvia Sbaragli, Elena Franchini, Miriam Salvatberg, Edo Dozio (consulente)

Introduzione

Il progetto FAMT&L (Formative assessment in mathematics for teaching and learning) nasce dalla collaborazione tra cinque partners europei: Università di Bologna (coordinatore del progetto), Università Cergy-Paris (Francia), Università Inndland di Scienze Applicate (Norvegia), Università di Cipro, Dipartimento Formazione e Apprendimento (SUPSI) con lo scopo di valorizzare il ruolo della valutazione formativa nel processo di insegnamento/apprendimento della matematica. A tale scopo il Canton Ticino si avvale della collaborazione degli insegnanti di due scuole partner per l'implementazione del progetto (scuola media di Arona e Gravenano).

Obiettivi della ricerca

L'obiettivo del progetto è di migliorare le competenze degli insegnanti sia sulla pianificazione e valutazione (valutazione per l'apprendimento), sia sulla didattica della matematica, in particolare, far sì che gli insegnanti acquisiscano un atteggiamento che consiste nel sapere:

- analizzare situazioni educative complesse;
- individuare i bisogni di apprendimento degli studenti concernenti la disciplina matematica e le competenze trasversali (metacompetenze, strategie di apprendimento, metodi di studio);
- formulare ipotesi e pianificare strategie e tecniche per individuare le difficoltà e offrire rimedi per un efficace apprendimento della matematica;
- utilizzare la valutazione con uno scopo formativo, al fine di dare agli insegnanti la possibilità di verificare, organizzare e migliorare i loro metodi e di consentire agli studenti di autovalutarsi e diventare consapevoli dei propri processi di apprendimento.

Descrizione

Il progetto, della durata di tre anni (dicembre 2013 – novembre 2015), si sviluppa in diverse fasi:

- analisi delle convinzioni degli studenti e degli insegnanti relativamente alla valutazione formativa e alle sue pratiche (amministrazione di un questionario);
- predisposizione di un database di video e materiali utilizzati durante la formazione;
- analisi attraverso un opportuno software del video realizzati in classe nelle scuole partner, con l'utilizzo di una griglia di indicatori;
- sviluppo di una piattaforma di formazione;
- elaborazione di un modello di formazione (in presenza e a distanza), al fine di migliorare in modo significativo le competenze di valutazione degli insegnanti;
- implementazione del modello di formazione con eventuali rielaborazioni e modifiche.

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Risultati

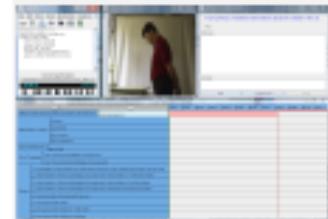
La prima fase di ricerca si è focalizzata sulla somministrazione e analisi dei risultati di due questionari (docenti e allievi) sottoposti a tutti i paesi partners allo scopo di far emergere le convinzioni sulle valutazioni formative e le pratiche messe in atto dagli insegnanti in classe. In particolare, in Canton Ticino è stato somministrato a 69 docenti di matematica e a 342 allievi della scuola media delle sedi di Cadenazzo, Gravenano, Intravio, Arona e Locarno. L'analisi ha permesso di evidenziare alcuni aspetti interessanti, tra i quali alcune incongruenze tra quanto dichiarato dai docenti e quanto poi messo in pratica in aula secondo gli allievi o ritenuto importante per loro. Di seguito riportiamo uno dei grafici del Canton Ticino realizzati a partire dal confronto tra i risultati di alcuni strumenti da parte dei docenti e l'importanza attribuita dagli studenti.



Gli strumenti della valutazione formativa ritenuti più adeguati dalle quasi totalità degli insegnanti, in accordo con il giudizio degli allievi, sono: lo svolgimento degli esercizi o dei problemi, seguiti da analisi e discussioni di casi complessi. Per i compiti a casa meno del 20% degli studenti pensa sia uno strumento molto importante, mentre più del 70% degli insegnanti lo utilizza. Secondo gli studenti risulta una preferenza di attività di tipo con esercizi (ad esempio calcoli e espressioni), piuttosto che strumenti che richiedono apprendimenti comunicativi (presentazione di relazioni su ricerche e lavori personali) o di collaborazione personale di un problema (svolgimento di progetti di lavoro su situazioni concrete). Insegnanti e allievi sono concordi sull'importanza di realizzare gli obiettivi di apprendimento, ma sembra che in classe gli insegnanti non lo facciano in modo sufficiente e chiaro. In diverse domande si racconta l'importanza per gli allievi di un feedback continuo da parte dei docenti, che però appare limitato. In generale i docenti dichiarano di essere aperti agli aspetti formativi della valutazione e sentono avere ben inquadri gli aspetti salienti, ma dalle incongruenze emerse con quanto dichiarato dagli allievi pare non il applicarlo efficacemente in aula.

Discussioni e conclusioni

L'analisi dei questionari ha permesso di puntualizzare con i docenti partners le peculiarità della valutazione formativa, sottolineando quali pratiche la coinvolgono. Al momento stiamo realizzando alcuni video nelle classi con l'obiettivo di evidenziare alcune pratiche di valutazione formative (autovalutazione, valutazione tra pari, interazione con l'allievo, feedback, ...). Attraverso l'utilizzo di un software gratuitamente scaricabile dalla rete (Anvil 5.1) avremo la possibilità di analizzare minuziosamente i video sfruttando una griglia di indicatori messa a punto e condivisa dai vari paesi coinvolti.



La costruzione di un web repository di video ha poi l'obiettivo di creare un database di situazioni che evidenzino pratiche di valutazione formative. Proprio a partire da queste stiamo elaborando un modello di formazione che coinvolge l'utilizzo di una piattaforma online con un approccio innovativo.



Sono inoltre state proposte due varianti del modello per venire incontro maggiormente alle esigenze di ciascun paese partner: uno completamente a distanza e uno che prevede anche momenti di confronto in presenza. Si prevede che il corso pilota rivolto a docenti di matematica delle scuole medie si realizzi nell'anno accademico 2015/16.

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Figure 3. The SUPSI poster of the project results

SUPSI

Progetto europeo FAMT&L

La valutazione formativa nella didattica della matematica

Silvia Sbaragli, Elena Franchini, Miriam Salvisberg, Edo Dozio (consulente)

Introduzione

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Obiettivi della ricerca

Favorire un uso corretto della valutazione formativa (valutazione per l'apprendimento) in didattica della matematica, al fine di incoraggiare il pensiero riflessivo e critico dei docenti su strategie di valutazione efficaci. In particolare, uno dei principali finalità della ricerca è la realizzazione di una formazione per i docenti di matematica di scuole medie sulla valutazione formativa focalizzata sull'analisi di finali relativi a momenti di valutazione formativa realizzati in aula, i video, realizzati dai vari paesi con le scuole partner costituiscono il fulcro del modello di formazione proposto e sono raccolti in una piattaforma virtuale (web repository) appositamente studiata per archiviare finali e documenti di ogni paese.

Descrizione

Il progetto della durata di tre anni (dicembre 2013 – novembre 2016), si sviluppa in diverse fasi. Quelle su cui ci siamo concentrati in questo periodo prevede:

- elaborazione di un modello di formazione (in presenza e a distanza);
- archiviazione dei video nel web repository;
- implementazione del modello di formazione;
- bilancio della formazione.

Ciascun paese sta realizzando un corso di formazione pilota, seguendo alcune linee guida comuni suggerite dal gruppo svizzero, che prevedono la somministrazione di un questionario iniziale e finale per monitorare l'efficacia del corso, l'utilizzo del video del web repository, l'osservazione delle lezioni e degli eventuali centri di convezione da parte degli insegnanti, la realizzazione di una messa in comune finale dove si riassumono i punti chiave sulla valutazione formativa emersi durante il corso.

Risultati

Il corso pilota organizzato in Ticino è stato rivolto ai docenti in formazione che frequentano il Master abilitante per l'insegnamento alla scuola media. Si è trattato di 2 incontri di 4 ore ciascuno realizzati in presenza con l'utilizzo del web repository. L'uso del video era finalizzato ad analizzare le pratiche di docenti relative a momenti di valutazione formativa e a riflettere in modo critico sulle proprie azioni in classe, stimolando le discussioni tra ricercatori e docenti. Diversi studi evidenziano l'efficacia dell'utilizzo del video nella formazione degli insegnanti (Paragago, Zannoni & Steiger, 2007), come ad esempio la metodologia Lesson Study, dove gli insegnanti analizzano sistematicamente una lezione, documentando alle tecniche di registrazione audiovisive.



La costruzione di un web repository di video ha l'obiettivo di creare un database di situazioni che evidenzino pratiche di valutazione formativa, utile sia agli insegnanti come fonte di ispirazione, che ai ricercatori come piattaforma da cui attingere i vari video per la formazione.

Durante i due incontri di formazione sono stati proposti video realizzati nelle scuole partner che miravano a costruire conoscenze, competenze e gesti professionali sulla valutazione formativa, e a riflettere in modo specifico sulle misconcezioni e sugli errori didattici in matematica.

In particolare le attività proposte prevedevano:

- domande generali riguardo all'individuazione di momenti di valutazione formativa (quali e perché) permettendo una prima riflessione e discussione sul tema;
- l'analisi delle sequenze video scelte utilizzando gli indicatori presenti nella griglia esposta dai ricercatori e usata per indicare i video, permettendo un'osservazione più dettagliata delle azioni degli insegnanti e degli allievi in reazione ad una situazione di valutazione formativa;
- domande-stimolo volte alla riflessione sulle proprie pratiche;

- Inquadramento delle situazioni osservate in un possibile contesto teorico, come ad esempio le tre fasi del ciclo suggerito in Ruiz-Pitro & Furka (2004).



Questo ciclo si è rivelato particolarmente efficace per capire la differenza tra una valutazione formativa informale e una normale interazione didattica, consentendo di rendere più analitico il pensiero dei docentistudenti e raggiungendo così maggiore consapevolezza del processo di insegnamento-apprendimento.

Discussione e conclusioni

Da i risultati dei questionari finali risulta che, nonostante il corso fosse sviluppato in soli due incontri, vi sia stata una completa soddisfazione sia riguardo ai contenuti proposti che all'intensità stimolata, lamentando al più la breve durata del corso rispetto all'importanza delle tematiche affrontate.



Dalle risposte emerge che tutti i docenti sono consapevoli del significato di valutazione formativa, in particolare dell'idea di valutazione come momento in cui allievo e docente si rendono conto del punto in cui si trova nel percorso di apprendimento; una duplice utilità: per il docente regolare e differenziare la programmazione in base alle informazioni ricevute e per l'allievo prendere coscienza di ciò che ha appreso oppure no. Questi tutti i docenti hanno particolarmente apprezzato l'efficacia della visione di video che mostrano esempi di valutazione formativa. Lo stretto legame con la realtà d'aula permette di focalizzare meglio quello che diventano nella storia sulla valutazione formativa.

A partire dai risultati emersi da tutti i corsi pilota dei cinque paesi il gruppo svizzero redigerà la proposta di alcuni modelli di formazione e realizzerà una guida per formatori con le principali linee da seguire per proporre un corso su questo tema.

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Agosto 2016

Figure 4. The SUPSI poster of the training model

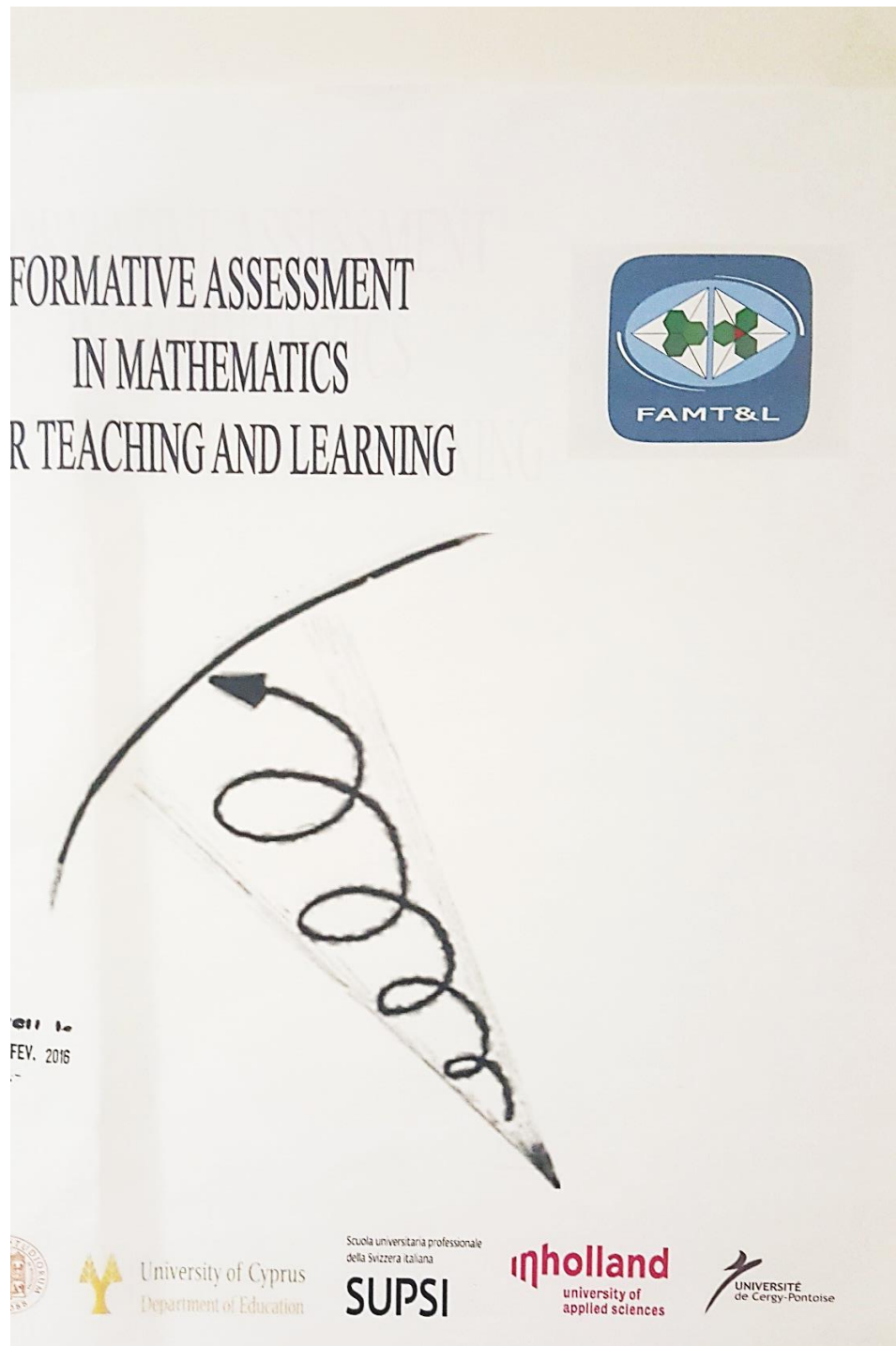


Figure 5. The UCP poster for promoting the project

FAMT&L COMPETITION

La compétition lancée par le projet FAMT&L vise à mettre en valeur la créativité des professeurs de mathématiques, en les encourageant à utiliser les mathématiques comme un mode d'expression innovateur à travers l'évaluation formative. L'objectif de cette compétition est d'accroître les aspirations des professeurs de mathématiques et de stimuler leurs intérêts pour la mise en oeuvre de l'évaluation formative, ses techniques ainsi que ses pratiques. La réalisation de cet objectif se fera à travers la création de situations courtes filmées en classe.

Les participants peuvent être des professeurs du secondaire venant d'établissements publics et/ou privés. Chaque participant représentera son établissement.

Le résultat recherché est une vidéo courte (5 minutes) d'un enseignant (et des élèves) représentant une des situations suivantes :

- Montrant une situation décrivant l'évaluation formative (en utilisant tous les moyens possibles (verbaux, images, diagrammes et autres représentations...))
- Proposant et décrivant une technique spécifique de l'évaluation formative qui est utilisée
- Présentant une vidéo courte (de mise en oeuvre de l'évaluation formative en classe, dans laquelle une technique spécifique est utilisée)

Prix proposés:

- Premier prix : 500 € et un certificat de réussite
- Second prix : 300 € et un certificat de réussite

Les récompenses seront offertes sous forme de matériels qui pourront être utiles à l'établissement du vainqueur (ordinateur, tablette, TBI...)

DATES A RETENIR

| | |
|----------------------------------------------------|-------------------|
| Premier appel à la compétition | 25 avril 2016 |
| Second appel à la compétition | 16 Mai, 2016 |
| Date limite de soumission de candidature | 15 Juillet 2016 |
| Notification de sélection des 2 candidats par pays | 16 Septembre 2016 |
| Notification aux finalistes | 30 Septembre 2016 |
| Lancement de la compétition (à Bologna, Italie) | Decembre 2016 |

Vous trouverez de plus amples informations concernant le concours à l'adresse suivante (adresse du site web du projet) : <http://www.famt-l.eu/competition/>



FORMATIVE ASSESSMENT
OF MATHEMATICS
TEACHING AND LEARNING



Figure 6. The UCP poster for promoting the competition

Formative Assessment in Mathematics Teaching and Learning



inholland
hogeschool

Formatief assessment, maakt het leren zichtbaar.

Formatief assessment, versterkt het leren.

Formatief assessment, motiveert en stimuleert.

Formatief assessment, maak de leerling eigenaar van het eigen leren.

Een interactieve workshop waarin de beginselen van formatief assessment getoond worden. U neemt mee een aantal praktische voorbeelden die morgen in elke les kunnen worden toegepast, zonder al te veel voorbereiding.

Meer informatie:
<http://www.famt-l.eu/>
rob.velder@inholland.nl



Figure 7. The InHolland poster for promoting the project

Formative Assessment in Mathematics Teaching and Learning



inholland
hogeschool

In een internationale onderzoeksgroep is een professionaliseringsinstrument ontwikkeld voor docenten.

kenmerken van de training:

- praktijk gericht
- leren docent staat centraal
- formatief opgezet
- leren in een gemeenschap
- veel voorbeelden en video's
- observeren en leren

Meer informatie:

<http://www.famt-l.eu/>
rob.velder@inholland.nl

Wedstrijd

Door het ontwerpen van creatieve, formatieve interventies heeft FAMT-L wedstrijd tot doel het vergroten van de ambitie bij de docent en hen te stimuleren formatief assessment toe te passen



Figure 8. The InHolland poster for promoting the training course

At the end of the project a poster was prepared for promoting the final conference held in Bologna, Italy on the 25th of November 2016 (Figure 9). In the poster the purpose of the final conference was described and the agenda of the conference was provided.

The poster was distributed by all partners to different destinations.

For example, in Cyprus the poster was sent via email to all the academic staff and the students of the Department of Education. The poster was also placed in different buildings in the University of Cyprus, in order to be accessible by the students and the academic staff from all the departments. The poster was also published by the Cyprus Mathematical Society's website (<http://www.cms.org.cy/>).

In Italy, the flyer (Figure 10) was sent via email to all the academic staff and students of Department of Education and Department of Mathematics; it was also sent via mail to all partner schools and to a lot of math teachers in Italy. The poster was disseminated also by some core of research in Mathematics Education, by Rete Witec, European Association for Women in Science, by the *INDIRE (National Institute for Documentation, Innovation and Educational Research)* and by the *INVALSI, National Institute for the Educational Evaluation of Instruction and Training*). The poster was also placed in different buildings in the University of Bologna, in order to be accessible by the students and the academic staff from all the departments. The poster was also published in the University of Education website (http://www.edu.unibo.it/risorse/files/programma-convegno-famt-l/at_download/file/Volantino-Conv-251116.pdf) and in the FAMT&L website (<http://www.famt-l.eu>). Both flyer and poster are in Italian language and English language.

In Switzerland the poster was sent via email to all the academic staff, the students of the Department of Teaching and Learning, all teachers in schools in Ticino.


In Netherlands the poster of the final conference was put on bulletin board in University for the academic staff and the students and it was also placed in newsletter for colleagues and students. In addition, the poster was sent via mail in different networks regarding the beta-partners and the associated schools.








The poster was also shared in the Facebook page of the project (<https://web.facebook.com/Famtl-Formative-Assessment-in-Mathematics-for-Teaching-and-Learning-508441582670725/?fref=ts>).

FORMATIVE ASSESSMENT IN MATHEMATICS' TEACHING & LEARNING

FINAL CONFERENCE - NOVEMBER, 25/2016

Auditorium Lumière – Università di Bologna Progetto LLP - Comenius
Via Azzo Gardino - Bologna



The conference goal is to taking the stock of the situation about the Formative Assessment in Mathematics Education and it aims to create an opportunity for debate on the issue of teacher training with the support of video analysis.

This day will be an opportunity for international debate between universities, professors and researchers, pre-service and in-service teachers of all grade levels. The partners of the Project and the teachers who have been involved by the Research/Training FAMT&L will offer plenary lectures and times of open-discussion about formative assessment in mathematics and on the main results of the Project.

International, national and regional institutions, engaged in the development of the teaching professionalism and the quality of educational systems, will participate to this conference. The conference will also include the "Dissemination Prize", an award that will win the school that has produced the "best" video inherent to the formative assessment in mathematics.

Il convegno mira a fare il punto della situazione sulla Valutazione Formativa nella Didattica della Matematica e intende creare un'opportunità di dibattito sul tema della formazione degli insegnanti con il supporto metodologico della videoanalisi.

La giornata sarà un'occasione di confronto internazionale fra docenti e ricercatori universitari, insegnanti pre-service e in-service di tutti i livelli scolastici. I partner del Progetto e gli insegnanti che sono stati coinvolti dalla Ricerca-Formazione FAMT&L proporranno conferenze in plenaria e momenti di discussione aperta sulle questioni della valutazione formativa in matematica e sui principali risultati di ricerca del Progetto.

Alla giornata parteciperanno istituzioni internazionali, nazionali e regionali impegnate per lo sviluppo della professionalità docente e la qualità dei sistemi scolastici.

Il convegno includerà anche il "Dissemination Prize", un premio che si aggiudicherà la scuola che avrà realizzato il "miglior" video inerente alla valutazione formativa in matematica.

Agenda of the FAMT&L Conference

Opening session: h. 9.00

Mirko Degli Esposti (Deputy Rector, Department of Mathematics, UNIBO)

Alessandra Scagliarini (Vice Rector for International Relations, Department of Veterinary Medical Sciences, UNIBO)

Elena Luppi (Rector's Delegate for Gender Equality, Department of Education Studies "Giovanni Maria Bertin", UNIBO)

Luigi Guerra (Head of Department of Education Studies "Giovanni Maria Bertin", Department of Education Studies "Giovanni Maria Bertin", UNIBO)

Roberta Caldin (Dean of School of Psychology and Education Sciences, Department of Education Studies "Giovanni Maria Bertin", UNIBO)

Francesco Girotti (Manager of DIRI, International Relations Division, UNIBO)

Topics (morning):
h. 10.00 - 13.00

Presentation of LLP-Comenius Project FAMT&L
Giorgio Bolondi and **Ira Vannini** (University of Bologna, UNIBO)

Formative Assessment (shared definition)
Athanasios Gagatsis, Paraskovi Michael-Chrysanthou, Theodora Christodoulou and Iliada Iliia (University of Cyprus, UCY)

The Questionnaires Results
Federica Ferretti and Stefania Lovece (University of Bologna, UNIBO)

Our model for the video analysis
Laurent Jeannin and Fatiha Lograda, EMA (University of Cergy-Fontaine, UCP)

Pilot course. The main results
Silvia Sbaragli, Elena Franchini

and Miriam Salvaterra (University of Applied Sciences and Arts of Southern Switzerland, SUPSI)

The quality of FAMT&L Project. Open discussion with teachers schools
Serp de Blauw and Rob Volder (INHOLLAND University)

Topics (afternoon):
h. 14.30 - 18.00

Final Prize of Competition and presentation of Video Winners
Alessandro Gimigliano (University of Bologna, UNIBO)

The Formative Assessment in Mathematics
Bruno D'Amore (IRF, Core for Research in Mathematics Education)

Assessment Beliefs and Gender Gap
Carlo Tomasetto (Rete Wtac, European Association for Women in Science, Engineering and Technology, UNIBO)

Rounde Table conducted by Giorgio Bolondi and Alessandro Gimigliano: Promote the mathematics teachers skills in the use of the assessment for learning
Mariolina Bartolini-Bussi (University of Modena and Reggio Emilia)

Giovanni Biondi and Maria Chiara Pettenati (INDIRE, National Institute for Documentation, Innovation and Educational Research)

Rossella Garuti and Stefania Pozio (INVALSI, National Institute for the Educational Evaluation of Instruction and Training)

Patricia Wastiau-Schlüter (European Schoolnet, transforming education in Europe)

For any information, please contact:
federica.ferretti5@gmail.com
stefania.lovece@unibo.it

Figure 9. The poster for the Final Conference

FORMATIVE ASSESSMENT IN MATHEMATICS' TEACHING & LEARNING

FINAL CONFERENCE - NOVEMBER, 25/2016

Auditorium Lumière – Università di Bologna
Via Azzo Gardino - Bologna

Progetto LLP - Comenius



Supsi
SOCIETÀ ITALIANA
PER LA PSICOLOGIA
E LA DIDATTICA

holland
UNIVERSITY OF
APPLIED SCIENCES

University
of Cyprus

UNIVERSITÄT
DE GRUYTER
POTSDAM



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

The Conference

The conference goal is to taking the stock of the situation about the Formative Assessment in Mathematics Education and it aims to create an opportunity for debate on the issue of teacher training with the support of video analysis.

This day will be an opportunity for international debate between universities, professors and researchers, pre-service and in-service teachers of all grade levels. The partners of the Project and the teachers who have been involved by the Research/ Training FAMT&L will offer plenary lectures and times of open-discussion about formative assessment in mathematics and on the main results of the Project.

International, national and regional institutions, engaged in the development of the teaching professionalism and the quality of educational systems, will participate to this conference.

The conference also includes the "Dissemination Prize", an award that will be won by the school that has produced the "best" video on the formative assessment in Mathematics.

Il convegno mira a fare il punto della situazione sulla Valutazione Formative nella Didattica della Matematica e intende creare un'opportunità di dibattito sul tema della formazione degli insegnanti con il supporto metodologico della videoanalisi.

La giornata sarà un'occasione di confronto internazionale tra docenti e ricercatori universitari, insegnanti pre-service e in-service di tutti i livelli scolastici. I partner del Progetto e gli insegnanti che sono stati coinvolti dalla Ricerca-Formazione FAMT&L proporranno conferenze in plenaria e momenti di discussione aperta sulle questioni della valutazione formative in matematica e sui principali risultati di ricerca del Progetto.

Alla giornata parteciperanno istituzioni internazionali, nazionali e regionali impegnate per lo sviluppo della professionalità docente e la qualità dei sistemi scolastici.

Il convegno includerà anche il "Dissemination Prize", un premio che si aggiudicherà le scuole che avrà realizzato il "miglior" video inerente alla valutazione formative in matematica.

Agenda

OPENING SESSION: H 9.00

Milko Degli Esposti (Deputy Rector, Department of Mathematics, UNIBO)
Alessandra Scaglioni (vice Rector for International Relations, Department of Veterinary Medical Sciences, UNIBO)

Elena Luppi (Rector's Delegate for Gender Equity, Department of Educational Studies "Giovanni Maria Butti", UNIBO)

Luigi Gaerem (Head of Department of Educational Studies "Giovanni Maria Butti", Department of Education Studies "Giovanni Maria Butti", UNIBO)

Roberta Colla (Dean of Faculty of Psychology and Educational Sciences, Department of Education Studies "Giovanni Maria Butti", UNIBO)

Francesca Girotti (Manager of IPR, International Relations Division, UNIBO)

TOPICS (MORNING): H 10.00 - 13.00

Presentation of LLP-Comenius Project FAMT&L

Giorgio Bolondi and Irene Vianoli (University of Bologna, UNIBO)

Formative Assessment (shared definition)

Athanasios Gagialis, Paraskevi Michail-Chryssanthou, Theodoros Christodoulou and Edda Ili (University of Cyprus, UCI)

The Questionnaires Results

Federica Favetti and Stefania Lovace (University of Bologna, UNIBO)

Our model for the video analysis

Laurent Jermann and Fatima Logez, EMA (University of Caen-Normandie, UCN)

Pilot course. The main results

Silvia Steingrimsdóttir, Elena Franzini and Miriam Seltschik

(University of Applied Sciences and Arts of Southern Switzerland, SUPSI)

The quality of FAMT&L Project. Open discussion with teachers schools

Seung de Hwang and Rob Wilder (UNIC, UNB University)

TOPICS (AFTERNOON): H 14.30-18.00

Final Prize of Competition and presentation of Video Winners

Alessandro Giugliano (University of Bologna, UNIBO)

The Formative Assessment in Mathematics

Ilsema D'Amore (IRIS, Core for Research in Mathematics Education)

Assessment Beliefs and Gender Gap Caffe Sossanetto

Felix Hübner, European Association for Women in Science, Engineering and Technology, UNIBO)

Round Table conducted by Giorgio Bolondi and Alessandro Gimigliano:

Promote the mathematics teachers skills in the use of the assessment for learning

Marilena Bartolotti-Bassi (University of Modena and Reggio Emilia)

Giovanni Bonoli and Maria Chiara Petronzi

INCRIS, National Institute for Documentation, Innovation and Educational Research)

Rosella Garuti and Stefania Poole

INCRIS, National Institute for the Educational Evaluation of Instruction and Training)

Patricia Weidauer-Schäffer (European Science, Transforming education in Europe)

FOR ANY INFORMATION, PLEASE CONTACT:

Federica Favetti (favetti.federica@unibo.it)

Stefania Lovace (lovace.stefania@unibo.it)

Figure 10. The Italian flyer for the Final Conference

2. Flyers

2.1 For promoting the project actions

A flyer in English (Figure 11) was prepared for promoting the projects aims and actions. Emphasis was given on promoting our teachers' training program, by describing our main methodology and stressing the use of videos. In particular, the flyer included a short description of the purpose of the FAMT&L project, the main steps of FAMT&L project and brief information about our teacher training program. The cover of the flyer included the project's title and logo and the figure created by Luca Mantecchini, showing "*The cyclical planning and upward progress in the teaching-learning process*". In the back cover of the flyer the logos of all the partners' universities are found, with the logos regarding the type of the project and its funding and the project website, in order the public to have access to further information about the project.

The flyers were distributed by all the partners in the buildings of each University and in the buildings of the corresponding University Departments, in order to be available to all people who visit the Universities and Departments in each country.

Regarding the University of Cyprus, the flyers were also distributed to the participants of the "18th Cyprus Conference on Mathematics Education and Science" held on the 13th of February 2016 in Paphos (Cyprus).

In addition, the flyers were distributed from the UNIBO University to the participants of the EAPRIL 2015 Conference (European Association for Practitioner Research on Improving Learning – Conference), held in Belval, Luxembourg between the 24-27 of November 2015.


Furthermore, SUPSI University used flyers for Secondary School teachers since January 2016, entitled "Encourage the assessment. Formative observation in mathematics through the video support" (Figure 12). Flyers were sent for SUPSI also for promoting the Mathematical teacher training entitled "Guidelines for mathematical teacher training on the promotion and proper use of formative assessment in mathematics" (Figure 13).

Netherlands has also prepared a flyer (Figure 14) for promoting the program about the training course.


In addition, UCP has prepared a flyer in order to promote the competition (Figure 15). This flyer was distributed in May 2016.


Partners in the project:

 **Italy** - Alma Mater Studiorum Università di Bologna
www.unibo.it


 **Cyprus** - University of Cyprus
www.ucy.ac.cy

 **France** - Cergy-Pontoise University
www.u-cergy.fr

 **Switzerland** - University of Applied Sciences and Arts of Southern Switzerland
www.supsi.ch


 **Netherlands** - Inholland University of Applied Sciences
www.inholland.nl

Funded by:

 Lifelong Learning Programme

 comenius

Our website: www.famt-leu



FORMATIVE ASSESSMENT IN MATHEMATICS FOR TEACHING AND LEARNING




Image that represents the cyclical planning and upward progress in the teaching-learning process

Our teacher-training program

The aim of our teacher-training program will be to foster among teachers a proper use of formative assessment (assessment for learning) in mathematics education.

External grounding of the pilot training courses in the associated schools is at the heart of the external justification of the project.

The method adopted for the courses uses the analysis of video sequences recorded in class and support the same video in the training program.

The pilot training courses – together with the training model that has been defined – will be applied in different schools.

Each course will be implemented by each partner of the consortium in collaboration with national associated partner schools.

In these training courses special emphasis will be given in the use of videos, through video-analysis with the participants.

Purpose of the FAMT&L project

The Project aims to provide a **methodological model and some valid materials for a quality proposal of mathematics teacher training in Europe**, starting from an in-depth analysis of training teachers' needs and on-going experiences in the different partner countries.

Subsequently, the project aims to promote in-service training of mathematics teachers through the design and implementation of an **online repository**: an innovative product that will be used, in the future, as online **resource for training activities addressed to mathematics teachers** in the schools involved, and implementing each training teachers' national system.

Main steps of FAMT&L project

- Survey on the mathematics teachers' and students' beliefs and practices concerning formative assessment in classroom.
- Designing and implementing a web repository for the mathematics teachers training about the proper use of formative assessment in teaching-learning situations.
- Elaborating a training model for mathematics teachers training in secondary school:
 - characterized by a variety of tools and objects / guideline for in-service secondary schools teachers training courses.
 - aimed at improving teachers' skills to the use of formative assessment in mathematics.

Figure 11. Flyer for promoting the projects' aims and actions (in English)

Descrittivo corso formazione continua

TITOLO
 "Incentivare le valutazioni. Osservazione formativa in matematica attraverso il supporto di video".

Presentazione (max 1200 battute)
 La presente proposta di formazione continua si inserisce all'interno della ricerca europea FAMT&L (Formative Assessment, Mathematics, Teaching & Learning) relativa alle possibilità che offre la valutazione formativa per il processo di insegnamento e apprendimento della matematica. La ricerca nelle quali si inserisce la proposta ha la durata di tre anni (da dicembre 2013 a dicembre 2016) e i paesi coinvolti sono: Olanda, Francia, Cipro, Italia e Canton Ticino. Una finalità importante della ricerca è la realizzazione di una formazione per i docenti di matematica di scuole medie sulla valutazione formativa e formazione da impostare attraverso l'analisi di filmati focalizzati su momenti di valutazione formativa realizzati in aula. I video prodotti nei vari paesi sono inseriti all'interno di una piattaforma virtuale utilizzata come archivio dei filmati e dei documenti e come spazio virtuale di formazione e di confronto.

Obiettivi (max 700 battute)
 - Migliorare e incrementare il processo di valutazione / osservazione formativa nelle lezioni di matematica.
 - Sapere analizzare in modo critico dei video focalizzandosi sulla valutazione formativa, di conseguenza saper progettare e realizzare situazioni di valutazione formativa in classe.
 - Individuare strategie didattiche per colmare le difficoltà nell'apprendimento della matematica.

Destinatari
 Docenti di matematica delle scuole medie, docenti dei Servizi di Sostegno Pedagogico (max. 66 partecipanti).

Certificato
 Attestato di frequenza

Crediti di studio
 2 ECTS

Programma (max 1200 battute)
 Il corso si articola nelle seguenti fasi:
 - presentazione dei principali aspetti di inquadramento teorico sulla valutazione formativa, con particolare attenzione rivolta alle convinzioni dei docenti (somministrazione di un questionario appositamente strutturato) e all'analisi di alcune tipologie di scenari e situazioni d'aula specifiche della valutazione formativa (visione di video);
 - progettazione "realistica" di situazioni specifiche di valutazione formativa da proporre (adattamento partecipativo in classe (tramite assistenza online) e incontri virtuali) in piattaforma;
 - condivisione del lavoro, messa in comune delle opinioni emerse, messa in luce delle pratiche efficaci.

Durata
 6 incontri di 4 ore ciascuno; 24 ore in presenza.

Relatori/accompagnatori
 Miriam Salviolo - ricercatrice CIRBE, Dipartimento Formazione e Apprendimento SUPSI
 Elena Franchini - docente ricercatore di didattica della matematica, Dipartimento Formazione e Apprendimento SUPSI
 Edo Dado - consulente psicopedagogista
 In alcuni momenti potrebbero intervenire i docenti delle scuole partner del progetto europeo (Ariani e Gressano), che sono già coinvolti nel progetto.

Responsabili
 Miriam Salviolo - ricercatrice CIRBE, Dipartimento Formazione e Apprendimento SUPSI
 Elena Franchini - docente ricercatore di didattica della matematica, Dipartimento Formazione e Apprendimento SUPSI.

Iscrizioni
 Entro il 15 gennaio 2016

Date e orari
 Firma data: mercoledì 17 febbraio
 Altre date da definire a settembre.

Orario delle lezioni: 9.00-13.00

Luogo
 Da definire in base alle provenienze degli iscritti.

Osservazioni (eventuali)
 La certificazione, per chi intende conseguirla, consiste nella partecipazione al corso e nella progettazione e documentazione di un possibile intervento mirato alla valutazione formativa.

Figure 12. SUPSI University flyer: "Encourage the assessment. Formative observation in mathematics through the video support"

The flyer is titled "SUPSI Formazione continua 2015/2016" and lists various courses under the heading "Offerta formativa di breve durata". The courses are organized in a grid with columns for course titles, durations, and descriptions. Some of the visible course titles include "Partecipazione e apprendimento", "Educazione al consumo", "L'educazione alla cittadinanza", "L'educazione alla sostenibilità", "L'educazione alla cultura", "L'educazione alla salute", "L'educazione alla lingua", "L'educazione alla matematica", "L'educazione alla scienza", "L'educazione alla tecnologia", "L'educazione alla storia", "L'educazione alla geografia", "L'educazione alla arte e cultura", "L'educazione alla musica", "L'educazione alla danza", "L'educazione alla teatro", "L'educazione alla cinema", "L'educazione alla televisione", "L'educazione alla radio", "L'educazione alla stampa", "L'educazione alla pubblicità", "L'educazione alla comunicazione", "L'educazione alla media", "L'educazione alla informazione", "L'educazione alla cultura della pace", "L'educazione alla cooperazione", "L'educazione alla cittadinanza attiva", "L'educazione alla democrazia", "L'educazione alla legalità", "L'educazione alla responsabilità", "L'educazione alla solidarietà", "L'educazione alla empatia", "L'educazione alla compassione", "L'educazione alla gentilezza", "L'educazione alla pazienza", "L'educazione alla tolleranza", "L'educazione alla umiltà", "L'educazione alla modestia", "L'educazione alla sobrietà", "L'educazione alla castità", "L'educazione alla purezza", "L'educazione alla verginità", "L'educazione alla fedeltà", "L'educazione alla onestà", "L'educazione alla integrità", "L'educazione alla correttezza", "L'educazione alla giustizia", "L'educazione alla equità", "L'educazione alla imparzialità", "L'educazione alla obiettività", "L'educazione alla neutralità", "L'educazione alla imparzialità", "L'educazione alla equità", "L'educazione alla giustizia", "L'educazione alla equità", "L'educazione alla giustizia", "L'educazione alla equità", "L'educazione alla giustizia", "L'educazione alla equità".

At the bottom right of the flyer, there is a photograph of a classroom activity where children are sitting around a table, engaged in a project that involves creating a large tree-like structure with many small figures hanging from the branches. The children appear to be working together and are smiling.

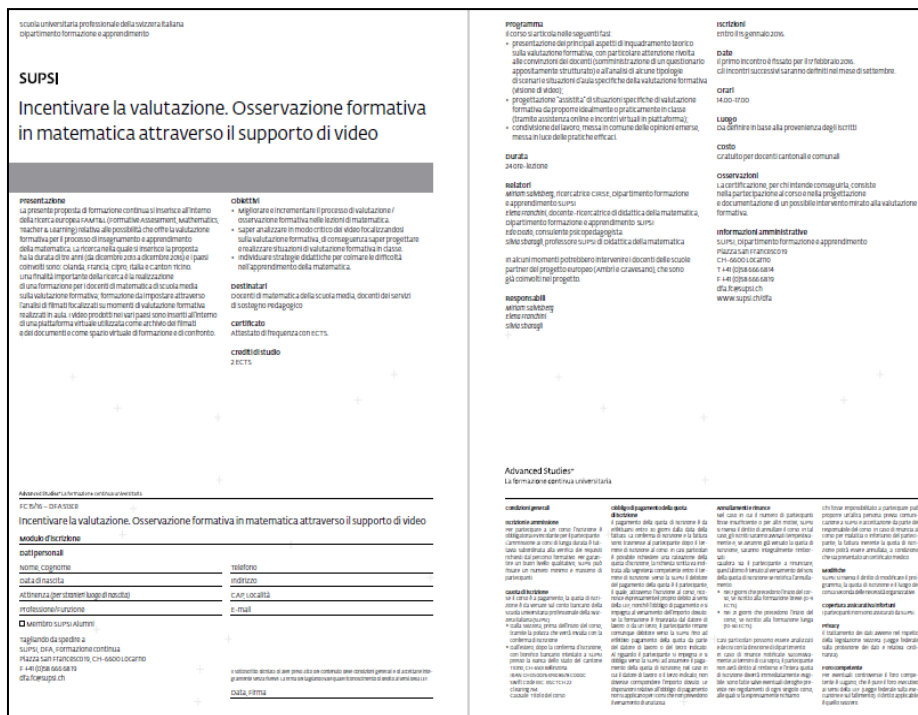


Figure 13. SUPSI University flyer: “Guidelines for mathematical teacher training on the promotion and proper use of formative assessment in mathematics”



Figure 14. InHolland University flyer about the training program

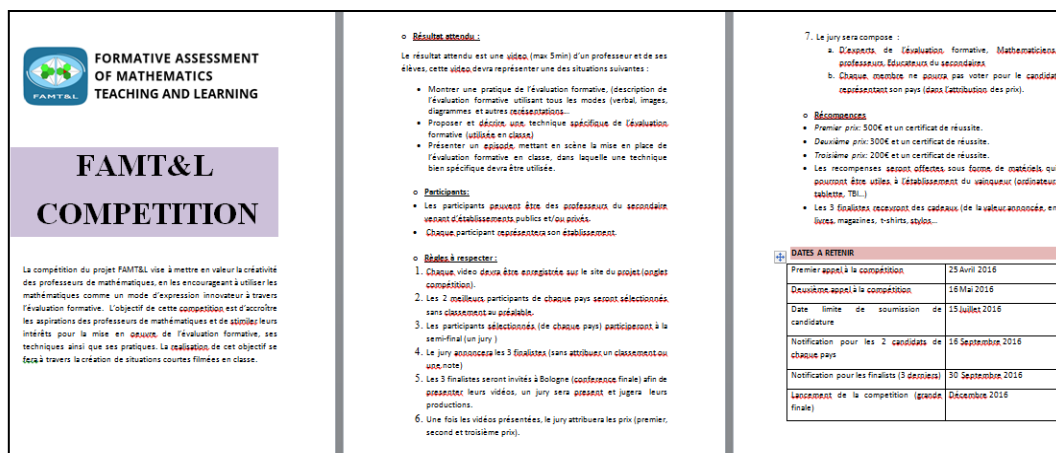


Figure 15. The UCP flyer for promoting the competition

2.2 For promoting the training model

Leaflets were also prepared for promoting the training program designed in the different countries.

In Holland the flyers for promoting the training model were distributed in the seminars described in the following table.

| DESTINATION | DESCRIPTION | DATE |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Bootcamp | A conference with 1600 teachers. In the programme were a lot of workshops with different content. | March 31, 2015 |
| Bruggen bouwen naar het onderwijs van de toekomst | A conference about research and developments in education. | June 20, 2016 |
| Formatief assessment in de les | Workshop/in service training for 30 teachers in formative assessment | September 15, 2016 |
| Grenze(n)loze wiskunde | Conference for researches, teachers in education of mathematics. Theme of this conference this year is Borderless Mathematics. | November 4, 2016 |
| Voor en door docenten. Morgen gaan we differentiëren | In a project leerling2020 several schools participate in a learning environment to change their education. The project is subsidized by the ministry of Education. | November 10, 2016 |

In Italy the flyers (Figure 16) for promoting the training model were distributed in the Conference of European Association for Practitioner Research on Improving Learning –in Belval, Luxembourg (24-27 Nov 2015) and in the Launch Seminar of Italian Pilot Course (23 April 2016). This course is a university professional development course and the flyer was sent via email to all the academic staff and students of Department of Education and Department of Mathematics; it was also sent via mail to all partner schools and to a lot of math teachers in Italy.

In Swiss the flyers reached Secondary School teachers, to whom they were sent in January 2016 (Figure 13 above).

In Cyprus, a leaflet was prepared in Greek (see below, Figure 17) for calling the secondary mathematics teachers all over Cyprus to participate in the training program. The leaflet was sent by email to all secondary schools in Cyprus and was also distributed in handouts in some of these schools. The leaflet included the description of the purpose and actions of the FAMT&L project and the aims and methodology in general of the training program. Next, a detailed description of all the steps of the Cypriot training model was provided, so as the participants to have a complete idea of the organization of the training program. The leaflet includes also the dates of the program,

conduct information for applications and the logos of the program and all the partners' Universities.

For further promotion of the program, the leaflet was also published by the Cyprus Mathematical Society's website

(<http://www.cms.org.cy/assets/files/2015-2016/Programma-katartisis-ekpaideftikon.pdf>).

INFORMAZIONI GENERALI

DIREZIONE
Prof.ssa Ivo Vannini, Dipartimento di Scienze Dell'Edcazione «Giovanni Maria Bertini», Università di Bologna.

COORDINAMENTO SCIENTIFICO
Prof. Giorgio Bolondi, Dipartimento di Matematica, Università di Bologna.

PRESENTAZIONE
Il Corso intende formare un insegnante esperto in metodologie e procedure della valutazione formativa degli apprendimenti in classe.

PROFILO PROFESSIONALE
L'insegnante al termine del corso potrà mettere in campo strategie di valutazione formativa che possono migliorare i processi di insegnamento-apprendimento della matematica. Egli, inoltre, occuperà l'attività fondamentale per progettare e realizzare efficaci processi di didattica individualizzata in classe. In questo senso, al fine di un miglioramento delle competenze matematiche degli allievi della scuola, l'insegnante esperto potrà costituire uno strumento molto importante per la progettazione dei Piani di Miglioramento orientati a rinnovare i contesti d'apprendimento e le pratiche didattiche, soprattutto nell'area matematica e scientifica.

REQUISITI
L'insegnante esperto di valutazione può svolgere, infatti, la funzione di referente di scuola per la valutazione e il miglioramento.

RISULTATI ATTESI
Al termine del corso l'insegnante sarà in grado di:
- concepire funzioni, test, contestualizzate e finalizzate alla valutazione formativa;
- conoscere le principali metodologie e tecniche per alcune processi di valutazione formativa in matematica;
- applicare in classe attività di valutazione formativa in matematica adatte a target, contesti, obiettivi di apprendimento, contenuti, ecc.;
- progettare la diffusione di pratiche concrete di valutazione formativa nella didattica della matematica.

STRUTTURA DEL CORSO
Il corso è articolato in attività in presenza e attività a distanza, nonché in attività in piccoli gruppi o individuali. Il corso di lavoro sarà distribuito durante tutto il percorso e permetterà la partecipazione di ogni singolo corsista/insegnante alle attività proposte. Le attività a distanza prevederanno sia lo studio individuale sia lo scambio online di attività di gruppo attraverso l'uso della piattaforma del corso e di uno specifico web repository per l'analisi di video sequenze filmate di insegnante in classe. Le piattaforme e-learning e il repository online sono stati creati nell'ambito del progetto europeo Comenius FAMT&L (Formative Assessment in Mathematics for Teaching and Learning). Le modalità di verifica saranno sia in itinere, attraverso feedback relativi ai singoli lavori svolti durante le diverse fasi, sia al termine del percorso, attraverso un colloquio o commento del lavoro progettuale svolto durante tutto il percorso.

Al fine dell'ottenimento del titolo è obbligatoria una frequenza del 75%.

CALENDARIO

| GIUGNO | LUGLIO | AGOSTO | SETTEMBRE | OCTOBRE | NOVEMBRE | DICEMBRE |
|--------|--------|--------|-----------|---------|----------|----------|
| 13.30 | 13.30 | 9.30 | 14.30 | 13.30 | 9.30 | 14.30 |
| 18.30 | 18.30 | 11.30 | 18.30 | 18.30 | 11.30 | 17.30 |
| 5 ore | 5 ore | 4 ore | 4 ore | 5 ore | 4 ore | 7 ore |

COLLEGIO DEI DOCENTI
Prof.ssa Ivo Vannini
Prof. Giorgio Bolondi

INSEGNAMENTI
- Modelli e procedure di valutazione formativa - Prof.ssa Ivo Vannini
- Didattica della matematica - Prof. Giorgio Bolondi

ALTRE INFORMAZIONI

SEDE DELLE LEZIONI
Atene e laboratori del Dipartimento di Scienze dell'Edcazione «Giovanni Maria Bertini», Via Filippo De' Bolognese a alta aula del complesso universitario.

DESTINATARI E REQUISITI D'ACCESSO
Insegnanti di matematica, di ruolo e non, in servizio presso scuole secondarie di I grado, del biennio delle scuole secondarie di II grado e nei percorsi di IUPV (istruzione e formazione professionale per obbligo formativo), sia pubblici sia privati.

Il corso è riservato a coloro che sono in possesso di Laurea in SSMMFFNN o altre Lauree che hanno consentito o possono consentire l'accesso all'insegnamento della Matematica. Gli Insegnanti che hanno partecipato alle attività del Progetto FAMT&L (per la videoverifica in classe) potranno accedere al corso come sovrimmatricoli o titolo gratuito. In caso vi sia disponibilità di posti, si accetteranno anche iscrizioni da parte di insegnanti della scuola primaria.

CORSO
Lo spazio di iscrizione è di 300€ da corrispondersi in unico rateo dal 21 al 30 settembre. La segreteria didattica fornisce ulteriori dettagli a tutti i candidati idonei. Il numero massimo di iscritti è fissato in 45. Il Dipartimento si riserva la facoltà di non procedere all'attivazione del corso qualora il numero minimo di iscritti sia inferiore a 10.

CFU
Il corso non rilascia Crediti Formativi Universitari.

CONTATTI
SEGRETARIA DIDATTICA
Fondazione Alma Mater - Area Alti Formazione
Via Belle Arti, 42 - 40126 Bologna
PIERPAOLO CARLINI
pierpaolo.carlini@unibo.it
Tel. 051 2091979

FAM

Figure 16. The UNIBO flyer for promoting the training model

COMENIUS **UNIBO** **Lifelong Learning Programme**

ΔΙΑΔΟΡΦΩΤΙΚΗ ΔΕΙΞΙΜΟΤΗΤΑ ΣΤΗ ΔΙΔΑΚΤΙΚΑ ΚΑΙ ΜΑΘΗΣΗ ΤΩΝ ΜΑΘΗΜΑΤΙΚΩΝ

Πρόγραμμα κατάρτισης εκπαιδευτικών
4 – 6 Ιουλίου 2016

Πανεπιστήμιο Κύπρου
Τμήμα Εκπαιδευτικής Αγωγής

Το προηγούμενο πρόγραμμα FAMT&L σχετικά στην ενότητα της μεθοδολογίας μετέδωσε και εγχαίρει νέους για μια κοινότητα πρόταση για την κατάρτιση των εκπαιδευτικών των μαθημάτων στην Ελλάδα, Γαλλία, και με σε βέλτε ενόψει των οικιακών κατάρτισης τους και των προετοιμά τους στις διάφορες φάσεις που συμπεριλαμβάνονται στο πρόγραμμα.

Στα πλαίσια των δραστηριοτήτων του προγράμματος, FAMT&L, παρέχεται ένα πρόγραμμα κατάρτισης, αναπτύσσοντας για τη συνειδησιακή εφαρμογή της διαμορφωτικής αξιολόγησης στη διδασκαλία και μάθηση των μαθημάτων.

Ο στόχος του προγράμματος κατάρτισης αναπτύσσοντας ένα να προέβησαν τη σωστή χρήση της διαμορφωτικής αξιολόγησης (εξέλιξη για τη μέτρηση) στον τομέα της ανακάλυψης των μαθημάτων.

Η μεθοδολογία που υιοθετείται για να μετρηθούν στα πλαίσια των προγραμμάτων είναι χρησιμοποιώντας την ενότητα είναι με διάφορα αποτελέσματα με εφαρμογή διαμορφωτικής αξιολόγησης σε νέες εκπαιδευτικές πρακτικές.

Το πρόγραμμα διαρκεί 12 ώρες και θα πραγματοποιηθεί σε 3 συνεδρίες των 4 ωρών, στα Πανεπιστήμιο Κύπρου.

Συνεπώς, ημερομηνία θα είναι βέλτεση συμμετοχής.
Η συμμετοχή στο πρόγραμμα είναι δωρεάν.

ΜΑΘΗΜΑ 1

1. Οικειότητα της έννοιας της διαμορφωτικής αξιολόγησης

Μετά από εισήγηση θεωρητική υλική, οι συμμετέχοντες θα αναζητούν την έννοια της διαμορφωτικής αξιολόγησης:

- Παρουσίαση του Στρατηγικού προγράμματος (κοινά μεθοδολογία, αποτελέσματα).
- Παρουσίαση των αποτελεσμάτων της έρευνας για τη Κύπρο και αντανακλάει των αποτελεσμάτων με τις άλλες χώρες.
- Παρουσίαση του προγράμματος σχεδίασης και ανάπτυξης και των στόχων του.
- Παρουσίαση του θεωρητικού κλάδου για τη διαμορφωτική αξιολόγηση.
 - ✓ Καθορισμός των διαδικασιών της διαμορφωτικής αξιολόγησης
 - ✓ Πραγματοποίηση και ανάλυση δεδομένων κατασκευασμένων διαμορφωτικής αξιολόγησης
- Εφαρμογή αποτελεσμάτων υλική (εξέλιξη μαθημάτων, στοιχεία, βραβεία κ.λπ.).

2. Δορυφόρος μέτρηση και μεθόδους

Οι συμμετέχοντες θα έχουν στη διάθεσή τους φόρμα, βραβεία ανακάλυψης και άλλο σχετικό υλικό, που θα σχετίζεται με συγκεκριμένες παραμέτρους της διαμορφωτικής αξιολόγησης.

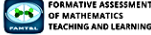





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| <p>ΜΑΘΗΜΑ 2</p> <p>Ονομάζεται της άσκησης της διαφορετικής αξιολόγησης με χρήση βίντεο. Μια από την ανάλυση των βίντεο θα αναλάβει η οικογένεια της άσκησης της διαφορετικής αξιολόγησης από τους εκπαιδευτικούς.</p> <p>1. Αξιολόγηση παρατήρησης βίντεο</p> <ul style="list-style-type: none"> Οι συμμετέχοντες θα παρακολουθήσουν πρώτα απομακρυσμένα βίντεο, με σκοπό να ανιχνεύσουν και να περιγράψουν συγκεκριμένες πρακτικές και εργαλεία διαφορετικής αξιολόγησης. Με βάση την παρατήρηση και την ανάλυση των βίντεο, θα γράψουν συστάσεις με τη βοήθεια υλικών με τη διαφορετική αξιολόγηση. <p>2. Διαγράμμιση παρατήρησης βίντεο</p> <ul style="list-style-type: none"> Οι συμμετέχοντες θα παρακολουθήσουν πρώτα απομακρυσμένα ηχογραφήσεις της διαφορετικής αξιολόγησης και θα τα ανιχνεύουν με τη χρήση κλειδών παρατήρησης. Οι συμμετέχοντες θα συζητούν τις ανάλυσεις τους, ώστε να καθοριστούν οι στόχοι και οι εργαλεία διαφορετικής αξιολόγησης που παρατηρήθηκαν στα βίντεο. <p>3. Εργασία διαφορετικής αξιολόγησης</p> <ul style="list-style-type: none"> Οι συμμετέχοντες θα εφαρμόσουν μια διαφορετική διαφορετικότητα αξιολόγησης σε μικρές ομάδες στην τάξη, χρησιμοποιώντας συγκεκριμένα εργαλεία διαφορετικής αξιολόγησης. Αυτό το στάδιο αφορά κυρίως στο να βάλουν στην πράξη τη διαφορετικότητα. Οι συμμετέχοντες θα παρακολουθήσουν απομακρυσμένα και βιντεοσκοπημένες βίντεο, τα οποία περιλαμβάνουν συγκεκριμένες πρακτικές διαφορετικής αξιολόγησης (π.χ. αυτο-αξιολόγηση, αμοιβαία αξιολόγηση κ.λπ.). Οι συμμετέχοντες θα αξιολογήσουν μεταξύ τους και με τους εκπαιδευτές για το σχεδιασμό διαφορετικότητας με τη χρήση της διαφορετικής αξιολόγησης. | <p>ΜΑΘΗΜΑ 3</p> <p>1. Εργασία της διαφορετικής αξιολόγησης</p> <ul style="list-style-type: none"> Οι συμμετέχοντες θα εφαρμόσουν στην τάξη με τους μαθητές απομακρυσμένα τη διαφορετικότητα που ορίστηκε με βάση τη διαφορετικότητα αξιολόγησης (αμοιβαία αξιολόγηση), θα ακολουθήσουν συζητήσεις για τις εφαρμογές των συμμετεχόντων και θα δοθεί ανατροφοδότηση. Οι συμμετέχοντες θα συζητούν πρώτα ομάδες (5-6 άτομα). Κάθε συμμετέχοντες θα εφαρμόσει σε συντάξεις (για περίοδο 20') μια διαφορετικότητα που ορίζεται διαφορετικότητα αξιολόγησης και ακολουθεί, θα συζητούν και θα αξιολογούν τον αλληλο τους (με βάση κριτηριακά εργαλεία). Οι μαθητές συμμετέχοντες θα κληθούν να δώσουν ανατροφοδότηση (με βάση κριτηριακά εργαλεία). Μετά την εφαρμογή της αμοιβαία αξιολόγησης, από όλους τους συμμετέχοντες θα ακολουθήσει συζήτηση για παρόμοια ανατροφοδότηση από τους εκπαιδευτές και από τους συμμετέχοντες. <p>2. Εργασία παρατήρησης</p> <p>Εξήγησε συμμετεχόντων για τη διαφορετικότητα αξιολόγησης. Οι εκπαιδευτές και οι εκπαιδευτικοί συζητούν τα βίντεο που είναι της διαφορετικής αξιολόγησης, όπως τους προτάθηκαν από τα βίντεο.</p> <ul style="list-style-type: none"> Οι συμμετέχοντες θα κληθούν οι συμμετεχόντες για τη διαφορετικότητα αξιολόγησης και θα γράψουν τους με τη βοήθεια. Οι συμμετέχοντες θα κληθούν οι συμμετεχόντες για τις πιο απομακρυσμένες πρακτικές διαφορετικής αξιολόγησης. Οι συμμετέχοντες θα κληθούν να κληθούν τους για τη διαφορετικότητα αξιολόγησης και να απαντήσουν τους για τη λειτουργία του μαθητικού απομακρυσμένου που περιλαμβάνει όλα κλειδιά του συγκεκριμένου προγράμματος μαθημάτων. | <p>Για περισσότερες πληροφορίες και εγγραφή στο πρόγραμμα επικοινωνήστε με:</p> <p>Παιδαγωγική Χρονιά (e-mail: pnh@uoi.gr, t. 21093954)</p> <p>Θεωρία Χρονιά (e-mail: theoria@uoi.gr)</p> <p>Ενότητα Νέων (e-mail: pnh@uoi.gr)</p> <p>Ιστοσελίδα προγράμματος: www.famt-l.eu</p> <p>Συντονιστές προγράμματος: Αθανάσιος Γεωργίου, Καλλιόπη Μαθηματικής Παιδείας, Παιδαγωγικό Κολλέγιο</p>  |
| <p>Στο σχετικό πρόγραμμα FAMT&L συμμετέχουν:</p> <ul style="list-style-type: none">  Italia - Alma Mater Studiorum University of Bologna www.unibo.it  Kypros - University of Cyprus www.ucy.ac.cy  Γαλλία - Cergy-Pontoise University www.u-cergy.fr  Svizzera - University of Applied Sciences 400 Arts of Southern Switzerland www.supsi.ch  Ολλανδία - Inholland University of Applied Sciences www.inholland.nl | | |

Figure 17. The UCY leaflet for promoting the training model

2.3 For promoting the FAMT&L Competition

A flyer was prepared for promoting the FAMT&L Competition (Figure 18). The flyer was prepared at first in English and was then translated to each partners' language, such as in Greek (Figure 19) and in French (Figure 20). Italy didn't translate the flyer in Italian language, but the Italian partners communicated to schools and teachers through the website <http://www.famt-l.eu/famt-l-competition/> where they could read the information to participate. The flyer includes a description of the aims of the competition and the regulations about the participants, the product, the prizes and the important dates. In the flyer there is a citation to the projects' website and in particular to the page created for the competition (<http://www.famt-l.eu/competition/>), in order to access more information about the regulations and important dates. The flyer was send by all the partners (be e-mail or hard-copies) to all the secondary schools, in order to reach the secondary mathematics teachers.

FAMT&L COMPETITION

The FAMT&L competition aims to enhance the creativity of math teachers by encouraging them to use mathematics in an innovative way of expression and communication through Formative Assessment. By creating small situations of Formative Assessment in mathematics classrooms, the objective of the FAMT&L competition is to raise math teachers' aspiration and stimulate their interest towards the implementation of Formative Assessment techniques and practices.

The **participants** could be secondary education math teachers from public and private schools. Each participant will be representing his/her school.

The **product** should be a short video (max 12 minutes) of a teacher (and students), presenting one of the following situations:

- providing a definition/ a description of Formative Assessment with any means (i.e verbally, using pictures, diagrams or other representations, with movements e.t.c)
- proposing and describing a specific Formative Assessment technique to be used in mathematics teaching
- presenting a short episode of the implementing Formative Assessment in classroom, in which a particular technique is used.

Prizes

- *First Prize:* 500€ and certificate of success.
- *Second Prize:* 300€ and certificate of success.
- *Third Prize:* 200€ and certificate of success.

The prizes will be given as equipment and material to be used in the winners' schools (such as computers, tablets, interactive white boards e.t.c).

IMPORTANT DATES

| | |
|-----------------------------------------------------------|---------------------------------|
| First call of the competition | 25 th April, 2016 |
| Second call of the competition | 16 th May, 2016 |
| Submission deadline | 2 nd October, 2016 |
| Notification to 2 selected participants from each country | 15 th October, 2016 |
| Notification to finalists | 30 th October, 2016 |
| Launch of the competition (in Bologna, Italy) | 25 th November, 2016 |

More information about the regulations and important dates can be found at our projects' website: <http://www.famt-l.eu/competition/>



**FORMATIVE ASSESSMENT
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Figure 18. The flyer of the competition

ΔΙΑΓΩΝΙΣΜΟΣ FAMT&L

Ο διαγωνισμός FAMT&L έχει στόχο να ενισχύσει τη δημιουργικότητα των εκπαιδευτικών των Μαθηματικών, ενθαρρύνοντας τους να χρησιμοποιούν τα μαθηματικά με ένα καινοτόμο τρόπο έκφρασης και επικοινωνίας μέσω της Διαμορφωτικής Αξιολόγησης. Δημιουργώντας συνθήκες Διαμορφωτικής Αξιολόγησης σε τάξεις των μαθηματικών, ο στόχος του διαγωνισμού FAMT&L είναι να ενισχύσει τις φιλοδοξίες των εκπαιδευτικών των μαθηματικών και να παρακινήσει το ενδιαφέρον τους σχετικά με την εφαρμογή των τεχνικών και των πρακτικών της Διαμορφωτικής αξιολόγησης.

Οι συμμετέχοντες χρειάζεται να είναι εκπαιδευτικοί μαθηματικών δευτεροβάθμιας εκπαίδευσης από δημόσια και ιδιωτικά σχολεία. Κάθε συμμετέχοντας θα εκπροσωπήσει το σχολείο του.

Οι συμμετέχοντες εκπαιδευτικοί (και οι μαθητές τους) θα πρέπει να φτιάξουν ένα σύντομο βίντεο (διάρκειας μέχρι 5 λεπτά), παρουσιάζοντας μία από τις ακόλουθες καταστάσεις:

- παρέχοντας έναν ορισμό/περιγραφή της Διαμορφωτικής Αξιολόγησης με οποιοδήποτε μέσο (π.χ. προφορικά, χρησιμοποιώντας εικόνες, διαγράμματα ή άλλες παραστάσεις, με κινήσεις, κ.ά.)
- προτείνοντας μια συγκεκριμένη τεχνική Διαμορφωτικής Αξιολόγησης για τη διδασκαλία των μαθηματικών
- παρουσιάζοντας ένα σύντομο επεισόδιο εφαρμογής της Διαμορφωτικής Αξιολόγησης στην τάξη, στο οποίο χρησιμοποιείται μια συγκεκριμένη τεχνική.

Βραβεία

- *Πρώτο Βραβείο:* 500€ και πιστοποιητικό επιτυχίας
- *Δεύτερο Βραβείο:* 300€ και πιστοποιητικό επιτυχίας
- *Τρίτο Βραβείο:* 200€ και πιστοποιητικό επιτυχίας

Τα βραβεία θα δοθούν υπό μορφή εξοπλισμού και υλικών που θα χρησιμοποιηθούν στα σχολεία των νικητών (π.χ. ηλεκτρονικοί υπολογιστές, ταμπλέτες, διαδραστικός πίνακας κ.τ.λ.).

Για περισσότερες πληροφορίες σχετικά με τους κανονισμούς του διαγωνισμού μπορείτε να επισκεφτείτε την ιστοσελίδα του ερευνητικού προγράμματος FAMT&L (<http://www.famt-l.eu/competition-ucy/>) και να επικοινωνήσετε στα pmicha@ucy.ac.cy και theodoraco@yahoo.gr.

ΣΗΜΑΝΤΙΚΕΣ ΗΜΕΡΟΜΗΝΙΕΣ

| | |
|-----------------------------------------------------------------------------------------------------------|----------------------|
| Πρώτη ανακοίνωση του διαγωνισμού | 25 Απριλίου, 2016 |
| Δεύτερη ανακοίνωση του διαγωνισμού | 16 Μαΐου, 2016 |
| Προθεσμία υποβολής συμμετοχών | 15 Ιουλίου, 2016 |
| Γνωστοποίηση αποτελεσμάτων στους 2 συμμετέχοντες από κάθε χώρα για την πρόκριση τους στον ημιτελικό γύρο. | 16 Σεπτεμβρίου, 2016 |
| Γνωστοποίηση αποτελεσμάτων στους 3 συμμετέχοντες που θα επιλεγούν για τον τελικό γύρο. | 30 Σεπτεμβρίου, 2016 |
| Τελικός γύρος (Μπιολόνα, Ιταλία) | 23 Νοεμβρίου, 2016 |



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Figure 19. The Cypriot flyer of the competition

FAMT&L COMPETITION

La compétition lancée par le projet FAMT&L vise à mettre en valeur la créativité des professeurs de mathématiques, en les encourageant à utiliser les mathématiques comme un mode d'expression innovateur à travers l'évaluation formative. L'objectif de cette compétition est d'accroître les aspirations des professeurs de mathématiques et de stimuler leurs intérêts pour la mise en oeuvre de l'évaluation formative, ses techniques ainsi que ses pratiques. La réalisation de cet objectif se fera à travers la création de situations courtes filmées en classe.

Les participants peuvent être des professeurs du secondaire venant d'établissements publics et/ou privés. Chaque participant représentera son établissement.

Le résultat recherché est une vidéo courte (5 minutes) d'un enseignant (et des élèves) représentant une des situations suivantes :

- Montrant une situation décrivant l'évaluation formative (en utilisant tous les moyens possibles (verbaux, images, diagrammes et autres représentations...))
- Proposant et décrivant une technique spécifique de l'évaluation formative qui est utilisée
- Présentant une vidéo courte (de mise en oeuvre de l'évaluation formative en classe, dans laquelle une technique spécifique est utilisée)

Prix proposés:

- Premier prix : 500 € et un certificat de réussite
- Second prix : 300 € et un certificat de réussite

Les récompenses seront offertes sous forme de matériels qui pourront être utiles à l'établissement du vainqueur (ordinateur, tablette, TBI...)

DATES A RETENIR

| | |
|----------------------------------------------------|-------------------|
| Premier appel à la compétition | 25 avril 2016 |
| Second appel à la compétition | 16 Mai, 2016 |
| Date limite de soumission de candidature | 15 Juillet 2016 |
| Notification de sélection des 2 candidats par pays | 16 Septembre 2016 |
| Notification aux finalistes | 30 Septembre 2016 |
| Lancement de la compétition (à Bologna, Italie) | Decembre 2016 |

Vous trouverez de plus amples informations concernant le concours à l'adresse suivante (adresse du site web du projet) : <http://www.famt-l.eu/competition/>



**FORMATIVE ASSESSMENT
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Figure 20. The French flyer of the competition

3. Website

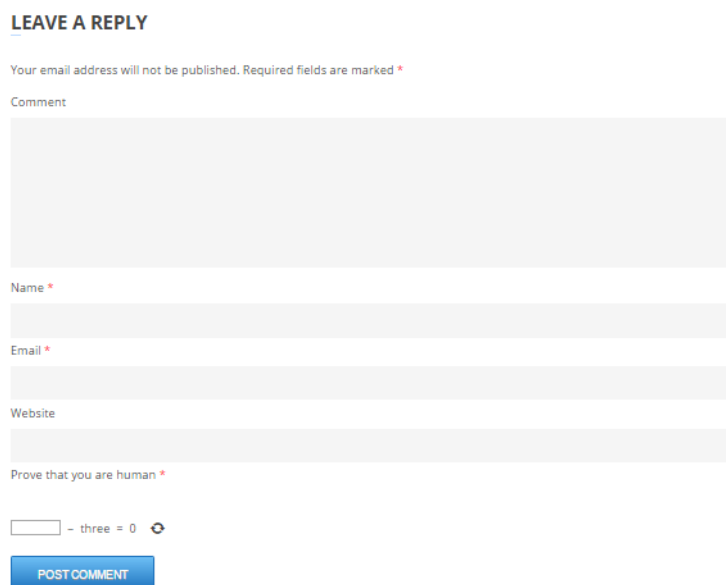
All partners kept the website updated with different material (related announcements/ news/ publications/ actions e.tc).

The homepage of the web site includes news and important events related to the project (Figure 21). For example announcements can be found related to the project pilot courses, the project meetings with the partners, the FAMT&L competition etc.



Figure 21. The homepage of the web site

For each announcement, the user has the option to click on it and have access to additional information. Furthermore, the users have the possibility to interact with all the partners and the rest of the users, as they have the possibility to leave a reply in relation to the announcement they read (Figure 22).



The image shows a web form titled "LEAVE A REPLY". At the top, it states "Your email address will not be published. Required fields are marked *". Below this is a "Comment" field, which is a large, empty text area. Underneath the comment field are three smaller input fields: "Name *", "Email *", and "Website". Below these fields is a CAPTCHA section titled "Prove that you are human *", which includes a small image of a box and the text "- three = 0" with a refresh icon. At the bottom of the form is a blue button labeled "POST COMMENT".

Figure 22. The “Leave a reply” field

The “Deliverables” page (<http://www.famt-l.eu/deliverables/>) provides information of the Deliverables of each work package of the project. In this page users can have access to a list of publications relevant to the actions and results of the project (<http://www.famt-l.eu/publications/>). In addition, in the website a page about the Competition (<http://www.famt-l.eu/competition/>) which is included in the Dissemination actions of the project is available. Each project partner has its own page with regulations and submission form, in the corresponding language.

4. Project presentations / seminars

Partners should try to organize a small seminar or presentations for presenting the actions and some basic results of the project and for promoting its pilot training course.

For example, In Italy two seminars (Figure 23) were organized from the Department of Education Studies in Bologna, on the 5th and 7th of March 2015. The seminars were given by a FAMT&L researcher from UCY (Paraskevi Michael-Chrysanthou) and were about “The use of formative assessment in teaching and learning”.



Figure 23. Invitation to the seminars in Bologna

In Cyprus, the basic results of the project and the structure of the pilot training course were presented in during a symposium within the action of the 18th LLP Comenius FAMT&L: 538971-LLP-1-2013-1-IT-COMENIUS-CMP Deliverable 7.3

Cyprus Conference on Mathematics Education and Science (Paphos, Cyprus – 13/2/2016). A 2 hours talk entitled “Formative Assessment in the Teaching and Learning of Mathematics” (Figure 24) was given in Greek about the aim and the actions of the project. However, the main purpose of the talk was for promoting our training model and invite teachers to participate.



Figure 24. Symposium in Cyprus: “Formative Assessment in the Teaching and Learning of Mathematics”

The following table (Table 1) presents all the project presentations organized by the partners of the project.

Table 1.
The partners’ project presentations

| PARTNER | TITLE | DESCRIPTION | PLACE | DATE |
|----------------|----------------------------------|-----------------------------------------------------------------------|------------------------------------------|-----------------|
| UNIBO | Meeting with Associated Partners | Meeting with Associated Partners to present the action of the project | Department of Education Studies, Bologna | 26 January 2015 |
| UNIBO | Training | Session of training with teachers involved in the project | Department of Education | April 2015 |

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| | | | Studies, Bologna | |
| UNIBO | Seminars with a FAMT&L researcher (Paraskevi Michael-Chrysanthou) | The use of formative assessment in teaching and learning | Department of Education Studies, Bologna | 5 and 7 March 2015 |
| UNIBO | Meetings in school | Meeting to present results of data analysis | Junior High School "Istituto Comprensivo Gasparini"-Novi di Modena (MO) | 6 Mar 2015 |
| UNIBO | Presentation Pilot Course | Seminar for the presentation of Italian Pilot Course | Department of Education Studies, Bologna | 23 April 2016 |
| UNIBO | Presentation of research's results | Interviewing and discussing with students about formative assessment in the school | FUTURA San Pietro in Casale (BO) | 4 April 2016 |
| UNIBO | Presentation Pilot Course | Seminar for the presentation of Italian Pilot Course | Department of Education Studies, Bologna | 23 April 2016 |
| SUPSI | "FAMT&L - Formative assessment in mathematics education." | Description of the training model at the department with teachers in training to Master for teaching the middle school. | SUPSI-DFA | September 2015 |
| SUPSI | "FAMT&L - Formative assessment in mathematics education." | Teachers and students questionnaires: analysis and comments. | Department of Education, Culture and Sports (DECS) | March 2014 |

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| SUPSI | “FAMT&L - Formative assessment in mathematics education.” | Description of the project, its objectives and major milestones | Department of Education, Culture and Sports (DECS) | January 2014 |
| UCY | Towards a Comprehensive Meaning for Formative Assessment: The Case of Mathematics | The seminar was held within the actions of the UNICA 2016. | Rome, Italy | 15-16 December 2016 |
| UCY | Formative Assessment in the Teaching and Learning of Mathematics. | <ul style="list-style-type: none"> The seminar was held within the actions of the 18th Cyprus Conference on Mathematics Education and Science. A 2 hours talk about the aim and the actions of the project was held. The purpose was for promoting our training model and invite teachers to participate. | Paphos, Cyprus | 13/2/2016 |
| UCY | Formative assessment in the teaching and learning (In Greek) | Presentation of basic aspects of formative assessment in teaching and learning – theory, practices, examples. | Partner school OLYMPION | September 2015 |
| UCY | Formative assessment in the teaching and learning (In Greek) | Description of the project aims and actions. Presentation of basic aspects of formative assessment in teaching and learning. | Partner school OLYMPION | June 2015 |
| UCY | Formative assessment in the teaching | Teachers and students questionnaires: analysis and comments. | Partner school OLYMPION | June 2015 |

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| | and learning of mathematics (In Greek) | Informing the mathematics teachers about the aims of the use of video in the project. | | |
| INHOLLAND | Bootcamp | A conference with 1600 teachers. In the programme were a lot of workshops with different content. Here a workshop was given about FA referring to FAMTL-project | Haarlem | March 31, 2015 |
| INHOLLAND | Bruggen bouwen naar het onderwijs van de toekomst | A conference about research and developments in education. Here a lecture was given to teachers, principles and researchers about the project and formative assessment | Vrije Universiteit, Amsterdam | June 20, 2016 |
| INHOLLAND | Formatief assessment in de les | Workshop/in service training for 30 teachers in formative assessment | Schagen | September 15, 2016 |
| INHOLLAND | Grenze(n)loze wiskunde | Conference for researches, teachers in education of mathematics. Theme of this conference this year is Borderless Mathematics. In the subsection "Boundaries to what teachers can do in education" a lecture was given about the research project. | Veenendaal | November 4, 2016 |
| INHOLLAND | Voor en door docenten. Morgen gaan we differentieren | In a project leerling2020 several schools participate in a learning environment to change their education. The project is subsidized by the ministry of Education. | Brabant/Zuid Nederland | November 10, 2016 |

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| | | At this conference (a quick starter for an professionalization programme) lecture about FA and project. | | |
| UCP | Formative assessment in the teaching and learning of mathematics | The poster of the project was placed in the building of the University (department of Education Studies). The poster of the competition and the flyer were also sent by mail to IREM de paris(institut de recherche en enseignement des mathématiques) Institute of Mathematics and the flyer and poster promoting the completion were sent via mail o the master of didactics of mathematics (University of Paris 7). The poster and flyer were also sent by mail to the middle school of Daguerre (Paris) We also sent the poster of the final conference to the middle school of Daguerre and the we also posted the poster of the conference in the website of the Laboratory of Department of Sciences https://www.u-cergy.fr/fr/laboratoires/ema/recherche/projet-famt-l.html | Department of Education Studies, | 2016 |

5. Publications

A list of publications in Scientific Journals, Conference Proceedings and books with the contributions of all partners is available. These actions are further described in the relevant Deliverable (Deliverable 7.4).

6. Social media

A page in Facebook for the project was created (Figure 25). The Facebook page can be found at <https://web.facebook.com/FamtI-Formative-Assessment-in-Mathematics-for-Teaching-and-Learning-508441582670725/?pnref=story>. All partners tried to keep updated the related social media with material (information/ results/ actions) of the project.



Figure 25. The FAMT&L Facebook page