



**A. General Information**

This application form consists of the following main sections:

- Context: this section asks for general information about the type of project proposal you want to submit;
- Participating organisation(s): this section asks for information about the applicant organisation and about other participating organisations involved as partners in the project;
- Description of the project: this section asks for information about the stages of the project which should include: preparation, implementation and follow-up;
- Budget: in this section you will be asked to give information about the amount of the EU grant you request;
- Project Summary: In this section you should describe in a compact way your project's rationale, objectives and how you intend to achieve these;
- Check List/Data Protection Notice/Declaration of Honour: in these sections, the applicant organisation is made aware of important conditions linked to the submission of the grant request;
- Annexes: in this section, the applicant needs to attach additional documents that are mandatory for the completion of the application;
- Submission: in this section, the applicant will be able to confirm the information provided and to submit the form electronically;

For more information on how to fill in this application form, you can read the e-Forms Guideline.

**B. Context**

Programme	Erasmus+
Key Action	Cooperation for innovation and the exchange of good practices
Action	Strategic Partnerships
Field	Strategic Partnerships addressing more than one field
Which field is mostly represented in this application?	School Education
Call	2014
Round	Round 1
Deadline for Submission (dd-mm-yyyy hh:nn:ss - Brussels, Belgium Time)	30-04-2014 12:00:00
Language used to fill in the form	English

**B.1. Project Identification**

Project Title	Making construals as a new digital skill for creating interactive open educational resources
Project Acronym	CONSTRUIT!
Project Start Date (dd-mm-yyyy)	01-09-2014
Project Total Duration (Months)	36 months
Project End Date (dd-mm-yyyy)	31-08-2017



Erasmus+

Application Form

Call: 2014

KA2 – Cooperation and Innovation for Good Practices

Form Version: 1.06  
Adobe Reader Version: 11.006

Applicant Organisation Full Legal Name (Latin characters)

THE UNIVERSITY OF WARWICK

Form hash code



46C25319F4B0C82F

**B.2. National Agency of the Applicant Organisation**

Identification

UK01 (UNITED KINGDOM)

For further details about the available Erasmus+ National Agencies, please consult the following page:

[http://ec.europa.eu/education/erasmus-plus/national-agencies\\_en.htm](http://ec.europa.eu/education/erasmus-plus/national-agencies_en.htm)

Form hash code: 46C25319F4B0C82F

Form has not been submitted yet

EN



**C. Participating organisation(s)**

**C.1. Applicant Organisation**

PIC	999976784
Full legal name (National Language)	
Full legal name (Latin characters)	THE UNIVERSITY OF WARWICK
Acronym	
National ID (if applicable)	N/A
Department (if applicable)	
Address	Kirby Corner Road - University House
Country	United Kingdom
Region	
P.O. Box	
Post Code	CV4 8UW
CEDEX	
City	COVENTRY
Website	www.warwick.ac.uk
Email	
Telephone 1	+442476524760
Telephone 2	
Fax	+442476524991

**C.1.1. Profile**

Type of Organisation	Other
Is your organisation a public body?	Yes
Is your organisation a non-profit?	Yes

**C.1.2. Accreditation**

Have you received any type of accreditation before submitting this application?

Accreditation Type	Accreditation Reference
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C.1.3. Background and Experience

Please briefly present your organisation (e.g. its type, size, scope of work, areas of specific expertise, specific social context and, if relevant, the quality system used).

Among UK universities, Warwick is a unique, and uniquely successful, institution. Despite its relative youth - it was founded in the mid-1960s - it is now one of the UK's leading universities, with an acknowledged reputation for excellence in research and teaching, for innovation and for links with business and industry. The results of the 2008 Research Assessment Exercise (RAE) reiterate Warwick's position as one of the UK's leading research universities, with Warwick ranked at 7th overall in the UK. In the media league tables, it has consistently maintained its position in the top ten in the UK. Warwick is currently strengthening its international research profile through strategic alliances with Monash University in Australia and with New York University through the CUSP partnership.

What are the activities and experience of your organisation in the areas relevant for this project? What are the skills and/or expertise of key persons involved in this project?

The CONSTRUIT! project will draw on many different kinds of educational expertise and experience at Warwick.

Within the Department of Computer Science, staff in the IAS group have extensive experience of designing and developing educational software relating to interoperability of adaptive systems, pedagogic architectures, relational and temporal data mining, teaching and learning tools and systems, authoring of adaptive hypermedia, user context modelling, and prediction for web personalization. Dr Mike Joy is an associate professor, and his research interests include educational technology, computer science education, object-oriented programming, and Internet software, and he is the author or coauthor of over 150 papers. He has extensive experience working on EU projects, including the recently completed projects MAlLog (Lifelong Learning) and BlogForever (FP7). Dr Joy is a Chartered Fellow of the British Computer Society and a Fellow of the Higher Education Academy, and is Editor in Chief of the Journals ITALICS and GSTF Journal of Education. Dr Alexandra I Cristea is an associate professor and a Fellow of the British Computer Society who has published more than 150 papers on adaptive educational systems, authoring of adaptive hypermedia, user modelling, intelligent tutoring systems, semantic web technologies, concept mapping, and artificial intelligence. Dr Cristea also has a proven track record managing EU funded projects, and in addition to BlogForever (FP7) she has been involved as a partner in GRAPPLE (FP7), PROLEARN (FP7 Network of Excellence), ALS (Socrates Minerva STREP) and ADAPT (Socrates Minerva STREP). Dr Jane Sinclair is an associate professor, and her main contributions the field of Educational Technology have been in the areas of plagiarism prevention and detection, the student perspective and experience of plagiarism, and Formal Methods education, and she is on the editorial board for the International Journal of Learning Technology. Dr Matthew Leeke is an assistant professor who has authored sixteen peer-reviewed publications in the design, implementation and evaluation of dependable systems.

The university has a strong commitment to innovation in teaching and learning. Ms Emma King works in the Learning and Development Centre where she leads the Postgraduate Award in Technology Enhanced Learning which supports colleagues from across the institution to consider, implement and evaluate e-learning projects. Mr Russell Boyatt is currently a Senior Academic Technologist in the University who worked as the RA on the MAlLog project. Dr Jonathan Foss is an Early Career Researcher who worked on the GRAPPLE project during his PhD.

Sinclair, Leeke and Boyatt have established a MOOC to support computing teaching at school with funding from the Google CS4HS scheme. Ms Margaret Low is a Principal Teaching Fellow in Warwick Manufacturing Group who has wide experience of outreach activities, and is heavily involved in the UK Computing at Schools initiative.

The practice of 'making construals' to which CONSTRUIT! refers is a by-product of many years of research into Empirical Modelling (EM), as pioneered by Dr Meurig Beynon and Dr Steve Russ with input from several generations of Computer Science students at Warwick.

Dr Meurig Beynon is a reader emeritus who has led the Department's research on Empirical Modelling, publishing more than a 100 refereed papers on the topic, supervising over 20 research theses and in the process generating many educational 'construals' and other OERs. Dr Steve Russ is an international authority on the mathematical works of mathematician Bernard Bolzano who has made extensive contributions to EM.

'Making construals' is a core component of a course on EM that was established more than ten years ago. It has a mature curriculum,



tools and resources that have been co-developed by research students, including Antony Harfield, Charlie Care, Russell Boyatt and Matthew Leeke, and deployed in several hundred student projects.

Dr Antony Harfield is a lecturer in the Department of Computer Science and Information Technology at Naresuan University in Thailand, where his research interests focus on mobile technology for education; he has previously worked as a researcher at the University of Joensuu in Finland and as a consultant for the ITER Organization in France building and running project management systems. His doctoral thesis addresses the application of EM to educational technology. Dr Charlie Care is interested in how the construction, co-construction, and sharing of computer based models can improve and enhance traditional learning; he currently works at Meducation, a medical learning network whose aim is to expand and support the use of new-media learning objects within the medical sector. Russ, Harfield and Care are all Associate Fellows in Computer Science.

Have you participated in a European Union granted project in the 3 years preceding this application?

Yes

Please indicate:

EU Programme	Year	Project Identification or Contract Number	Applicant/Beneficiary Name
Lifelong Learning Programme	2009	KA3 ICT-505326	Mike Joy

**C.1.4. Legal Representative**

Title: Mr

Gender: Male

First Name: Andrew

Family Name: Smith

Department: Finance Office

Position: Director

Email: A.H.Smith@warwick.ac.uk

Telephone 1: +44 (0)2476 150272

If the address is different from the one of the organisation, please tick this box

**C.1.5. Contact Person**

Title: Dr

Gender: Male

First Name: Mike

Family Name: Joy



Erasmus+

## Application Form

Call: 2014

KA2 – Cooperation and Innovation for Good Practices

Form Version: 1.06  
Adobe Reader Version: 11.006

Department

Computer Science

Position

Associate Professor (Reader)

Email

m.s.joy@warwick.ac.uk

Telephone 1

+44 24 76523368

If the address is different from the one of the organisation, please tick this box

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Form hash code: 46C25319F4B0C82F

EN

Form has not been submitted yet



**C.2. Partner Organisation**

PIC	949180212
Full legal name (National Language)	EDUMOTIVA
Full legal name (Latin characters)	European Lab for Educational Technology
Acronym	
National ID (if applicable)	095
Department (if applicable)	
Address	Agios Ioannis 1
Country	Greece
Region	EL25 - Πελοπόννησος (Peloponnisos)
P.O. Box	
Post Code	23100
CEDEX	
City	Sparta
Website	www.edumotiva.eu
Email	
Telephone 1	+302731024916
Telephone 2	+306932218137
Fax	

**C.2.1. Profile**

Type of Organisation	Other
Is the partner organisation a public body?	No
Is the partner organisation a non-profit?	Yes

**C.2.2. Accreditation**

Has the partner organisation received any type of accreditation before submitting this application?

Accreditation Type	Accreditation Reference
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**C.2.3. Background and Experience**

Please briefly present the partner organisation (e.g. its type, size, scope of work, areas of specific expertise, specific social context and, if relevant, the quality system used).

The European Lab for Educational Technology - EDUMOTIVA is a not for profit organization based in Sparta, Greece that brings together professionals active in the area of Educational Sciences and Learning Technologies. It counts 7 people as permanent staff and over 30 external collaborators (mainly teachers, certified trainers, researchers and instructional designers). Edumotiva's aim is to offer students of all ages education and training that will improve their lives, influence their thinking, impact on the communities within they act. Edumotiva aims at making learning 'real, meaningful and relevant' for the new generation of students and at supporting adults (including teachers) in developing 21st century skills through innovative training programmes for citizens of all ages. Edumotiva maintains close ties with primary, secondary and vocational schools, public institutions for adult education and various associations with a focus on education, culture and societal problems. Through this network and through Edumotiva's training scheme, access to learners of all ages is achieved. The key activities of Edumotiva are: research, instructional design, evaluation, education and training.

What are the activities and experience of the partner organisation in the areas relevant for this project? What are the skills and/or expertise of key persons involved in this project?

The members of Edumotiva have a broad diversity of educational and professional backgrounds; all bound by a shared passion for shaping learning in the digital world. Edumotiva people have a long experience in organising training courses for teachers and other professionals and in implementing training methodologies based on the principles of the adult learning theories. Edumotiva also organises pedagogical interventions that target students at primary, secondary and vocational level. Learning interventions are grounded in innovative learning methods and approaches such as: collaborative learning, peer learning, authentic learning, technology-enhanced learning, constructivist approaches to learning, learning in communities of practice and more. Although a young organisation, Edumotiva brings together creative people with long expertise in educational and research projects at regional, national and European level and with significant experience in EU project management. Edumotiva's members have coordinated the TERCOP project (Comenius 2006 – 2009, [www.terecop.eu](http://www.terecop.eu)), have served as national coordinator in the SAFROS Research project (FP7, 2010-13), [www.safros.eu](http://www.safros.eu)) and in several LLP European projects. Coupled with this Edumotiva brings together people that are facilitating learning for a long time and are active members of research and school communities. Key persons involved in this project:

Prof. Dimitris Alimisis, is the Scientific Leader of EDUMOTIVA, former Professor of Educational Technology at the Education Department of the Higher School of Pedagogical & Technological Education (Patras, GR) and lecturer at the Hellenic Open University in the field of Education. He holds a B.Sc. in Physics from Dept. of Physics, Univ. of Athens, and PhD in Science Education from Dept. of Philosophy – Pedagogy – Psychology, Univ. of Athens. His research interests include educational technology, teacher training, and adult learning, synchronous and asynchronous distance education with a focus on the use of Information and Communications Technologies as tools for Constructivist and Constructionist learning. His teaching experience includes, among others, educational technology courses for teachers, Science Education in the Greek Open University, Didactics with new technologies in post-graduate courses at the Univ. of Athens and training of trainers in the field of adult education. His research and educational works have been published in international scientific conference proceedings, books and journals.

Emmanouil Zoulias holds a B.Sc. in Electrical and Computer Engineering and PhD in Data Mining from Dept. of Electrical and Computer Engineering (National Technical Univ. of Athens) and Medical School (Patras University). His main active research focuses on validation process, data mining, web mining technologies and web 2 technologies. He is a developer, administrator and integrator of various web2-based platforms for public educational training developed with various technologies like PHP, JSP, ASP, HTML5, XHTML, JavaScript, Joomla, wordpress. His teaching experience includes, among others, educational technology courses in the field of web development, ICT skills for the National School of Public Administration and for public sector employees. Dr. Zoulias has been involved in various European projects in the field of education, tele - education and tele - medicine: SAFROS (Patient Safety in Robotic Surgery, FP7-ICT-2009), GALENOS, MEDASHIP, UNIVERSAL.

Rene Alimisi is active in Edumotiva as project manager. She currently manages the FOCAL project (Lifelong Learning Programme Grundtvig Partnership project) that aims at exploiting cultural artefacts and experiences to foster intergenerational dialogue. Rene has a rich engineering background and thorough knowledge of the field of Information Communication Technology in Education with more than 4 years experience within the area of EU funded Projects. Rene has worked as an adult trainer in well known Greek Institutions and companies (Centers for Adult Education, University of Thessaly, ASPETE, IDEKE, INEDIVIM, Epimorfotiki Kilkis) with adults of all ages and various cultural backgrounds. She has also carried out research studies in primary and secondary schools in Greece and UK aiming at exploring how ICT interventions can support students in developing computational thinking skills in a creative and playful way. Rene holds a degree in Computer Engineering (from the Univ. of Thessaly, GR) and a MA in ICT in Education (from the Institute of Education, London) with modules involving Research Methods and Development, Computer



Mediated communication, Key issues in ICT in Education, Learning Technologies, Instructional designing, Digital video production, User Experience Research and Evaluation of technological and learning interventions.

Has the partner organisation participated in a European Union granted project in the 3 years preceding this application?

Yes

Please indicate:

EU Programme	Year	Project Identification or Contract Number	Applicant/Beneficiary Name
Lifelong Learning Programme Grundtvig Partnership project	2012	2012-1-LT1-GRU06-07163	VšĮ "eMundus" (Lithuania)

C.2.4. Legal Representative

Title: Professor

Gender: Male

First Name: Dimitris

Family Name: Alimisis

Department:

Position: Scientific leader

Email: alimisis@otenet.gr

Telephone 1: +302731024916

If the address is different from the one of the organisation, please tick this box

C.2.5. Contact Person

Title:

Gender: Female

First Name: Rene

Family Name: Alimisi

Department:

Position: Project manager

Email: ralimisi@gmail.com

Telephone 1: +302731024916

If the address is different from the one of the organisation, please tick this box



**C.3. Partner Organisation**

PIC	991207984
Full legal name (National Language)	UEF
Full legal name (Latin characters)	ITA-SUOMEN YLIOPISTO
Acronym	
National ID (if applicable)	22857339
Department (if applicable)	
Address	YLIOPISTONRANTA 1 E
Country	Finland
Region	
P.O. Box	1627
Post Code	70211
CEDEX	
City	KUOPIO
Website	www.uef.fi
Email	kirjaamo@uef.fi
Telephone 1	+358294451111
Telephone 2	
Fax	

**C.3.1. Profile**

Type of Organisation	Other
Is the partner organisation a public body?	Yes
Is the partner organisation a non-profit?	No

**C.3.2. Accreditation**

Has the partner organisation received any type of accreditation before submitting this application?

Accreditation Type	Accreditation Reference



**C.3.3. Background and Experience**

Please briefly present the partner organisation (e.g. its type, size, scope of work, areas of specific expertise, specific social context and, if relevant, the quality system used).

The University of Eastern Finland is a multidisciplinary university which offers teaching in more than 100 major subjects. The university comprises four faculties: the Philosophical Faculty, the Faculty of Science and Forestry, the Faculty of Health Sciences, and the Faculty of Social Sciences and Business Studies, and has 15,000 students and 2,800 members of staff. A range of programmes are taught in English, and the university hosts about 1,200 international students annually, offering its students an international and lively study environment and state-of-the-art facilities.

In its strategy, UEF defines 'New Technologies and Materials' as one of its special areas of strength. The School of Computing is one of the biggest departments at the University of Eastern Finland. Within this school, UEF's strengths are digital story telling, smart design and human language technologies. The educational technologies research group at the UEF (edTech) is one of the few European educational technology groups based in a Computer Science department. The core focus of the research group at UEF is on designing and developing real life educational applications, developing solutions to meet real demands by following the design science approach. The group has worked for almost 15 years with several research and development initiatives in Africa, including contextual ICT curriculum development, design of tangible technologies for learning programming and creating fresh solutions for open and distance learning in Africa. The group has had previous experience in leading global curriculum development projects, as it was the leader of an edulink project, funded by the EU and the ACP, composed of 10 partners from Europe, Africa and Asia.

What are the activities and experience of the partner organisation in the areas relevant for this project? What are the skills and/or expertise of key persons involved in this project?

The relevant expertise lies within the edTech research group. The group develops fresh technological solutions in order to bridge various kinds of learning gaps. These include learning gaps caused by physical distances, time constraints, limited learning resources, mental or physical disabilities, and cultural differences, to name but a few. In our R&D work, we use existing technologies in novel and unconventional ways and invent educational computing innovations for real life challenges together with learners, teachers, companies, parents and other stakeholders. R&D projects involving edTech have been funded by prominent governmental, academic and commercial organisations such as Academy of Finland, the European Comission, the European Social Fund, the National Technology Agency of Finland, Finland's Slot Machine Association and Assa Abloy Ltd.

Erkki Sutinen is a professor in Computer Science, Leader of the Educational Technology Research Unit and Head of the Department between 2006 and 2009 at the University of Eastern Finland, Adjunct Professor at Tumaini University (Tanzania). His research interests include using technologies for clearly defined needs, such as for complex subject domains, like programming, in developing countries, and within special education. The applied techniques cover visualization, information retrieval, data mining, robotics, and design models. Chief technical advisor for the Programme of cooperation in Science, Technology and Innovation between Finland and Mozambique during years 2010-2012. He has co-authored and published over 100 academic papers.

Ilkka Jormanainen (PhD) works as a project manager at edTech research unit of University of Eastern Finland, School of educational data mining, educational robotics and tangible interfaces, and other concretization tools in education. He is currently on leave from his position as an Executive Director of Joensuu Science Society, a NGO focusing on science and technology education. In his work at Joensuu Science Society, he was leading the annual Finnish SciFest festival for science and technology for three years. Furthermore, he has been strongly involved in development of SciKids - technology education concept at the University of Eastern Finland (formerly University of Joensuu). He has got consulting, research, teaching, and administration experience from various international initiatives in Finland, South Africa, Nepal, Tanzania, Zambia, and Mozambique. He has co-authored and published more than 20 academic papers.

Ubium co-founder Carolina Islas Sedano has worked in industry and academia, her current research work focusing in serious games. The themes involving her research in serious games include: smart tourism, prevention of natural disasters and XXI century skills. The special emphasis of Islas Sedano's research is in the conceptualization, development and implementation of applications in context, in particular games. Her other research interests include multimedia, innovation and design. Carolina defended her doctoral dissertation "Hypercontextualised Games" at the University of Eastern Finland, in the School of Computing. She obtained her B.Sc. in Electronic Engineering from Universidad Iberoamericana in Mexico City, and her M.Sc. in Communication and Media Engineering in Offenburg, Germany. To date, she has published over 40 international research articles and offered workshops on game design in several countries (e.g. Mexico, Korea, Thailand, Germany, Tanzania).



Andres Moreno has more than 7 years of combined research and development experience in educational software, visualizations and ICT for Development and has successfully integrated different approaches and tools to create innovative solutions. He has been part of the development team of educational software Jeliot 3, which has been used all around the world to teach Java. He has further integrated the tool into other software and developed the concept of conflictive animations, which combines his experience in teaching, programming and research. In Mozambique, Andres has developed most of his international consultancy career, putting into action the conflicting plans of local and international partners in ICT for Development as part of a Mozambican Science, Technology and Innovation society. As a researcher, he has published more than 15 peer-reviewed papers and participated in several international conferences sponsored by ACM and IEEE.

Professor Patrick Dillon's research is concerned with education as a cultural pattern and includes work on heritage education, situated learning and learning in virtual situations. He has directed projects with grants from the European Union, and from professional associations, multinational companies, government departments, and funding councils in the UK. He has wide experience of working internationally and has professorial positions at the University of Exeter, UK and the Universities of Helsinki and Eastern Finland.

Has the partner organisation participated in a European Union granted project in the 3 years preceding this application?

Yes

Please indicate:

EU Programme	Year	Project Identification or Contract Number	Applicant/Beneficiary Name
EM ACTION 2	2013	2013-2537/001-001-EMA2	University of Trento
EM ACTION 2	2011	2011-2581/001-001-EMA2	University of Trento

C.3.4. Legal Representative

Title: Professor

Gender: Male

First Name: Jukka

Family Name: Jurvelin

Department:

Position: Dean

Email: jukka.jurvelin@uef.fi

Telephone 1: +358 40 353 9282

If the address is different from the one of the organisation, please tick this box

C.3.5. Contact Person

Title: Professori



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Application Form

Call: 2014

KA2 – Cooperation and Innovation for Good Practices

Form Version: 1.06  
Adobe Reader Version: 11.006

Gender	Male
First Name	Erkki
Family Name	Sutinen
Department	School of Computing
Position	Professor
Email	erkki.sutinen@uef.fi
Telephone 1	+358 29 445 3045

If the address is different from the one of the organisation, please tick this box



**C.4. Partner Organisation**

PIC	949531255
Full legal name (National Language)	Helix5
Full legal name (Latin characters)	Helix5
Acronym	
National ID (if applicable)	06058389
Department (if applicable)	
Address	Mendelssohnlaan 12
Country	Netherlands
Region	NL21 - Overijssel
P.O. Box	
Post Code	7522 KP
CEDEX	
City	Enschede
Website	
Email	
Telephone 1	+31534336717
Telephone 2	+31644902924
Fax	

**C.4.1. Profile**

Type of Organisation	Other
Is the partner organisation a public body?	No
Is the partner organisation a non-profit?	No

**C.4.2. Accreditation**

Has the partner organisation received any type of accreditation before submitting this application?

Accreditation Type	Accreditation Reference



**C.4.3. Background and Experience**

Please briefly present the partner organisation (e.g. its type, size, scope of work, areas of specific expertise, specific social context and, if relevant, the quality system used).

Helix5 was established in 1988 as an SME for national and EU projects on New Media, Society and Industries. Its web site can be seen here <http://helix5.eu/>. Its staff, which varies between two and five FTE, specialises in international projects and EU project definition and dissemination. Helix5 has been registered in the EU ECAS administration under PIC code 949531255 and has been accredited for its quality checking procedures.

What are the activities and experience of the partner organisation in the areas relevant for this project? What are the skills and/or expertise of key persons involved in this project?

Helix5's current and recent projects are in the fields of International Higher Education as recently provided for projects between the European Commission and local Ministries for Education in Thailand, Australia, South Africa, Finland, Russia and The Ukraine. Helix5 has been involved in EU projects from 1992 onwards concerned with aspects of Education, Training, Corporate Development, Media and Knowledge Transfer.

Margriet Simmerling has been leader in projects for the European Commission in the fields of SME business synergies, Life-Long Learning and Web-Based Communities.

Piet Kommers is Associate Professor at the University of Twente and is currently scientific advisor in the IRNet project [[www.irnet.us.edu.pl](http://www.irnet.us.edu.pl)] as defined under Marie Curie in Russia, Poland, The Ukraine, Portugal, Spain and Australia. For his full CV, please consult his recent projects [<http://pkommers.wix.com/piet-kommers>].

Has the partner organisation participated in a European Union granted project in the 3 years preceding this application?

Yes

Please indicate:

EU Programme	Year	Project Identification or Contract Number	Applicant/Beneficiary Name
GRUNDTVIG Learning Partnership	2012	IT2 LLP-Com-Era-Gru-SV	NUFFIC

**C.4.4. Legal Representative**

Title: Mrs

Gender: Female

First Name: Margriet

Family Name: Simmerling

Department: European projects

Position: CEO

Email: Simmerling@helix5.nl

Telephone 1: +31 534336717



If the address is different from the one of the organisation, please tick this box

**C.4.5. Contact Person**

Title	Dr
Gender	Male
First Name	Piet
Family Name	Kommers
Department	Scientific Projects
Position	Scientific Consultant
Email	P.A.M.Kommers@utwente.nl
Telephone 1	+31 534336717

If the address is different from the one of the organisation, please tick this box



**C.5. Partner Organisation**

PIC	999841566
Full legal name (National Language)	UNIVERZITA KOMENSKÉHO V BRATISLAVE
Full legal name (Latin characters)	UNIVERZITA KOMENSKÉHO V BRATISLAVE
Acronym	
National ID (if applicable)	00397865
Department (if applicable)	
Address	SAFARIKOVO NAM 6
Country	Slovakia
Region	
P.O. Box	000
Post Code	818 06
CEDEX	
City	BRATISLAVA 16
Website	http://www.uniba.sk
Email	
Telephone 1	+421259244248
Telephone 2	
Fax	+421252963863

**C.5.1. Profile**

Type of Organisation	Higher education institution (tertiary level)
Is the partner organisation a public body?	Yes
Is the partner organisation a non-profit?	No

**C.5.2. Accreditation**

Has the partner organisation received any type of accreditation before submitting this application?

Accreditation Type	Accreditation Reference



**C.5.3. Background and Experience**

Please briefly present the partner organisation (e.g. its type, size, scope of work, areas of specific expertise, specific social context and, if relevant, the quality system used).

Comenius University is a leading university of Slovakia, with 13 faculties of the complete standard university spectrum. It was founded in 1919 and follows the university tradition of the Academia Istropolitana established in Bratislava by Matthias Corvinus, the Hungarian King, in 1465. In 2014, as the first and only Slovak university, CU was ranked among the first 500 world universities, based on the assessment of the University Ranking by Academic Performance.

What are the activities and experience of the partner organisation in the areas relevant for this project? What are the skills and/or expertise of key persons involved in this project?

The Department of Informatics Education was established 20 years ago at Comenius University, Faculty of Mathematics, Physics and Informatics by detaching certain responsibilities from the Department of Computer Science – focusing mainly on future Informatics teachers study programmes and corresponding educational research. The strongest point of the department, however, is the development of educational software. In Slovakia, Informatics education was established as a modern compulsory subject at every upper secondary school in 1985. In 2005, it became a compulsory subject at every lower secondary school and, since 2008, also in every primary school.

At the department and within our team we are engaged in the following tracks:

- Co-developing national curriculum for Informatics education of all school stages in Slovakia. We are also running future teachers of Informatics bachelor and master programs. We emphasize their educational programming skills and our main teaching strategy is 'learning to program by developing simple and more serious games with clear educational potential'.
- We have long tradition in developing environments for educational programming, which have been extremely popular internationally, for example RNA, RSS, and Imagine Logo environments were all published in UK, by Logotron Inc., Cambridge, and were spread to tens of thousands of schools in dozens of countries.
- Using the environments mentioned above, we developed many educational software applications, some of which were integrated into national curricula of other countries (including UK), e.g. Logotron Visual Fractions, Thomas the Clown etc. In developing these applications, we have always consistently applied modern constructionist methods of learning by developing and learning by discovering etc.
- We have strong tradition in conducting corresponding educational research, namely applying so called design-based research strategy. One of our outcomes (in close cooperation with EDIX) is a new method of how to develop educational software for very young students.
- We are running several supplementary creative Informatics activities, which help develop productive environment, highly supportive to educational programming. One of them is organizing iBobor (Informatics Beaver) contest in Slovakia that is part of the worldwide network of Bebras contests. In 2013, we had more than 55.000 contestants from 899 schools in Slovakia.

Professor Ivan Kalas is a professor of Informatics Education and Educational Programming. He concentrates on developing Informatics (Computing) curricula for preschool, primary and secondary stages, co-developing modern constructivist educational programming software environments for students, like Thomas the Clown, Comenius Logo, Visual Fractions, and Imagine Logo, which have dozens of localizations and are being used in thousands of schools throughout the world. He is also engaged in writing textbooks and other teaching/learning materials for computational thinking for everybody. At Comenius University, Kalas leads educational research and doctoral school in the field of Technology Enhanced Learning. Since 2008, Ivan is a member of the International Advisory Board of the Microsoft Partners in Learning programme. Since 2009, he is a member of the Governing Board of the UNESCO Institute for Information Technologies in Education. Since 2013, he is a Visiting Professor at the Institute of Education, London.

Dr. Peter Tomcsanyi works as assistant professor at Comenius University and is at the same time a freelance programmer. He is participating in development of various educational software environments for 25 years. He participated in the design and development of Comenius Logo and Imagine Logo – two Logo implementations that were widely used in several countries (including The Netherlands, Greece and UK) and therefore had impact on education in these countries. He participated in international projects Match, Playground and CoLabs, which used Comenius Logo and Imagine Logo for developing constructionist microworlds. He gives courses on compiler construction, system programming and operating systems. He has a PhD. degree in Theory of Informatics Education. The educational intervention which he developed within his doctoral period – a teacher oriented interactive environment that allows easy construction of simple quiz-like activities for primary students is widely used by Slovak and Czech teachers. He is the country leader of the iBobor contest in Slovakia - part of the worldwide network of Bebras contests that involves 30 countries. Peter co-developed the Web-based contest system used in Slovakia.



Has the partner organisation participated in a European Union granted project in the 3 years preceding this application?

Yes

Please indicate:

EU Programme	Year	Project Identification or Contract Number	Applicant/Beneficiary Name
FP7	2009	PIRG02-GA-2008-231025	Brejová Bronislava

C.5.4. Legal Representative

Title: Professor

Gender: Male

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Family Name: Mičieta

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Position: Rector of University

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Post Code: 814 99

CEDEX:

City: Bratislava 1

Telephone 2:

C.5.5. Contact Person

Title: Professor

Gender: Male



First Name	Ivan
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Post Code	842 48
CEDEX	
City	Bratislava
Telephone 2	



**C.6. Partner Organisation**

PIC	999974941
Full legal name (National Language)	UEDIN
Full legal name (Latin characters)	THE UNIVERSITY OF EDINBURGH
Acronym	
National ID (if applicable)	
Department (if applicable)	
Address	OLD COLLEGE, SOUTH BRIDGE
Country	United Kingdom
Region	
P.O. Box	
Post Code	EH8 9YL
CEDEX	
City	EDINBURGH
Website	www.ed.ac.uk
Email	Angela.Noble@ed.ac.uk
Telephone 1	+441316509023
Telephone 2	
Fax	+441316509024

**C.6.1. Profile**

Type of Organisation	Other
Is the partner organisation a public body?	Yes
Is the partner organisation a non-profit?	Yes

**C.6.2. Accreditation**

Has the partner organisation received any type of accreditation before submitting this application?

Accreditation Type	Accreditation Reference
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**C.6.3. Background and Experience**

Please briefly present the partner organisation (e.g. its type, size, scope of work, areas of specific expertise, specific social context and, if relevant, the quality system used).

The University of Edinburgh is one of the largest and most successful universities in the UK with an international reputation as a centre of academic excellence. Its international character is reflected in its student population, which comprises of 2,000 European students and 3,442 International students (out of a total population of around 24,500 students) from over 120 different countries worldwide. It can also be found in its truly international staff and in its joint research and other links with overseas universities, institutes, companies and governments.

The University is the leading research university in Scotland and is amongst the top ten in the United Kingdom. Almost all members of staff at the university are research active. Following the announcement of the results of the 2008 Research Assessment Exercise some 63% of the University's research activity is in the highest categories (4\* and 3\*), of which one third is recognised as "world-leading". A total of 1,684 individuals, more than 90% of the institution's academic staff, saw their research assessed across 39 subject areas. The results place the University in the top 5 in the UK and number one in Scotland by volume of 4\* "world-leading" research. The University is home to 37% of Scotland's 4\* research.

On a European level, traditionally the University has been very successful in participating in European Framework Programmes. The success continued during the Sixth Framework Programme with the University collaborating in some 190 projects, total award value of approximately €74M, and in the Seventh Framework Programme the University participates in some 398 projects with an award value of €222m. This includes a large number of FP7 multi partner collaborative projects where the University takes a lead role as Project Co-ordinator. This also includes 115 Marie Curie Awards of which we are partner in 26 ITNs and lead 5.

It is the University's stated aim that it wishes as far as possible to conduct its research and development activities on a trans-national basis. The pooling of research expertise, equipment and database resources contributes to major advances in science, technology and medicine worldwide.

What are the activities and experience of the partner organisation in the areas relevant for this project? What are the skills and/or expertise of key persons involved in this project?

The Team from the School of Education at the University of Edinburgh have extensive experience in the design of online learning experiences, in the support of online distance learners in a variety of contexts, and have contributed to the theorising about digital pedagogies. The work of the Edinburgh Team centres on a highly successful MSc programme in Digital Education which has been running now for 8 years. The programme now recruits around 50 students each year, most participating on a part-time basis over 3 to 4 years. The student group is drawn from professionals working in the areas of higher and further education and commercial training, and is international in composition. In contrast to this programme which is predicated on intensive tutor support through the online medium, in 2013 some members of the group led one of the first 6 MOOCs (massive open online courses) to be offered by the University of Edinburgh in partnership with the Coursera MOOC platform (<https://www.coursera.org/edinburgh>). This innovative course, on E-Learning and Digital Cultures (<https://www.coursera.org/course/edc>) has explored some radically different areas of online pedagogy, and has resulted in new thinking about the challenges of supporting, guiding and motivating the virtually connected, though physically distanced, learner. The MOOC activity at Edinburgh has also led to the development of an intense interest in the institution with the emerging field of learning analytics, with which the Team from the School of Education have been closely involved (<https://www.era.lib.ed.ac.uk/handle/1842/6683>).

The key personnel in the Edinburgh Team will be Hamish Macleod and Jen Ross. They would call, as appropriate, upon the wider body of knowledge and experience of online learning and digital pedagogies represented in the Edinburgh Team. Dr Macleod has a background in psychology, teaching at undergraduate level for a number of years, and in educational development. He is a past Director of the MSc in Digital Education, and continues to teach on that programme, leading on courses on learning, and in games in education. Dr Ross is presently Director of the MSc in Digital Education, and leads on courses on digital cultures, technological futures of digital education, and research methods. Both are members of the group leading the E-Learning and Digital Cultures MOOC, and actively research on various areas of digital education.

Has the partner organisation participated in a European Union granted project in the 3 years preceding this application?

Yes

Please indicate:



EU Programme	Year	Project Identification or Contract Number	Applicant/Beneficiary Name
Lifelong Learning (Comenius)	2013	543281-LLP-1-2013-1-IT-KA2-KA2MP	Dr John Ravenscroft

**C.6.4. Legal Representative**

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Gender: Male

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Department:

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**C.6.5. Contact Person**

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Family Name: Macleod

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Position: Senior Lecturer

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**D. Description of the Project**

What is the rationale of this project, in terms of objectives pursued and needs to be addressed?

The primary focus of this project is on addressing the first aim for a Strategic Partnership, as set out on p95 of the Programme Guide: "enhancing the quality and relevance of the learning offer in education, training and youth work by developing new and innovative approaches and supporting the dissemination of best practices". It focuses on further developing, trialling, evaluating and disseminating a new digital skill that relates directly to a digital competency identified within the EC DIGCOMP framework: viz. Problem Solving, with specific reference to Section 5.3: "To innovate with technology, to actively participate in collaborative digital and multimedia production, to express oneself creatively through digital media and technologies, to create knowledge and solve conceptual problems with the support of digital tools." We shall introduce new principles and tools for a computing practice that enables educators and learners to collaborate in creating live interactive resources ("construals") that serve as personal, shareable 'working models' or understandings. Such a practice is more accessible than conventional programming but more expressive and powerful than conventional uses of ICT. Its adoption will lead to the online development of open educational resources that can be flexibly modified by educators and learners alike to give exceptionally rich support for blending educational practices combining instruction and construction. As the European Commission's Rethinking Education initiative has identified, the 'digital revolution brings important opportunities for education'. It has also argued for the need 'to scale-up use of ICT in learning and teaching'. This requires innovation, work to 'define how, when and where ICT can be used effectively in pedagogical and assessment approaches' and activities to support teachers and learners to increase their digital competence.

The strengths of current technology-enhanced learning are most evident in domains that are well-understood. Because the computer is well-oriented towards representing formality and abstraction, one natural trend has been towards the classification of knowledge, as in the semantic web. In such domains, technology can then enhance the quality of the learning offer by enabling the learning activities to be instrumented and monitored automatically. Computing technology has also transformed the scope for non-formal and informal learning activities. In online learning environments, learners now have access to a range of learning resources supplemented by concrete artefacts such as visualisations and simulations that relate more closely to their real-world experience and by the rich social context afforded by networking. Digital learning has greater scope than ever before to be integrated with the learner's everyday life. Its central challenge, as recognised in the Edinburgh 'Manifesto for Teaching Online', is to make sense of the role of the teacher in contexts where learners have such freedom to be active and, in particular, how to direct and assess their learning. The contrast between these two paradigms of learning, the one based on formalising knowledge and exploiting the computer in its traditional role as an information processor, the other on affording informal experiences of unprecedented richness and diversity, reflects a topical duality in computing education itself: between teaching formal computer science and abstract programming skills (such as appeal to the mathematician and theoretical scientist) and encouraging students to exploit the computer as an instrument (as a craftsman or a musician or an experimental scientist might) so as to enrich the core interactions with the physical and social world in their everyday lives.

The principal objective of our project is to promote 'making construals' as a new practice that promises to integrate and bring coherence to the dual perspectives on computing and on digital learning. A core concept in this practice, the automatic maintenance of dependency relationships familiar from spreadsheets, is also a prominent informal ingredient of much complex software. Our project is part of a bigger project - beyond the scope of Erasmus+, but aligned to one of the EC's motivating underlying objectives of enhancing ICT teaching and practice across Europe - whose long term goal is to transform computing practice. Our thesis is that so much conventional software development is directed towards implementing the dependencies that connect software to its domain of application, and that in principle can serve to link software development and evolution to knowing and learning within the domain, that this is a great source of inefficiency with potentially enormous economic implications.

In what way is the project innovative and/or complementary to other projects already carried out?

The novelty of our approach is reflected in the model-building practices that 'making construals' supports, for which we make the following claims:

1. The principles and concepts for making construals are accessible, represent an alternative way to approach exploiting the computer, have very wide application and are universally relevant to perceptions of state, are implicit in key areas of contemporary computing practice.
2. There are principles for construal comprehension by which the meaning of a construal can be inferred through intelligent interaction from knowing a context to which it relates, construals are amenable to interactive evaluation and authentication,



construals make it possible to record understanding that may be context-dependent, incomplete and have elements of confusion, the practice of construal comprehension is accessible in semantic contexts where traditional program comprehension would be difficult even for the specialist.

3. Collaborative construal construction: construals can be developed in a collaborative way with a high degree of concurrency, they can accommodate diverse perspectives and roles, enable experts and novices to work effectively together, can be used to communicate private understanding and to establish shared understanding.

4. The practice of making construals affords scope for the interactive and live instrumentation and evaluation of construals: the development of a construal is documented though its history in such a way it can be recorded and revisited as if live, the development of construals can be monitored and mined for evidence of learning, the development of construals can be guided in a live fashion through concurrent interventions.

5. Construals can serve as a shared resource that can be readily extended, adapted and customised and from which a wide variety of OERs can be derived, e.g.:

- presentations framed in association with a construal with a degree of openness that ranges from unrestricted scope for exploratory interaction to standard commentary-style slide presentation
- conventional programs with closely prescribed user interaction and formal interpretation.

6. Construals are well-oriented towards addressing topical features of contemporary computing applications:

- observables can be drawn directly from sensory input and physical observables
- construals can be readily adapted to different kinds of human agency and are thus suited to personal and special needs
- construals have instrumental qualities such as are represented in musical, engineering and scientific instruments.

Some of these characteristics can be seen in current computing practices, most notably in the way in which domain experts with limited programming expertise apply spreadsheets in problem-solving contexts, and in the applications of spreadsheets in education (see e.g. Baker and Sugden's journal of that name). The principles for making construals deployed in this project bring unprecedented conceptual clarity to the use of computing technology in exploratory sense-making activities of this nature. This dramatically enhances their scope and power.

How did you choose the project partners and what experiences and competences will they bring to the project? How was the partnership established and does it involve organisations that have never been previously involved in a similar project?

The CONSTRUIT! project brings together four of the most active centres for educational technology in EU universities, Warwick, UEF - Finland, CU - Bratislava and Edinburgh, with organisations led by Kommers and Alimisis, both distinguished figures in the educational technology field. All the participating organisations have considerable previous experience of working on EU projects on educational themes.

The primary motivation for establishing this project, as conceived by Beynon and Russ, came from the perceived need to further develop and disseminate the principles of 'making construals' as a computing technology that can have significant impact on how ICT and technology-enhanced learning are regarded and practised. It was apparent that collaborative construal construction directed at a specific theme could provide a new way to leverage basic programming skills so that teachers and pupils could co-create OERs in a highly flexible manner (cf. the MENACE project described below). This proved to be a suitable exercise to engage master teachers in the UK Computing at School initiative over the summer but could not be part of CONSTRUIT! because of the extreme pressures on computing teachers in the UK at this time. Partnering with Edumotiva enabled us to recruit Rene Alimisi, who has experience in evaluation in a school education context, and to enlist student teachers of ICT from Greece. This partnership builds on Dimitris Alimisis and Beynon's shared interest in how best to use technology to support constructionist learning.

CONSTRUIT! aims to show how making construals can support learning activities in a broad range of settings. The choice of Sutinen at UEF as a partner reflects his strong commitment to making practical contributions through educational research and to taking innovation into application. This commitment is in evidence in the work of Ilkka Jormanainen, whose doctoral studies - co-supervised by Sutinen and Beynon - applied the principles of making construals to monitoring activities in an educational robotics classroom. Further affinities between educational work at UEF and the agenda of CONSTRUIT! can be seen in Sutinen's interest in computing curricula suitable for the developing world, Sedano's work on game-based learning that is contextually framed, and Moreno's aspirations for program visualisation.



Experience of teaching at Warwick shows that the practice of making construals can be effectively assessed through giving students the freedom to select a topic of special personal interest and make this the subject of a construal to be described in a conference-style paper. The web-enabling of tools creates the potential for an open online course for making construals. The assessment process is unusual in that it can be carried out most effectively by live exploratory interaction with the construal in consultation with the student. This has led us to identify a common agenda between making construals as a medium for online learning and the Manifesto for Teaching Online developed by Hamish Macleod, Jen Ross and their colleagues at Edinburgh. The CONSTRUIT! project is an ideal timely opportunity to consolidate our mutual and complementary interests through collaboration.

It was important to find pedagogy and technology consultants who could evaluate the work from an independent perspective but were similarly oriented in their approach to using technology to support learning. Making construals, like building a spreadsheet from first principles, is an activity closely bound up with a fundamental aspect of learning: coming to recognise connections in our experience, and express these as dependencies. This learning has a different quality from that captured via formal approaches to knowledge representation. This motivated us to recruit Piet Kommers, whose work on pedagogy goes beyond the notion of learning as 'knowledge acquisition', and embraces the idea that learning can begin in confusion.

There is a natural synergy between making construals, as a practice that has evolved from 'rethinking programming', and the work that has been done at other educational research institutes that have developed within Computer Science departments, as at UEF and at Comenius University. There is a common interest in how computer programming could be different, and more accessible to people without a mathematical education. The choice of Comenius University as a consultant to the project stems from an interaction between Beynon, Tomcsanyi and Kalas at Comenius at EuroLogo 2007. This relates to work of Beynon's former doctoral student Chris Roe, who added a spreadsheet-like dependency mechanism to their Imagine Logo interpreter. It was clear at the time that introducing dependency had been considered and rejected in the interests of conceptual clarity. The idea of 'making construals' as a new digital skill that to some degree subsumes programming is an ideal focus for future consultation.

How will cooperation and communication happen among all project partners and with other relevant stakeholders? What will be the purpose and frequency of the transnational project meetings and who will participate in them?

The participants in the CONSTRUIT! project team will be organised as follows.

At the top level are the project leaders:

Mike Joy, Warwick  
Dimitris Alimisis, Edumotiva  
Erkki Sutinen, UEF

These leaders are overall responsible for the project from a strategic and individual participating organisation perspective.

Other team members will act as external consultants with specialist expertise in educational ICT, pedagogy, evaluation and online learning:

Ivan Kalas and Peter Tomcsanyi, Bratislava  
Piet Kommers, University of Twente / Helix5  
Hamish Macleod - Edinburgh  
Patrick Dillon - UEF  
Emmanouil Zoulias - Edumotiva

These consultants will support the development and analysis work by giving input to design decisions, overseeing collaborative work and reviewing the Intellectual Outputs as they are developed.

They will also assist dissemination by putting the CONSTRUIT! project in context and evaluate it with reference to an external perspective independent of the 'making EM construals' outlook.

Below this strategic level, two broadly complementary teams will work together as the Development team under the chairmanship and direction of Meurig Beynon and Steve Russ, Warwick. Beynon and Russ will take responsibility for the Technology and Pedagogy teams respectively, and liaise over the :



The Technology team: those responsible for the preparation of resources and delivery of activities: the core business of making construals, making 'making construals' accessible to others and developing the instruments to support teaching and learning with construals:

- Ilkka Jormanainen, UEF
- Matthew Leeke, Warwick
- Charlie Care, Warwick Associate Fellow
- Antony Harfield, Warwick Associate Fellow
- Russell Boyatt, Senior Academic Technologist, Warwick
- Jonathan Foss, Early Career Researcher, Warwick

The Pedagogy team: those responsible for studying making construals from a pedagogical perspective, guiding the monitoring, reflecting and evaluation of the activities carried out and the development of instruments:

- Emma King, Learning and Development Advisor, Warwick
- Rene Alimisi, Edumotiva
- Carolina Islas Sedano, UEF/Ubium
- Andres Moreno, UEF
- Jane Sinclair, Warwick
- Margaret Low, Warwick Manufacturing Group

In broad terms, the technology team is made up of people with much expertise in making construals and/or instruments to support this, whilst the pedagogy team is made up of people with experience of thinking about how educational technology is developed, used and evaluated.

A group of four former students [Karl King, Ashley Ward, Antony Harfield, Charlie Care] expert in making construals ("the MC quartet") will play a significant role in the Blended Mobility activities in the CONSTRUIT! project, acting as online tutors for remote learners and participating in person when such activities are held at Warwick. Steve Russ will act as the coordinator for this group who may be joined by others as the project proceeds.

There will be four transnational project meetings for the entire project: one at the beginning of the project and one at the end of each year. Each of these transnational project meetings will comprise a Project Management meeting, a Project Implementation meeting, and a Project Strategy meeting. These meetings will bring together the consultants specialising in pedagogy (Kommers, Macleod, Dillon) and technology (Kalas, Tomcsanyi and Zoulias) to review the work of the Pedagogy and Technology teams. There will also be a Project Implementation meeting in December each year, at which a subset of the development team and the consultants will meet to consider the plans for refinement of the MC resources. Because so many MC experts can only participate in events held at Warwick, most meetings will be held there. Learning activities at other venues will be attended by a relevant subset of the development team together with a representative set of consultants.

In addition to TPMs, project members will meet up at the annual learning activities in Finland in April and Edumotiva in May. There will also be Skype Project Management meetings between the project leaders Joy, Sutinen and Alimisis and Beynon and Russ at regular intervals (A0). Project members will be in regular email contact. Some 'Long-term teaching or training assignments' have also been arranged (C17, C18).

As the project progresses, the possibility of exploiting online construals themselves as a novel means of electronic communication will be explored. This feature may be particularly useful in the later phases of the project when the concurrent access to an online construal has been enabled. It may be a useful feature to exploit in collaborating on the preparing presentations within the MCE for instance.

What are the most relevant priorities addressed by your project?

Revising and strengthening the professional profile of the teaching professions

Promoting the professional development of staff and youth workers in ICT methodologies



What are the most relevant topics addressed by your project?

ICT - new technologies - digital competences

New innovative curricula/educational methods/development of training courses

Open and distance learning

What results are expected during the project and on its completion? Please provide a detailed description of the expected results (if they are not listed in intellectual outputs, multiplier events or learning, training, teaching activities).

The project will produce a comprehensive set of resources to the support 'making construals'. These will include:

- a curriculum for 'making construals' (the 'MCC')
- an open source online instrument for making construals (the 'MC instrument') that will be derived from the existing JS-EDEN interpreter
- resources in the form of examples to illustrate e.g. how construals can be used to create OERs for a variety of target groups and application areas (the "MC resources").

These will be components of the principal Intellectual Output O1: an open online course devoted to the principles of making construals.

A report contextualising 'making construals', relating it to other work, identifying its qualities and limitations, detailing its potential for application, strategic significance for teaching and learning in Europe, and future prospects, to include:

- documented case studies of learning experiments conducted to test the claims made for 'making construals'.
- an account of how making construals is related to other practices in computing and technology-enhanced learning with which it shares a common orientation and similar aspirations
- a discussion of future directions for education, training and youth work with specific reference to the evolution of ICT practices and the future of computing education.

This report will draw upon the Intellectual Outputs O2 and O2.

Though CONSTRUIT! is focused on a practical objective and is not in itself a research project, the activities that we organise will provide an exceptionally rich context for studying learning in a wide variety of ways.

The publications relating to the theme of making construals that are listed at

<http://www2.warwick.ac.uk/fac/sci/dcs/research/em/publications/papers/>

include several papers that are directly linked to issues that are topical in this project (e.g. on Kalas and Tocsanyi's Imagine Logo and constructionism, on OERs in the form of construals such as can be accessed at [go.warwick.ac.uk/webeden](http://go.warwick.ac.uk/webeden) and on the way in which evaluating construals echoes the themes of the Edinburgh Manifesto for Teaching Online ) as well as several joint publications with co-authors at UEF. The CONSTRUIT! project will surely be a stimulus for the publication of more joint research papers involving members of the project team.

Serendipitously, this very application form for Erasmus+ funding is a remarkably interesting example of the relationship between



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Adobe Reader Version: 11.006

making construals and conventional programming. Dependency relationships have been prominently embedded into the application form environment in a way that clearly demonstrates the power of dependency relationships to capture a construal - in this instance, of a well-conceived application for funding under the scheme. The implementation of this conceptually exceptionally well-crafted construal as a conventional program has many undesirable side-effects as far as interaction with the form itself is concerned. Venturing to reimplement this form using the MC instrument would be a most interesting and instructive challenge, and might be a suitable topic for an informative comparative case-study.

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Form has not been submitted yet



**E. Preparation**

Please describe what will be done in preparation by your organisation and by your partners before the project activities take place.

The first month of the CONSTRUIT! project will be devoted to disseminating the knowledge and experience of the University of Warwick team to partner organisations.

At the initial Project Management meeting, the objectives of the CONSTRUIT! project will be presented and discussed, the overall project plan and responsibilities will be reviewed and a provisional schedule for meetings and activities across all three years drawn up. Existing resources by way of materials and tools deployed over the last decade in teaching students how to make construals at Warwick serve as initial prototypes for the principal intellectual output O1 (an open online course comprising a curriculum - the MCC, environment - the MCE, and online resources - the MCR) of the project.

The inspiration for the CONSTRUIT! project is a pilot project, independently funded, to be set up in conjunction with a group of Computing at School (CaS) master teachers from UK schools in the period mid-June to September. This project will have as its principal goal the collaborative construction of a construal on a specific theme, viz. Donald Michie's Matchbox Educable Noughts-and-Crosses Engine (MENACE). The development of this construal will build on one of the standard existing construals that has already been developed - and extensively discussed and elaborated - using the well-established desktop version of the JS-EDEN interpreter, which will be adapted for this purpose. The objective of this pilot project is to create an exemplar to illustrate how making construals can serve to create OERs with exceptional qualities. The MENACE pilot will trace the six components of the MCC, as set out here:

- MC1a. Principles and concepts for making construals
- MC1b. Principles of construal comprehension

- MC2a. Collaborative construal construction
- MC2b. Instrumenting construals for interactive assessment and evaluation

- MC3a. Deriving OERs from construals
- MC3b. Other applications for making construals

(These have here been labelled and paired to reflect the way in which they will be addressed in three years of the CONSTRUIT! project.) In the MENACE project, the teachers will first be introduced to the principles and concepts for making construals, then learn techniques for construal comprehension, at which point they will be able to create shared resources for making a MENACE construal by pooling individually created fragments of construals. These resources can then be adapted and remixed freely so as to create OERs that in this context will be intended to help pupils of computing to learn to write basic functions and procedures in JavaScript. It is anticipated that some of the pupils will be able to take this collaborative process further by themselves, thereby improving the resources available for demonstrating the principles behind MENACE.

At this stage, there is little automated support for these activities, which will need to be closely supervised and supported by student tutors with expert knowledge of making construals. The limitations of the current MC instrument will be addressed over the course of the CONSTRUIT! project. Focusing on making a construal for a specific topic in this way has the advantage of illustrating many virtues of construals for which claims have been made above. The MENACE template will be used in setting up the 'Blended Mobility' activities to be specified below.

The initial TPM will be the opportunity for making many significant introductions: of the technology and pedagogy teams to their consultants; of SciFest and IGGY organisers; of Alimisi to King and Macleod; of Alimisi to Low and representatives of CaS etc. Though abundant online resources for making construals are available on the current EM website, these are not well-matched to the needs of the CONSTRUIT! project and the new website for the CONSTRUIT! project will be established by a process of curation. Many of the available resources will require refinement in the course of the project.

To assist in orientation, Steve Russ as the leader of the EM diaspora will organise an informal introductory session of talks to be given by former students who have made significant contributions to the MC agenda and subsequently appreciated its relevance to their professional work.

Each participant will be directed to publications and illustrative examples that are relevant to the CONSTRUIT! agenda and their



specific role in it. The project team themselves will also become acquainted with making construals by attending an 'Intensive Study Programme for teaching staff' (C1) synchronised with the initial TPM.

Participants will be invited to participate in a co-creation exercise to enable the collective skills, experience and knowledge of the consortium to be harnessed in identifying where and how the existing framework (as developed and used in the University of Warwick) should be refined for use in each of the educational contexts to be targeted in the CONSTRUIT! project.

**E.1. Project Management**

How will you ensure proper budget control and time management in your project?

Budget control and time management will be done through rigorous reporting mechanisms and frequent checks done by the coordinator Mike Joy, in cooperation with the partners, to assure that objectives are met on time and within budget. The eligibility of the expenses of each partner and the proper use of the available grant according to ERASMUS+ funding rules will be checked in advance in close cooperation with the partners involved.

A detailed timetable with the planned activities will be agreed in the project meetings that will be held at the beginning of each project year. The project activities are structured in such a way as to simplify the task of gauging whether the project is running to schedule. For instance, in each year, there are two agendas being addressed in parallel corresponding to the curriculum components MCxa and MCxb. It will be important to monitor the time spent on these agendas to ensure that neither is given too high a priority over the other. These judgements will be made by Beynon and Russ in their role as project team directors.

The principals of the project in the partner institutions are experienced project leaders, and will have local control of work and administrative support. Since the tool will be developed and tested mainly through a series of workshops and training events, and since these meetings are already timetabled and budgeted in the project proposal, good management of the project and, ultimately, the timely delivery of the construal will be achieved by control of the timetable and careful planning and programming of the events. The project manager (Joy) will maintain overall co-ordination of the project and will scrutinise each activity (listed in Section F) to ensure it is delivered on time and to budget.

How will the quality of the project's activities and results be monitored and evaluated? Please mention the involved staff profiles and frequency of such quality checks.

The project is itself an iterative process, with testing and re-evaluation of the construal built in throughout the timetable of workshops. The events aimed at training potential users of the tool will provide feedback. Furthermore, the consultants associated with the project will provide evaluation and assessment reports at workshops at least once a year.

A quality plan will be written at the start of the project, and will be continually updated. The project manager will monitor each activity (listed in Section F). Where appropriate, feedback forms will be given to participants in the activities and the results from those feedback forms used to inform and improve the delivery of subsequent activities. For each activity a short report will be created for subsequent auditing purposes, and the quality plan updated accordingly.

What measures are foreseen to handle project risks (e.g. conflict resolution processes, etc.)?

Internal project risks will be minimised and managed by using established methodologies for cost estimations, project planning and project control, and such methodologies are standard practice in the professional work of the partners. Careful management and budgeting of the project will ensure that uncertainty in final costs is within the allocated budget margin. A risk register will be created at the start of the project as part of the quality plan and will be updated every 6 months by the project directors, following consultation with all of the partners.

Which activities and indicators of achievement (quantitative and qualitative) will you put in place in order to assess whether and to what extent, the project reaches its objectives and results?

Patrick Dillon of UEF will take on the informal role of an 'external observer' of the project activities. He has experience as a Project Evaluator and has studied educational technology from both technological and pedagogical perspectives. The degree to which the MC open online course to be developed in the course of the project enables learners to master the principles of making construals will be assessed as an intrinsic part of the project (cf. Intellectual Output O2). The extent to which the claims made for construals can be sustained is also the subject of an explicit evaluation (cf. Intellectual Output O3). The subsidiary objective of disseminating the practice of collaborative construal construction exemplified in the MENACE pilot project will achieve its goals if construals developed and deployed by student teachers in schools. The MC instrument will be tested and assessed by potential users in numerous learning activities. As the MC instrument matures, we expect to be able to monitor the teacher and learner interaction with the instrument in nuanced ways, and to gather valuable qualitative and quantitative information. We will also seek ongoing



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Application Form

Call: 2014

KA2 – Cooperation and Innovation for Good Practices

Form Version: 1.06

Adobe Reader Version: 11.006

feedback from teachers, teacher-trainers and students, including quantitative ratings.

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Form hash code: 46C25319F4B0C82F

Form has not been submitted yet

EN



**F. Implementation**

Please describe the activities that your project will organise. Please provide detailed information in particular about the project activities that will be supported from the grant for Project Management and Implementation.

The project activities relate to the three intellectual outputs of the project: an open online course for making construals (O1); an evaluation of this open online course in respect of the quality of the support it gives to the delivery of the MC curriculum (O2); an evaluation of the claims concerning the qualities of construals in section D (O3). They will be organised around the incremental development of the 'Making Construals' curriculum, as set out in section E. This has six components MC1a, MC1b, MC2a, MC2b, MC3a, MC3b. These six themes will be addressed pair-wise in parallel in years 1, 2 and 3, so that the work on each theme is equivalent to about six months of project time. The pattern of work for each year will be as follows:

September: Warwick prepares a review of the existing resources available to inform work on the two topical themes MCx<sub>a</sub>/MCx<sub>b</sub>.

October-December: These resources are reviewed by Edumotiva, UEF and Edinburgh with reference to their potential deployment to the corresponding target groups viz. student ICT teachers, young people aged 5-19 and education students respectively and by the consultants.

December: Warwick, Edumotiva, UEF and Edinburgh convene in a Project Implementation meeting collocated with a learning activity relating to the topical themes so as to frame a pedagogical and technological agenda for the further elaboration of the MCC, the extension and refinement of the MC instrument, and the development of open online materials. The learning activity to be conducted with nominated learners from Warwick, UEF, Bratislava and Edinburgh and monitored by pedagogy and technology consultants.

January-April: The pedagogy and technology teams refine the resources for MCx<sub>a</sub> and MCx<sub>b</sub> in the light of the feedback from the target group specialists and the consultants and from the prototyped learning activity, as evaluated by the learners and as monitored by the team members.

May-July: The refined MC instrument and online resources for MCx<sub>a</sub> and MCx<sub>b</sub> are deployed by Edumotiva, UEF and Edinburgh to the corresponding target groups viz. student ICT teachers, young people aged 5-19 and education students respectively, and evaluated. They are also deployed by Warwick with a view to evaluating the relevant claims.

August: The current status of the MC instrument and online resources for MCx<sub>a</sub> and MCx<sub>b</sub> are reviewed by the pedagogy and technology team in the light of feedback from the trials in May-July and refined as necessary.

September: The current status of the MC instrument and online resources for MCx<sub>a</sub> and MCx<sub>b</sub> are reviewed by the pedagogy and technology consultants in conjunction with the project team at the end-of-year Project Management meeting with reference to reports and feedback from target group representatives at Edumotiva, UEF and Edinburgh and after consideration of reports and demonstrations presented by these partners at the meeting.

The project consultants and the project team collaborate to review the progress made on developing the resources to support MCx<sub>a</sub> and MCx<sub>b</sub> and collate the feedback from staff and learners involved in the learning activities.

The various activities to deliver the three intellectual outputs can be mapped on to this pattern of work. This will be described in detail for Year 1 (a similar pattern pertains in Years 2 and 3):

- the seven stages above correspond on the Project Timetable with the red cells tagged by O1/A1, ... , O1/A7.
- the evaluation activities associated with O2 correspond to the ochre cells tagged by O2/A1.
- the evaluation activities associated with O3 correspond to the orange cells tagged by O3/ A1.

The learning activities organised to support this delivery also follow a regular annual pattern:

- a 'Blended Mobility for higher education learners' (C5) that runs in parallel with the first of a series of Virtual Workshops taking place in Year 1 (to be held at Warwick in December).



-- a 'Blended Mobility for Young People' (C8) that runs in parallel with the next Virtual Workshop (to be held at SciFest Joensuu in April).

-- 'Short term joint staff training events' (C11, C14) that take place in April and May in EUF and Edumotiva respectively.

The activities associated with the end of year Transnational Project Meeting comprise a 'Short term joint staff training event' at which the results of the year's work are presented (C2), and reports (O2/A2, O3/A2) on the the findings of the empirical studies that inform the intellectual outputs O2 and O3.

These activities are complemented by 'Long term teaching or training assignments' (C17, C18) that support extended visits to Warwick by key project members from Edumotiva and UEF and by 'Short term joint staff training events' (C19, C20) that enable staff from Edinburgh to share their expertise on Digital Education and online assessment.

Dissemination activities include regular newsletters for IGGY and an international conference (E1).

What target groups do you address in your activities plan?

The core target group is that of school teachers and pupils as represented in the pilot MENACE project. Over the course of the project, the collaborative construal construction prototyped with the existing resources in MENACE will be introduced to student teachers of ICT in Greece via Edumotiva. This will be in conjunction with the 'Short term joint staff training events' to be held annually at Edumotiva in May. Warwick also has access to student teachers of ICT and school computing teachers through its connections with the UK Computing at School (CaS) organisation, and via its Google-CS4HS funded MOOC.

Higher education students form a second target group. They will be recruited by the participating universities to attend the Blended mobility of higher education activities C5, C6 and C7 to be organised annually at Warwick. Of particular interest are the higher education students with specialist interest in online learning who study remotely on the Edinburgh MSc for Digital Education. Some of these may be available to participate at Warwick, but others may choose to participate online.

A further target group are the young people who attend the SciFest at Joensuu annually who will also participate in 'Blended mobility for young people' activities (C8, C9, C10) to be held in conjunction with the 'Short term joint staff training events' to be held annually at Scifest in April. These students will be joined online in this activity by students from the Warwick International Gateway for Gifted Youth (IGGY). Note that no costs are requested in respect of these learning activities, since both the young people and the staff running the activity will be present.

In the course of evaluating the claims made for construals, as detailed under the activities (O3/A1, O3/A3, O3/A5) associated with Intellectual Output O3, Warwick will be organising activities with learners from particular groups (such as female learners, the visually impaired, retired people or young unemployed). In this series of activities, Warwick will also compare and contrast the performance of students with different skill sets in different contexts (e.g. students making construals in the MCE with or without prior experience of JavaScript programming, or deploying JS-EDEN vs Java vs Imagine Logo in a Hackathon competition). It may be helpful to enlist special categories of learner for other reasons: for instance, consultants may wish to arrange for students with specific expertise in other areas (e.g. experts in Imagine Logo, agent-based systems or spreadsheets) to participate in learning activities in order to assist their evaluation of making construals.

The virtual workshops will play a valuable role in this context. They will allow students who attend learning activities in person to follow up online. They may also be a way of recruiting learners for subsequent learning activities. In keeping with the concept behind the MENACE pilot project, each virtual will address a specific topic and lead to the development of appropriate shared OERs. The range of possible topics is broad: it may include traditional classroom topics such as trigonometry or matrix algebra, recreational topics such as rook and pawn endgames in chess, or a domestic facility such as a central heating system. This gives scope for building on the interests of the project members to target groups in particular fields, such as robotics (Alimisis, Jormanainen), medicine (Zoulias, Care) or music (Kommers, Beynon) as is particular topical in the final phase of the project, when the potential



areas of application for making construals are being considered (MC3b).

The input of the MC quartet as online tutors will be used in both synchronous and asynchronous modes to support the virtual workshops. It is to be hoped that these tutors will recruit other expert tutors by renewing the interest of the many enthusiastic former students who have participated in making construals through projects and coursework at Warwick over the years. Studying the way in which tutors interact in the process of collaborative construction will be itself a useful source of empirical data for evaluation.

There is no precise match here to specific target groups identified in the call for Strategic Partnerships - the blurring of distinctions between established categories being quite characteristic of making construals in general. It is on this basis that CONSTRUIT! is pitched at 'Strategic Partnerships addressing more than one field'.

### F.1. Involvement of Participants With Fewer Opportunities

Does your project involve participants facing situations that make their participation more difficult?

No



**F.2. Project Activities**

**F.2.1. Intellectual Outputs**

Output Identification	O1
Output Title	The "Making Construals" open online course: a curriculum, an instrument and resources
Output Type	open on-line course
Output Description	An open online course as a practical resource for 'making construals' . This comprises a curriculum, an instrument and resources. This curriculum has six components: to be referenced below as MC1a, MC1b, MC2a, MC2b, MC3a, MC3b. For futher explanation of this curriculum see Section E. In its initial form, this curriculum will be derived by curating and adapting resources deployed in making construals in an existing course at Warwick - see the following webpage for more details: <a href="http://www2.warwick.ac.uk/fac/sci/dcs/research/em/teaching/cs405">http://www2.warwick.ac.uk/fac/sci/dcs/research/em/teaching/cs405</a>
Languages	
Media(s)	Interactive Resource

Activity	Activity Code	O1-A1
	Project Phase	Implementation
	Title	MC1 REVIEW
	Description	Reviewing the first component of the resources for 'making construals' (MC1a and MC1b)
	Tasks and role of each organisation	Preparing a review of existing resources for distribution to the partners (Warwick - 5 days) with pedagogy consultant Piet Kommers (Helix5 - 2 days)
	Estimated Start Date (dd-mm-yyyy)	01-09-2014
	Estimated End Date (dd-mm-yyyy)	29-09-2014
	Activity Leading Organisation	Helix5
	Participating Organisations	THE UNIVERSITY OF WARWICK
	Activity Code	O1-A2
	Project Phase	Implementation
	Title	MC1 CRITIQUE
	Description	Critique for establishing requirements for revision of MC1a and MC1b
	Tasks and role of each organisation	Critiquing existing resources from perspectives of different target groups (Edumotiva, UEF, Edinburgh - 10 days for each) overseen by Piet Kommers (Helix5 - 2 days)
	Estimated Start Date (dd-mm-yyyy)	01-10-2014
	Estimated End Date (dd-mm-yyyy)	31-12-2014



Activity Leading Organisation	Helix5
Participating Organisations	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF EDINBURGH
Activity Code	O1-A3
Project Phase	Implementation
Title	MC1 REFINEMENT
Description	Refining the MC instruments and resources for MC1a and MC1b
Tasks and role of each organisation	Adapting existing resources for teaching Making Construals (Warwick - 25 days programming + 5 days web development) overseen by Piet Kommers: Helix5, Bratislava and Zoulias: Edumotiva (3 days for each)
Estimated Start Date (dd-mm-yyyy)	01-01-2015
Estimated End Date (dd-mm-yyyy)	30-04-2015
Activity Leading Organisation	Helix5
Participating Organisations	THE UNIVERSITY OF WARWICK
Activity Code	O1-A4
Project Phase	Implementation
Title	MC1 TRIALLING
Description	Trialling refined resources for MC1a and MC1b
Tasks and role of each organisation	Deploying and giving feedback on refined resources (Edumotiva, UEF, Edinburgh - 5 days for each) overseen by Piet Kommers (3 days)
Estimated Start Date (dd-mm-yyyy)	01-05-2015
Estimated End Date (dd-mm-yyyy)	31-07-2015
Activity Leading Organisation	Helix5
Participating Organisations	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF EDINBURGH
Activity Code	O1-A5
Project Phase	Implementation



Title	MC1 FINISHING
Description	Finishing refined resources for MC1a and MC1b
Tasks and role of each organisation	Finalising and documenting resources (Warwick - 10 days) overseen by Piet Kommers (3 days)
Estimated Start Date (dd-mm-yyyy)	01-08-2015
Estimated End Date (dd-mm-yyyy)	31-08-2015
Activity Leading Organisation	Helix5
Participating Organisations	THE UNIVERSITY OF WARWICK
Activity Code	O1-A6
Project Phase	Implementation
Title	MC1 REPORTING
Description	Reporting on the MC1a and MC1b from pedagogy and technology perspectives
Tasks and role of each organisation	Evaluating from pedagogy and technology perspectives (Helix5 and Bratislava - 10 days each) and reporting at the transnational project meeting M2
Estimated Start Date (dd-mm-yyyy)	01-09-2015
Estimated End Date (dd-mm-yyyy)	30-09-2015
Activity Leading Organisation	THE UNIVERSITY OF EDINBURGH
Participating Organisations	Helix5
	UNIVERZITA KOMENSKÉHO V BRATISLAVE
Activity Code	O1-A7
Project Phase	Implementation
Title	MC2 REVIEW
Description	Reviewing the second component of the resources for 'making construals' (MC2a and MC2b) in conjunction with
Tasks and role of each organisation	Preparing a review of existing resources for distribution to the partners (Warwick - 5 days) with pedagogy consultant Piet Kommers (Helix5 - 2 days)
Estimated Start Date (dd-mm-yyyy)	01-09-2015
Estimated End Date (dd-mm-yyyy)	30-09-2015
Activity Leading Organisation	Helix5
Participating Organisations	THE UNIVERSITY OF WARWICK



Activity Code	O1-A8
Project Phase	Implementation
Title	MC2 CRITIQUE
Description	Critique for establishing requirements for revision of MC2a and MC2b
Tasks and role of each organisation	Critiquing existing resources from perspectives of different target groups (Edumotiva, UEF, Edinburgh - 10 days for each) overseen by Piet Kommers (Helix5 - 2 days)
Estimated Start Date (dd-mm-yyyy)	01-10-2015
Estimated End Date (dd-mm-yyyy)	31-12-2015
Activity Leading Organisation	Helix5
Participating Organisations	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF EDINBURGH
Activity Code	O1-A9
Project Phase	Implementation
Title	MC2 REFINEMENT
Description	Refining the MC instruments and resources for MC2a and MC2b
Tasks and role of each organisation	Adapting existing resources for teaching 'Making Construals' (Warwick - 25 days programming + 5 days web development) overseen by Piet Kommers: Helix5, Bratislava and Zoulias: Edumotiva (3 days for each)
Estimated Start Date (dd-mm-yyyy)	01-01-2016
Estimated End Date (dd-mm-yyyy)	30-04-2016
Activity Leading Organisation	Helix5
Participating Organisations	THE UNIVERSITY OF WARWICK
Activity Code	O1-A10
Project Phase	Implementation
Title	MC2 TRIALLING
Description	Trialling refined resources for MC3a and MC3b
Tasks and role of each organisation	Deploying and giving feedback on refined resources (Edumotiva, UEF, Edinburgh - 5 days for each) overseen by Piet Kommers (3 days)



Estimated Start Date (dd-mm-yyyy)	01-05-2016
Estimated End Date (dd-mm-yyyy)	31-07-2016
Activity Leading Organisation	Helix5
Participating Organisations	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF EDINBURGH
Activity Code	O1-A11
Project Phase	Implementation
Title	MC2 FINISHING
Description	Finishing refined resources for MC2a and MC2b
Tasks and role of each organisation	Finalising and documenting resources (Warwick - 10 days) overseen by Piet Kommers (3 days)
Estimated Start Date (dd-mm-yyyy)	01-08-2016
Estimated End Date (dd-mm-yyyy)	31-08-2016
Activity Leading Organisation	Helix5
Participating Organisations	THE UNIVERSITY OF WARWICK
Activity Code	O1-A12
Project Phase	Implementation
Title	MC2 REPORTING
Description	Reporting on the MC2a and MC2b from pedagogy and technology perspectives
Tasks and role of each organisation	Evaluating from pedagogy and technology perspectives (Helix5 and Bratislava - 10 days each) and reporting at the transnational project meeting M3 to be overseen by Edinburgh (2 days)
Estimated Start Date (dd-mm-yyyy)	01-09-2016
Estimated End Date (dd-mm-yyyy)	30-09-2016
Activity Leading Organisation	THE UNIVERSITY OF EDINBURGH
Participating Organisations	Helix5
	UNIVERZITA KOMENSKEHO V BRATISLAVE
Activity Code	O1-A13
Project Phase	Implementation

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Title	MC3 REVIEW
Description	Reviewing the first component of the resources for 'making construals' (MC3a and MC3b)
Tasks and role of each organisation	Preparing a review of existing resources for distribution to the partners (Warwick - 5 days) with pedagogy consultant Piet Kommers (Helix5 - 2 days)
Estimated Start Date (dd-mm-yyyy)	01-09-2016
Estimated End Date (dd-mm-yyyy)	30-09-2016
Activity Leading Organisation	Helix5
Participating Organisations	THE UNIVERSITY OF WARWICK
Activity Code	O1-A14
Project Phase	Implementation
Title	MC3 CRITIQUE
Description	Critique for establishing requirements for revision of MC3a and MC3b
Tasks and role of each organisation	Critiquing existing resources from perspectives of different target groups (Edumotiva, UEF, Edinburgh - 10 days for each) overseen by Piet Kommers (Helix5 - 2 days)
Estimated Start Date (dd-mm-yyyy)	01-10-2016
Estimated End Date (dd-mm-yyyy)	31-12-2016
Activity Leading Organisation	Helix5
Participating Organisations	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF EDINBURGH
Activity Code	O1-A15
Project Phase	Implementation
Title	MC3 REFINEMENT
Description	Refining the MC instruments and resources for MC3a and MC3b
Tasks and role of each organisation	Adapting existing resources for teaching 'Making Construals' (Warwick - 25 days programming + 5 days web development) overseen by Piet Kommers: Helix5, Bratislava and Zoulias: Edumotiva (3 days for each)
Estimated Start Date (dd-mm-yyyy)	01-01-2017
Estimated End Date (dd-mm-yyyy)	30-04-2017
Activity Leading Organisation	ITA-SUOMEN YLIOPISTO



Participating Organisations	THE UNIVERSITY OF WARWICK
Activity Code	O1-A16
Project Phase	Implementation
Title	MC3 TRIALLING
Description	Trialling refined resources for MC3a and MC3b
Tasks and role of each organisation	Deploying and giving feedback on refined resources (Edumotiva, UEF, Edinburgh - 5 days for each) overseen by Piet Kommers (Helix5 - 3 days)
Estimated Start Date (dd-mm-yyyy)	01-05-2017
Estimated End Date (dd-mm-yyyy)	31-07-2017
Activity Leading Organisation	Helix5
Participating Organisations	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF EDINBURGH
Activity Code	O1-A17
Project Phase	Implementation
Title	MC3 FINISHING
Description	Finishing refined resources for MC3a and MC3b overseen by Piet Kommers (3 days)
Tasks and role of each organisation	Finalising and documenting resources (Warwick - 10 days) overseen by Piet Kommers (3 days)
Estimated Start Date (dd-mm-yyyy)	01-08-2017
Estimated End Date (dd-mm-yyyy)	31-08-2017
Activity Leading Organisation	Helix5
Participating Organisations	THE UNIVERSITY OF WARWICK
Activity Code	O1-A18
Project Phase	Implementation
Title	MC3 REPORTING
Description	Reporting on the MC3a and MC3b from pedagogy and technology perspectives
Tasks and role of each organisation	Evaluating from pedagogy and technology perspectives (Helix5 and Bratislava - 10 days each) and reporting at the transnational project



	meeting M4 to be overseen by Edinburgh (2 days)
Estimated Start Date (dd-mm-yyyy)	01-08-2017
Estimated End Date (dd-mm-yyyy)	31-08-2017
Activity Leading Organisation	THE UNIVERSITY OF EDINBURGH
Participating Organisations	UNIVERZITA KOMENSKEHO V BRATISLAVE
	Helix5
Activity Code	O1-A19
Project Phase	Closure
Title	Completion of the MC open online course
Description	Final review of the open online course for Making Construals
Tasks and role of each organisation	Drawing together the components MC1, MC2 and MC3 for review by all (3 day for Warwick, 1 day each for Edumotiva, UEF, Edinburgh, Bratislava, Helix5)
Estimated Start Date (dd-mm-yyyy)	01-08-2017
Estimated End Date (dd-mm-yyyy)	31-08-2017
Activity Leading Organisation	THE UNIVERSITY OF WARWICK
Participating Organisations	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	Helix5
	UNIVERZITA KOMENSKEHO V BRATISLAVE
	THE UNIVERSITY OF EDINBURGH

Output Identification	O2
Output Title	An evaluation of the 'Making Construals' open online course
Output Type	Study/analysis
Output Description	The evidence to test/corroborate that the open online course for making construals is effective in practice - that it will assist learners and that our design of the MC curriculum, MC instrument, and MC resources has been improved from the initial prototype (as far as becoming a more effective learning resource is concerned). The qualitative and quantitative evidence to support this evaluation will be drawn from a wide range of learning activities for different categories of learner that include virtual workshops.
Languages	



Media(s)		
Activity	Activity Code	O2-A1
	Project Phase	Implementation
	Title	ANALYSIS OF MC ACTIVITY 1
	Description	Empirical analysis of MC activity in C5, C8, C14 and virtual workshops 1
	Tasks and role of each organisation	Design, deployment and analysis of empirical studies (Warwick, led by Emma King 15 days, Edumotiva, led by Rene Alimisi, 15 days, UEF, led by Illka Jormanainen, 15 days) overseen by Helix5, Bratislava and Edinburgh (5 days each)
	Estimated Start Date (dd-mm-yyyy)	01-12-2014
	Estimated End Date (dd-mm-yyyy)	31-08-2015
	Activity Leading Organisation	THE UNIVERSITY OF WARWICK
	Participating Organisations	European Lab for Educational Technology
		Helix5
		ITA-SUOMEN YLIOPISTO
		THE UNIVERSITY OF EDINBURGH
		UNIVERZITA KOMENSKÉHO V BRATISLAVE
	Activity Code	O2-A2
	Project Phase	Implementation
	Title	REPORTING ON ANALYSIS OF MC ACTIVITY 1
	Description	Report on empirical studies of MC activity year 1
	Tasks and role of each organisation	Preparing reports on case-studies in Making Construals (Warwick, led by Emma King 10 days, Edumotiva, led by Rene Alimisi 10 days, UEF, led by Illka Jormanainen, 10 days) overseen by Helix5, Bratislava and Edinburgh (5 days each)
	Estimated Start Date (dd-mm-yyyy)	01-09-2015
Estimated End Date (dd-mm-yyyy)	30-09-2015	
Activity Leading Organisation	THE UNIVERSITY OF WARWICK	
Participating Organisations	European Lab for Educational Technology	
	Helix5	
	ITA-SUOMEN YLIOPISTO	
	UNIVERZITA KOMENSKÉHO V BRATISLAVE	
	THE UNIVERSITY OF EDINBURGH	



Activity Code	O2-A3
Project Phase	Implementation
Title	ANALYSIS OF MC ACTIVITY 2
Description	Empirical analysis of MC activity in C6, C9, C15 and virtual workshops 2
Tasks and role of each organisation	Design, deployment and analysis of empirical studies (Warwick, led by Emma King 15 days, Edumotiva, led by Rene Alimisi, 15 days, UEF, led by Illka Jormanainen, 15 days) overseen by Helix5, Bratislava and Edinburgh (5 days each)
Estimated Start Date (dd-mm-yyyy)	01-12-2015
Estimated End Date (dd-mm-yyyy)	31-08-2016
Activity Leading Organisation	THE UNIVERSITY OF WARWICK
Participating Organisations	European Lab for Educational Technology
	Helix5
	ITA-SUOMEN YLIOPISTO
	UNIVERZITA KOMENSKEHO V BRATISLAVE
	THE UNIVERSITY OF EDINBURGH
Activity Code	O2-A4
Project Phase	Implementation
Title	REPORTING ON ANALYSIS OF MC ACTIVITY 2
Description	Report on empirical studies of MC activity year 1-2
Tasks and role of each organisation	Preparing reports on case-studies in Making Construals (Warwick, led by Emma King 10 days, Edumotiva, led by Rene Alimisi 10 days, UEF, led by Illka Jormanainen, 10 days) overseen by Helix5, Bratislava and Edinburgh (5 days each)
Estimated Start Date (dd-mm-yyyy)	01-09-2016
Estimated End Date (dd-mm-yyyy)	30-09-2016
Activity Leading Organisation	THE UNIVERSITY OF EDINBURGH
Participating Organisations	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
	Helix5
	ITA-SUOMEN YLIOPISTO
	UNIVERZITA KOMENSKEHO V BRATISLAVE



Activity Code	O2-A5
Project Phase	Implementation
Title	ANALYSIS OF MC ACTIVITY 3
Description	Empirical analysis of MC activity in C7, C10, C16 and virtual workshops 3
Tasks and role of each organisation	Design, deployment and analysis of empirical studies (Warwick, led by Emma King 15 days, Edumotiva, led by Rene Alimisi, 15 days, UEF, led by Illka Jormanainen, 15 days) overseen by Helix5, Bratislava and Edinburgh (5 days each)
Estimated Start Date (dd-mm-yyyy)	01-09-2017
Estimated End Date (dd-mm-yyyy)	30-09-2017
Activity Leading Organisation	THE UNIVERSITY OF WARWICK
Participating Organisations	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	Helix5
	THE UNIVERSITY OF EDINBURGH
	UNIVERZITA KOMENSKÉHO V BRATISLAVE
Activity Code	O2-A6
Project Phase	Implementation
Title	REPORTING ON ANALYSIS OF MC ACTIVITY 3
Description	Report on empirical studies of MC activity year 1-3
Tasks and role of each organisation	Preparing reports on case-studies in Making Construals (Warwick, led by Emma King 10 days, Edumotiva, led by Rene Alimisi 10 days, UEF, led by Illka Jormanainen, 10 days) overseen by Helix5, Bratislava and Edinburgh (5 days each)
Estimated Start Date (dd-mm-yyyy)	01-09-2017
Estimated End Date (dd-mm-yyyy)	30-09-2017
Activity Leading Organisation	THE UNIVERSITY OF EDINBURGH
Participating Organisations	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	Helix5
	UNIVERZITA KOMENSKÉHO V BRATISLAVE




Output Identification	O3
Output Title	An evaluation of claims for 'Making Construals'
Output Type	Study/analysis
Output Description	An evidence-based assessment of whether the broader claims for making construals made in the proposal are valid. For instance: "Is this really a NEW digital skill with all the qualities and potential bold implications for EU strategy re ICT teaching and practice that we are suggesting in our opening paras in section D?" etc. Significant auxiliary questions are "Can making construals be disseminated online?" "To what extent is the didactic framework transferable?" The qualitative and quantitative evidence to support this evaluation will be drawn from a wide range of learning activities for different categories of learner that include virtual workshops and experimental activities targeted at particular groups of learner (e.g. the partially sighted).
Languages	
Media(s)	

Activity	Activity Code	O3-A1
	Project Phase	Implementation
	Title	EVALUATING CLAIMS FOR MC [1]
	Description	Designing and conducting experiments to test claims about 'making construals' and evaluating the results through empirical studies
	Tasks and role of each organisation	Designing and conducting experiments (Warwick - 10 days) and evaluating through empirical studies (Helix5 - 10 days)
	Estimated Start Date (dd-mm-yyyy)	01-05-2015
	Estimated End Date (dd-mm-yyyy)	31-08-2015
	Activity Leading Organisation	THE UNIVERSITY OF WARWICK
	Participating Organisations	Helix5
	Activity Code	O3-A2
	Project Phase	Implementation
	Title	REPORTING ON EVALUATION OF CLAIMS FOR MC [1]
	Description	Reporting the findings of experiments to test claims about 'making construals'
Tasks and role of each organisation	Reporting the results of experiments to test claims about 'making construals' (Warwick - 5 days, Helix5 - 5 days) in consultation with Edinburgh (3 days)	



Estimated Start Date (dd-mm-yyyy)	01-09-2015
Estimated End Date (dd-mm-yyyy)	30-09-2015
Activity Leading Organisation	THE UNIVERSITY OF EDINBURGH
Participating Organisations	Helix5
	THE UNIVERSITY OF WARWICK
Activity Code	O3-A3
Project Phase	Implementation
Title	EVALUATING CLAIMS FOR MC [2]
Description	Designing and conducting experiments to test claims about 'making construals' and evaluating the results through empirical studies
Tasks and role of each organisation	Designing and conducting experiments (Warwick - 10 days) and evaluating through empirical studies (Helix5 - 10 days)
Estimated Start Date (dd-mm-yyyy)	01-05-2016
Estimated End Date (dd-mm-yyyy)	31-08-2016
Activity Leading Organisation	THE UNIVERSITY OF WARWICK
Participating Organisations	Helix5
Activity Code	O3-A4
Project Phase	Implementation
Title	REPORTING ON EVALUATION OF CLAIMS FOR MC [2]
Description	Reporting the findings of experiments to test claims about 'making construals'
Tasks and role of each organisation	Reporting the results of experiments to test claims about 'making construals' (Warwick - 5 days, Helix5 - 5 days) in consultation with Edinburgh (3 days)
Estimated Start Date (dd-mm-yyyy)	01-09-2016
Estimated End Date (dd-mm-yyyy)	30-09-2016
Activity Leading Organisation	THE UNIVERSITY OF EDINBURGH
Participating Organisations	Helix5
	THE UNIVERSITY OF WARWICK
Activity Code	O3-A5
Project Phase	Implementation



	Title	EVALUATING CLAIMS FOR MC [3]
	Description	Designing and conducting experiments to test claims about 'making construals' and evaluating the results through empirical studies
	Tasks and role of each organisation	Designing and conducting experiments (Warwick - 10 days) and evaluating through empirical studies (Helix5 - 10 days)
	Estimated Start Date (dd-mm-yyyy)	01-05-2017
	Estimated End Date (dd-mm-yyyy)	31-08-2017
	Activity Leading Organisation	THE UNIVERSITY OF WARWICK
	Participating Organisations	Helix5
	Activity Code	O3-A6
	Project Phase	Closure
	Title	REPORTING ON EVALUATION OF CLAIMS FOR MC [3]
	Description	Reporting the findings of experiments to test claims about 'making construals'
	Tasks and role of each organisation	Reporting the results of experiments to test claims about 'making construals' (Warwick - 5 days, Helix5 - 5 days) in consultation with Edinburgh (3 days)
	Estimated Start Date (dd-mm-yyyy)	01-09-2017
	Estimated End Date (dd-mm-yyyy)	30-09-2017
	Activity Leading Organisation	THE UNIVERSITY OF EDINBURGH
	Participating Organisations	THE UNIVERSITY OF WARWICK
		Helix5

**F.2.2. Multiplier Events**

Event Identification	E1
Event Title	The First International Conference on Making Construals
Event Description	International Conference on Making Construals
	A conference will be organised before the end of the project implementation period aiming at communicating the project ideas and activities within a wider audience consisting of people from varying professional, educational and cultural backgrounds and from all walks of life. The conference will draw upon CONSTRUIT! ideas, concepts and outcomes but it will be broad in scope; it will be primarily rooted in application-oriented interactive activities with



construals and collaborative constructionist practices; Although the emphasis is on application-oriented activities that allow interaction with the CONSTRUIT! concepts, research ‘papers’ will be also welcomed as they can indicate possible future directions for research studies.

In order to further boost participation in the conference, a ‘virtual strand’ will be supported that will offer interested parties the opportunity to participate online, to communicate their ideas and to interact with other people that have related interests (i.e in topics like shape modelling, medicine, finance, decision-making, robotics, music and more).

EduMotiva and University of Warwick will lead this activity. The other partners will also contribute to bring this international event into life. The partners of the CONSTRUIT! consortium will be in the organization committee.

The preparation of the conference will start during the second year of the implementation period to ensure that there will be enough time for preparatory planning. A website for the conference will be developed as well as the conference logo, leaflet and call for papers. The programme committee will be also established; this will include people from academia and researchers as well as practitioners from and beyond the project partnership. Planning for the conference location, room, exhibit area, facilities and social event will also be made. The partners will set up a strategy to promote this international event using existing channels (such as the project website, partner organisation websites, mailing lists) and social media (i.e Facebook, Twitter, LinkedIn). Appropriate time will be allocated to the programme committee for the review of the contributions to conference call. Special focus will be paid on the creation of the conference programme which will bring together research-based sessions and (primarily) application-oriented interactive activities from a wide range of subject areas.

The outcomes of the conference and key sessions, including podcasts of selected sessions, will become available online on the project web site and on the conference web site. Proceedings will be also published online and free access to them will be guaranteed. Organization committee will encourage authors and attendees to submit also multimedia files related to the ‘construal making process’ which will be combined with video material/ remarkable conference episodes retrieved from the conference activities. This material will be also uploaded on the project and conference web site and is seen as a trigger to motivate more people to embrace the pedagogical concepts underpinning the CONSTRUIT! project.

The organization of the international conference on making construals is considered an invaluable opportunity for exploitation and networking. We do not see this conference as the culmination of the dissemination and exploitation plan. Our vision is to seek for external co-funding or other support from diverse sources in order to ensure the organization of the conference every two years post project completion. In other words, we view this conference as a progression that can potentially be extended beyond the duration of the project, and into the future. In this line, conference website (as well as project website) will be available for at least 3 years after the project completion period constituting a significant post-project dissemination tool. We see this as a vital contribution to the sustainability of the project.

The participants in the conference will be encouraged to complete an evaluation questionnaire which will be mainly quantitative in character but will also allow qualitative feedback. The received comments will enable the organisation committee to plan for future conferences, to improve existing practices and modify decisions related to conference structure and organization.

Intellectual Outputs Covered (using Output Identification number)	O1, O2, O3
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Activity	Activity Code	E1-B1
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Project Phase	Dissemination
Title	Conference organisation
Description	Making administrative preparations for a conference, preparing a call for papers, setting up a programme committee, recruiting reviewers, selecting papers, booking accommodation, preparing a programme, organising special events
Tasks and role of each organisation	To be distributed amongst all partners equally
Estimated Start Date (dd-mm-yyyy)	01-09-2016
Estimated End Date (dd-mm-yyyy)	31-08-2017
Activity Leading Organisation	THE UNIVERSITY OF WARWICK
Participating Organisations	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	Helix5
	UNIVERZITA KOMENSKÉHO V BRATISLAVE
	THE UNIVERSITY OF EDINBURGH

**F.2.3. Learning/Teaching/Training Activities**

Do you foresee the inclusion of learning, teaching or training activities in your project?

Yes

What is the added value of these learning, teaching or training activities with regards to the achievement of the project objectives? Please describe also the arrangements for recognition or validation of the learning outcomes of the participants in learning, teaching or training activities. Will your project make use of European instruments like Europass, ECVET, Youthpass, ECTS etc. or any national instruments/certificates?

The learning activities organised in the project serve a crucial role both as the source of empirical data that is used in the evaluations associated with the intellectual outputs O2 and O3 and in dissemination.

The principles of making construals are best learnt through practice. Learning, teaching or training activities will serve as the primary medium for communicating the principles and skills of making construal from those in the consortium who already have expertise in making construals to the other project members; from project members to their students.

Essential in developing and refining the online resources that are essential for wider dissemination. 5000

LTT activities essential in evaluating the claims for making construals. Target groups and themes for LTT activities to be chosen to maximise the useful feedback. Help to inform consultants about making construals, and are a vehicle that can be used to respond to their suggestions and critique.

Essential as a way of informing the development of the MC instrument, testing the MC curriculum and building up the MC online resources.



Hope to benefit the learners also - opportunity to get their feedback and to involve them in the design of new features for the MCI.

No explicit reward, but significant if can enhance confidence with ICT - evidence in previous experience of students who had become frustrated by their ability to program conventionally benefiting emotionally from making construals.

Can also be entertaining and stimulating as a way of provoking thought and stimulating the imagination

Please describe each of the learning, teaching or training activities you intend to include in your project:

Activity No.	C1
Activity Type	Intensive Study Programmes for teaching staff
Activity Description	Familiarisation with making construals 0 [250]
No. of Participants	9
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF EDINBURGH
	Helix5
	UNIVERZITA KOMENSKÉHO V BRATISLAVE

Activity No.	C2
Activity Type	Short-term joint staff training events
Activity Description	Experiencing and reflecting on the practical progress on making construals over year 1
No. of Participants	12
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	European Lab for Educational Technology



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Activity No.	C3
Activity Type	Short-term joint staff training events
Activity Description	Experiencing and reflecting on the practical progress on making construals over years 1-2
No. of Participants	9
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	Helix5
	UNIVERZITA KOMENSKEHO V BRATISLAVE
	THE UNIVERSITY OF EDINBURGH

Activity No.	C4
Activity Type	Short-term joint staff training events
Activity Description	Experiencing and reflecting on the practical progress on making construals over year 1-3
No. of Participants	9
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5



Duration (months)	
Participating Organisations	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF EDINBURGH
	Helix5
	UNIVERZITA KOMENSKEHO V BRATISLAVE

Activity No.	C5
Activity Type	Blended mobility of higher education students
Activity Description	Learning activities directed at supporting the development of the MCC, MC instrument, and MC online resources, to be monitored by the MC consultants, for MC1a and MC1b
No. of Participants	20
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	

Participating Organisations	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	Helix5
	UNIVERZITA KOMENSKEHO V BRATISLAVE
	THE UNIVERSITY OF EDINBURGH

Activity No.	C6
Activity Type	Blended mobility of higher education students
Activity Description	Learning activities directed at supporting the development of the MCC, MC instrument, and MC online resources, to be monitored by the MC consultants, for MC2a and MC2b
No. of Participants	20
Participants with Special Needs (out of total number of Participants)	0



Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	Helix5
	UNIVERZITA KOMENSKEHO V BRATISLAVE
	THE UNIVERSITY OF EDINBURGH

Activity No.	C7
Activity Type	Blended mobility of higher education students
Activity Description	Learning activities directed at supporting the development of the MCC, MC instrument, and MC online resources, to be monitored by the MC consultants, for MC3a and MC3b
No. of Participants	20
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	Helix5
	UNIVERZITA KOMENSKEHO V BRATISLAVE
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Activity No.	C8
Activity Type	Blended mobility of young people
Activity Description	SciFest 2015

Form hash code: 46C25319F4B0C82F

Form has not been submitted yet



No. of Participants	20
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
	Helix5
	UNIVERZITA KOMENSKEHO V BRATISLAVE
	THE UNIVERSITY OF EDINBURGH

Activity No.	C9
Activity Type	Blended mobility of young people
Activity Description	SciFest 2016
No. of Participants	20
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
	Helix5
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Activity No.	C10
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Activity Type	Blended mobility of young people
Activity Description	SciFest 2017
No. of Participants	20
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
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Activity No.	C11
Activity Type	Short-term joint staff training events
Activity Description	Familiarisation with revised MC resources Year 1 at SciFest 2015
No. of Participants	12
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
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Activity No.	C12
Activity Type	Short-term joint staff training events
Activity Description	Familiarisation with revised MC resources Year 2 at SciFest 2016
No. of Participants	12
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
	Helix5
	UNIVERZITA KOMENSKEHO V BRATISLAVE
	THE UNIVERSITY OF EDINBURGH

Activity No.	C13
Activity Type	Short-term joint staff training events
Activity Description	Familiarisation with revised MC resources Year 3 at SciFest 2017
No. of Participants	12
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
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Activity No.	C14
Activity Type	Short-term joint staff training events
Activity Description	Familiarisation with revised MC resources Year 3 at Edumotiva 2015
No. of Participants	12
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	European Lab for Educational Technology
	THE UNIVERSITY OF WARWICK
	ITA-SUOMEN YLIOPISTO
	Helix5
	UNIVERZITA KOMENSKÉHO V BRATISLAVE
	THE UNIVERSITY OF EDINBURGH

Activity No.	C15
Activity Type	Short-term joint staff training events
Activity Description	Familiarisation with revised MC resources Year 3 at Edumotiva 2016
No. of Participants	12
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	European Lab for Educational Technology
	THE UNIVERSITY OF WARWICK



	ITA-SUOMEN YLIOPISTO
	Helix5
	UNIVERZITA KOMENSKEHO V BRATISLAVE
	THE UNIVERSITY OF EDINBURGH

Activity No.	C16
Activity Type	Short-term joint staff training events
Activity Description	Familiarisation with revised MC resources Year 3 at Edumotiva 2017
No. of Participants	12
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	European Lab for Educational Technology
	THE UNIVERSITY OF WARWICK
	ITA-SUOMEN YLIOPISTO
	Helix5
	UNIVERZITA KOMENSKEHO V BRATISLAVE
	THE UNIVERSITY OF EDINBURGH

Activity No.	C17
Activity Type	Long-term teaching or training assignments
Activity Description	Visit to Warwick by Carolina Islas Sedano and Andres Moreno from October 2014 to April 2015 to collaborate on the prototyping, trialling and revision of resources for curriculum components MC1a and MC1b
No. of Participants	2
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	Yes
Duration (days)	180



Duration (months)	6
Participating Organisations	THE UNIVERSITY OF WARWICK
	ITA-SUOMEN YLIOPISTO

Activity No.	C18
Activity Type	Long-term teaching or training assignments
Activity Description	Visit to Warwick by Rene Alimisi and Ilkka Jormanainen from October 2015 to April 2016 to collaborate on the prototyping, trialling and revision of the MC2b resources for instrumenting construals for interactive assessment and evaluation.
No. of Participants	2
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	Yes
Duration (days)	180
Duration (months)	6
Participating Organisations	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO

Activity No.	C19
Activity Type	Short-term joint staff training events
Activity Description	Visit to Warwick by Hamish Macleod and Jen Ross from the University of Edinburgh in February 2016 for discussion of MC2b agenda with Emma King, Rene Alimisi, Ilkka Jormanainen, Meurig Beynon and others from Warwick.
No. of Participants	8
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology



	ITA-SUOMEN YLIOPISTO
	THE UNIVERSITY OF EDINBURGH
	Helix5
	UNIVERZITA KOMENSKEHO V BRATISLAVE
Activity No.	C20
Activity Type	Short-term joint staff training events
Activity Description	Visit to Warwick by Hamish Macleod and Jen Ross from the University of Edinburgh in February 2017 for discussion of MC3a agenda with Emma King, Rene Alimisi, Ilkka Jormanainen, Meurig Beynon and others from Warwick.
No. of Participants	8
Participants with Special Needs (out of total number of Participants)	0
Accompanying Persons (out of total number of Participants)	0
Is this a long-term activity?	No
Duration (days)	5
Duration (months)	
Participating Organisations	THE UNIVERSITY OF WARWICK
	European Lab for Educational Technology
	ITA-SUOMEN YLIOPISTO
	Helix5
	UNIVERZITA KOMENSKEHO V BRATISLAVE
	THE UNIVERSITY OF EDINBURGH



G. Follow-up

G.1. Impact

What is the expected impact on the participants, participating organisations, target groups and other relevant stakeholders?

The partners in the CONSTRUIT! consortium are all committed to a view of learning as a creative activity that is a provocation to re-think and be imaginative. Many of them are drawn to ways of using the computer (such as building structures in Second Life, contextualised game-based learning, digital story-telling etc) to support learning that is radically different in character from the computer-supported tutoring system archetype. When considering how to enable such computer use they face the challenge of accounting for these activities with reference to a science of computing that is alienated from our experience by its abstraction. Making construals is a practice that resolves this problem: affording ways to thinking about the computer that originate directly from our lived experience.

Making construals is a new digital skill that:

- is accessible to a wide audience and equips them to take over some of the functions that specialist programmers currently address;
- enables people who understand subjects/environments/activities well in human terms to contribute either directly or through collaboration to the live development of shared resources for learning about them;
- encourages a culture of computing in which technology can be more gracefully integrated with the working practices of our everyday life and our personal stream of thought.

Such ways in which computing can be blended into our lives are particularly relevant to school education. The EC's Rethinking Education initiative recognises that 'digital learning and recent trends in open educational resources are enabling fundamental changes in the education world', highlighting the aspiration for 'the learner or teacher [to be] a creator of learning content' and going on to acknowledge that 'this requires good computer skills'. But in fact a schoolteacher cannot possibly be expected to context-switch from their extremely demanding teaching role to make changes to a sophisticated Java program, even if such an activity was possible in principle - to address this unresolved grand challenge of software requirements, much more than 'good computer skills' would be required.

CONSTRUIT! will exemplify a paradigm for co-construction of OERs through a cumulation of incremental interactions with a construal that can at all times be understood through its close relationship with our lived experience. Such OERs can be modified by teachers in context without the need to divert their attention from the learning activity itself and without the need for advanced computer programming skills. This has the potential to transform education by allowing teachers and pupils alike to mediate their understandings - and misunderstandings. This paradigm has wide application to learning in other contexts (e.g. understanding how the seasons are related to our location on earth, knowing how to interact more effectively with a complex device, such as a mobile phone, or appreciating a complex sporting activity, such as cricket).

Making a more intimate connection between using ICT and thinking in context will help those who find conventional uses of computers challenging. It will also stimulate those who find current practices for developing computer programs too inhibiting and frustrating. By shifting the emphasis from the ingenuity of a precisely specified fully automated device to the unfathomable richness of interpretations that can be projected onto interactions with a computer artefact by the human mind, making construals liberates the imagination. In this way, the HE students upon whom industrial economies depend so heavily can be encouraged to develop their potential as creative problem solvers and lateral thinkers and find the courage to express their personal, intuitive and authentic ideas.

The flexibility and fluidity of the representations that can be supported by using construals also has significant implications for the design of OERs. The problems of interoperability that the industry seeks to address through imposing standards also stem from the way in which software is constructed. Construals afford ways of opportunistically combining different resources without the need to impose a universal standard. This potential for exploiting construals to cope with diverse representations was illustrated in the pioneering work on developing portable interactive digital TV resources carried out by Richard Cartwright at the BBC R&D Labs.

What is the desired impact of the project at the local, regional, national, European and/or international levels?



Making construals has developed as a practice in a local setting, that of the Computer Science at the University of Warwick. The high level of enthusiasm that has been shown for making construals and the extent to which this has attracted students to carry this interest forward to graduate studies has been most encouraging. It is surprising that, despite this, there has been little external take-up of the practice. The first priority of CONSTRUIT! is to demonstrate that the practice of making construals can be made accessible to people who do not have the face-to-face apprenticeship-style experience to which CS students at Warwick have been exposed.

The effective web-enabling of the MC instrument that has been achieved is a first step towards giving wider exposure and access. We can expect that learning activities based on the Erasmus+ 'Blended mobility' pattern, such as we shall be practising in connection with a series of virtual workshops in the course of the project, to be a promising way of recruiting within the neighbouring region.

Through the CONSTRUIT! project, we expect to enhance the expressive power of the MC instrument to allow web resources of a very general nature to be readily integrated with it. This will highlight the clear potential for interdisciplinary applications. The project will consolidate an affiliation with the educational bodies at the institutional level at Warwick that opens the way to proving that construals can bring unity to science and the arts and humanities not only in principle but in practice.

The CONSTRUIT! project will also build upon the links we have established with Computing at Schools initiative both regionally and nationally. It will help to ensure the success and longer-term future of the MENACE pilot project and establish links between computing teachers in the UK and elsewhere across Europe that will be exceptionally stimulating where the topical debates about the future pattern for computing education in the UK - now part of the National Curriculum - are concerned.

On the broader international stage, the CONSTRUIT! consortium has strong links with other countries, for instance through Sutinen's work in Africa and Antony Harfield's association with Thailand which have already involved some experience of deploying 'making construals' in universities and schools. The investment in an open online course and enhancement of the MC instrument will enhance the prospects for deploying 'making construals' in such countries.

How will you measure the previously mentioned impacts?

The impact of the project on the participants will be measured by the extent to which they find it congenial and feasible to apply 'making construals' in ways that promote active and creative learning. The impact on school teachers and pupils will be gauged by how successful they are in collaboratively developing shared construals from which they derive OERs and classroom resources. We shall gain feedback through questionnaires and through direct experience of guiding their construction activities.

We shall monitor the extent to which the concept of making construals is being disseminated and applied by encouraging learners to develop their construals as open resources to be integrated into a presentation environment and shared with others via an online repository. As the project develops, we shall enhance the MC instrument so that the process of monitoring and archiving learner activity can be automated.

The overall impact may be gauged by the extent to which learners maintain their interest through participation in the virtual workshops and make use of the online resources.

## G.2. Dissemination and Use of Projects' Results

You are requested to elaborate dissemination plans. Please provide answers to the questions below.

To whom will you disseminate the project results inside and outside your organisation? Please define in particular your target audience(s) at local/regional/national/EU level and motivate your choice.

The project results will include tools, resources, examples and guidelines for the 'making of construals' as a powerful educational practice. The motivates the established dissemination strategy of directing activities at the identified stakeholder groups including:

Internal :

- Individuals supporting learning and teaching (teachers, tutors, learning technologists, educational developers, curriculum designers and more)
- Learners (registered students, potential applicants, and alumni)
- Groups responsible for sharing good practice and training staff (e.g. Learning Technology Centres)
- Groups preparing lecturers and post-graduates for internal teaching qualifications



• Those in Education Departments responsible for (national) initial teacher training qualifications

External:

- Educational institutions of all kinds
- Public authorities and policy makers (local authorities, governmental Departments and agencies, those responsible for qualifications at all levels)
- Subject communities (for example the Computing at School initiatives, and Mathematics teaching and learning communities, but including employers and professional bodies)
- Individuals supporting learning and teaching (teachers, learning technologists, educational developers, curriculum designers and more)
- Learners at all stages – school and college students, life-long learners, retired people

Key specific motivation for the above groups is our belief we have something special and innovative to offer but that this involves changes in educational cultures. The above target groups will apply at local, regional and national levels for all the partners, but there is also a need to work at an EU level. For example, policy makers in different countries will have different priorities and we need to address how the outcomes and impacts of our project results can best be integrated into programmes across the EU. To maintain the perspective of making a contribution to learning culture is vital to the sustainability of the project and its results.

Who will be responsible for the dissemination activities within your partnership and which specific expertise has it in this area? How many resources will you make available to allow for the proper implementation of your dissemination plans?

Edumotiva (European Lab for Educational Technology) will be the key leader of dissemination activities. Edumotiva has extensive experience in organizing workshops, seminars and conferences and have successfully set up and implemented dissemination plans in the past in the context of EU-funded projects (i.e Terecop, I am not Scared, School Inclusion, FOCAL and more). Personnel from Edumotiva are heavily involved in the organization of the International Conference TRTWR & RIE 2014 that is taking place almost every year in Europe (for more details: <http://www.terecop.eu/trtwr-rie2014.htm>). This has given us considerable experience in the co-ordination of dissemination activities, sometimes leveraging additional funding and invariably requiring strong negotiation and management skills. The team at the University of Warwick will also offer input and resources to support the dissemination plan at international level exploiting existing ties with European and other organizations (inside and outside Europe). [add detail] The contribution of all the partners of the consortium is considered valuable and critical in reaching the dissemination goals. Each partner will undertake dissemination in their respective country and will contribute to the promotion of the project at national and European levels.

What kind of dissemination activities do you intend to carry out (relevance) and through which channels?

The project aims at reaching as widely as possible the targeted sectors of school communities and academia as well as the wider lifelong learning sector promoting project ideas, pedagogical principles and concepts, educational resources, developed courses and other outcomes maximizing the impact of the project work plan activities. Hence, these tasks must start at an early stage to raise awareness, and set up a significant community. Towards achieving this goal, the following activities are foreseen:

Activity 1: Development of Project web site The project web site will be developed in the first month of the project implementation. Information will be given on objectives, pedagogical concepts, collaborative activities, motivational, scheduled meetings, interim and final results etc. Links will lead to publications, evaluations, and promotional material. It will provide access to resources, suggested activities, supporting material and developed courses, a News area, an Events Calendar and a multimedia library. A member area will be restricted to project partners and EU officers. It is expected that Edumotiva will develop, host and manage the website. Agreement will be sought among the partners, during the project, for the continued maintenance of the site after the end of the project.

Activity 2: Production of leaflets and bi-annual online newsletters for the CONSTRUIT! Project The leaflet (available in pdf format online and in attractive hard copy form) will outline project objectives and promote the CONSTRUIT! project. It will direct readers to the website and will be available in English and in the languages of the partners. The printed format allows much wider delivery. The newsletters will document progress, important activities, achieved results and plans for the future in an 'easy to grasp' manner. Newsletters will be available in pdf format through the project portal. They will also be promoted through mailing lists.

Activity 3: Presentations/publications to Conferences/Workshops The consortium partners will actively pursue publications to conferences related to the pedagogical concepts and theories of the CONSTRUIT! project, the ideas of collaborative construction, as well as to ICT-based methodologies. This task aims to reach the academic community active in the area of ICT in Education. Publications and presentations will take place in well-attended conferences (e.g. in the UK, BETT, CaS, and Mathematics conferences) and in national and international workshops and symposia.

Activity 4: Development of a web presence through social and other contemporary media. A plan for building web presence



through social media will be developed during the first 2 months and it will be implemented for the rest of the project implementation period. The plan will describe which social networks (i.e LinkedIn, Facebook, Twitter, Youtube) will be exploited for dissemination purposes and in which way. Edumotiva have good experience here, for example, the Pan-Hellenic School Network Portal (Greece) that has more than 200.000 visits per month and enrolls almost 17.000 Greek schools. Presentations to local media will be also pursued to boost dissemination at local and regional levels. This might include articles to newspapers, thematic magazines, radio broadcasts and more.

Activity 5: Contacting professional bodies, administrative authorities and policy makers The consortium partners will pursue presentations to thematic networks aiming to reach targeted audiences in a focused manner. This includes: academic and professional networks active in the area of educational technology where all partners have natural links; policy makers, including school, professional, and higher education administrations in UK, Scotland, Finland, Slovakia and Greece; industrial companies to which the partner organisation have working ties.

Activity 6: Use of Erasmus+ dissemination platform Through the Erasmus+ dissemination platform we will be given the opportunity to provide 'relevant and interesting content' to the general public, to present the project idea, to demonstrate work in progress, to present relevant links and key outcomes. The main vision is to succeed in presenting The CONSTRUIT! project as a good practice in the 'showroom' of the Erasmus+ dissemination platform.

Activity 7: Virtual Workshops The goal of these is to spread the word about CONSTRUIT! project, raising awareness on CONSTRUIT! initiative and attracting engagement from interested individuals and organisations. Workshops at preliminary stages will target the teacher community in each country, the higher education community and other interested parties. As the project progresses virtual workshops will focus on different thematic areas and will be oriented towards the needs of specific target groups. In total 10 virtual workshops are planned to take place during the project implementation period.

Erasmus+ promotes an open access requirement for all materials produced through its projects. In the case your project is producing intellectual outputs/ tangible deliverables, please describe if and how you intend to promote the free access for the public, through the internet, to a digital form thereof. In case a limitation should be foreseen for the use of the open licence, please specify the reasons, extent and nature of this limitation.

The main tool, developed and maintained through the project, JS-EDEN, will be available at sites such as SourceForge and Github. We foresee no limitation on the use of an open licence.

Embracing the idea of 'Commodification of Knowledge', the project results will be offered freely and openly for educators, students, and self-learners to use and reuse for teaching, learning, and research. The project outputs such as tools, resources, example construals etc will be freely accessible through digital hubs of Open Educational Resources such as: OERcommons (<http://www.oercommons.org/>), or Jorum (<http://open.jorum.ac.uk/xmlui/>), etc.

How will you ensure that the project's results will remain available and/or will be used by others?

By means of the hubs mentioned in the previous response, the project website, and local websites of all the partners, the main project outcomes and results will remain available and we will promote their use and re-use. It is the core idea of the project not to purely approach the end-users as end-users but as potential producers that can activate the learning cycle again and again breathing life into our resources and continuing after the end of the project implementation period.

The project website will include a Resources area, where various CONSTRUIT! results such as educational resources for teachers, paradigms of construals and more will become publicly available. The virtual workshops will be also be accessible through the multimedia library of the website.

The project results will also be available online through the partner organisations' official websites. In this way, existing and new staff, recently enrolled students, librarians and educational technologists, perspective students and other interested parties can have access to the CONSTRUIT! outcomes extending further the CONSTRUIT! audience.

If relevant, please provide any other meaningful information deemed necessary to give a comprehensive overview of your dissemination plans.

There are several additional educational institutions and schools to which partner organizations have working relationships through existing activities related to enhancements in primary and secondary education. For example, Edumotiva have working ties with several secondary and vocational education schools in the region of Sparta and Patras (Greece); the University of Warwick has strong contacts with the local CaS hubs, and the national CaS organisation, and has been running a MOOC during the current academic year helping to train ICT teachers in teaching the new ICT curriculum including programming.

Both quantitative indicators (i.e site traffic, hits and visits, visibility in social media, number of participants) and qualitative factors (i.e



the quality of the participation; participants experiences; feedback from end-users, other stakeholders, peers, policy-makers) would be used to measure progress towards goals. Qualitative factors will be measured through interviews and small-scale surveys after key dissemination events.

### G.3. Sustainability

What are the activities and results that are planned to be maintained after the end of the EU funding including the needed resources to sustain them?

The main intellectual output of the project are the MC curriculum, instrument and resources for an open online course. An essential goal for sustainability, to which CONSTRUIT! will contribute, is making the MC principles widely accessible as a collaborative platform where people with different levels of ICT expertise can co-create learning resources. We envisage that these shared resources in due course serve a similar social function to current webpages, as a first port-of-call for someone wishing to learn more about well-known topics. The significant difference is that these webpages will have the interactive character of construals that the learner can potentially reinvent, repurpose and reinterpret for themselves. This vision is entirely in keeping with current trends in the digital culture, but will benefit from a conceptual framework, instruments and resources that give better support for these new and emerging kinds of interaction.

Making construals is a skill, and can survive only through establishing a culture that can nurture it. For such a culture to flourish, it will be important to be able to teach MC as a digital skill to children. To this end, the project aspires to establish ways in which the basic concepts of observable, dependency and agency behind the MC digital skill can be introduced to children. We anticipate that - if these concepts can be communicated - children will find the modes of interaction that are characteristic of making construals more congenial than many adults, in keeping with the observations made by Ken Robinson in his celebrated TED talk on 'How schools kill creativity'. A relevant challenge that is topical in the EU is that of translating the basic vocabulary of MC into other languages. Interaction with construals can then serve to some degree as a communication medium that is complementary to language and has some potential to overcome the barriers of language, promoting the dissemination across national boundaries that help to ensure its survival.

Ensuring the survival of construals is in some respects less problematic than maintaining their identity and integrity. Experience at Warwick has shown that construals can be so easily modified and elaborated that curation becomes a problem. The development of the MC instrument will address this by making it easy to embed construals in a web environment through which the body of interactions that informed its construction can be easily accessed.

Many proposed innovative practices in computing have proved to be relatively short-lived. The primary objective for CONSTRUIT! is to promote the widespread adoption of a practice that will first establish and justify itself through its perceived benefits where communication and collaboration are concerned. A longer-term goal is to make a convincing case that making construals is genuinely a complementary digital skill that cannot be regarded as 'yet another' style of conventional programming. This is the motivation behind the broader topic of Empirical Modelling from which the practice of making construals has been distilled. The most effective way of guaranteeing the sustainability of making construals will be to demonstrate how its practice can inform a broader vision for computing that embraces what in the UK are distinguished as 'computer science' and 'ICT'.



### H. Budget

For further information please consult the Programme Guide for the overview of funding rules. Please note that all amounts must be expressed in Euros.

#### H.1. Project Management and Implementation

PIC of Organisation	Role of Organisation	Name of the Organisation	Grant Requested
999976784	Applicant Organisation	THE UNIVERSITY OF WARWICK	18000.00
949180212	Partner Organisation	European Lab for Educational Technology	9000.00
991207984	Partner Organisation	ITA-SUOMEN YLIOPISTO	9000.00
949531255	Partner Organisation	Helix5	9000.00
999841566	Partner Organisation	UNIVERZITA KOMENSKOHO V BRATISLAVE	9000.00
999974941	Partner Organisation	THE UNIVERSITY OF EDINBURGH	9000.00
Total			63000.00

NOTA BENE: AS DETAILED IN THE PROGRAMME GUIDE, IN CASE OF PROJECTS INVOLVING MORE THAN 10 PARTICIPATING ORGANISATIONS, THE GRANT SUPPORT FOR PROJECT MANAGEMENT AND IMPLEMENTATION WILL BE LIMITED TO THE AMOUNT EQUIVALENT TO 10 PARTICIPATING ORGANISATIONS (1 COORDINATING AND 9 PARTNER ORGANISATIONS) FOR THE PROJECT DURATION.

#### H.2. Transnational Project Meetings

PIC of Organisation	Total No. of Meetings	Total No. of Participants	Distance Band	Grant per Participant	Grant Requested
999976784: THE UNIVERSITY OF WARWICK	1	4	100 - 1999 km	575.00	2300.00
949180212: European Lab for Educational Technology	1	3	100 - 1999 km	575.00	1725.00
949531255: Helix5	2	2	100 - 1999 km	575.00	1150.00
991207984: ITA-SUOMEN YLIOPISTO	1	3	100 - 1999 km	575.00	1725.00
999841566: UNIVERZITA KOMENSKOHO V BRATISLAVE	3	6	100 - 1999 km	575.00	3450.00



PLC of Organisation	Total No. of Meetings	Total No. of Participants	Distance Band	Grant per Participant	Grant Requested
999974941: THE UNIVERSITY OF EDINBURGH	2	4	100 - 1999 km	575.00	2300.00
949180212: European Lab for Educational Technology	2	6	>= 2000 km	760.00	4560.00
999976784: THE UNIVERSITY OF WARWICK	2	8	>= 2000 km	760.00	6080.00
991207984: ITA-SUOMEN YLIOPISTO	2	6	>= 2000 km	760.00	4560.00
949531255: Helix5	1	1	>= 2000 km	760.00	760.00
999974941: THE UNIVERSITY OF EDINBURGH	1	2	>= 2000 km	760.00	1520.00
<b>Total</b>					<b>30130.00</b>

NOTA BENE: AS DETAILED IN THE PROGRAMME GUIDE, THE GRANT SUPPORT FOR TRANSNATIONAL PROJECT MEETINGS WILL BE LIMITED TO A MAXIMUM AMOUNT OF 23.000 € PER PROJECT PER PERIOD OF 12 MONTHS. FOR SHORTER PROJECT DURATIONS, THE MAXIMUM AMOUNT WILL BE REDUCED PROPORTIONALLY TO THE ACTUAL PROJECT DURATION IN NUMBER OF MONTHS.

### H.3. Intellectual Outputs

Which concrete participating organisations' staff resources are you planning to use in the production of outputs that have a significant contribution in terms of potential impact and transferability (e.g. new curricula, pedagogical materials, IT Tools, analysis and studies, etc.)?

PLC of Organisation	Output Identification	Category of Staff	Country	No. of Working Days	Grant per Day	Grant Requested
999976784: THE UNIVERSITY OF WARWICK	O1	Teachers/Trainers/Researchers	United Kingdom	144	214.00	30816.00
949180212: European Lab for Educational Technology	O1	Teachers/Trainers/Researchers	Greece	57	137.00	7809.00
991207984: ITA-SUOMEN YLIOPISTO	O1	Teachers/Trainers/Researchers	Finland	48	214.00	10272.00
949531255: Helix5	O1	Teachers/Trainers/Researchers	Netherlands	42	241.00	10122.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	O1	Teachers/Trainers/Researchers	Slovakia	42	74.00	3108.00



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PIC of Organisation	Output Identification	Category of Staff	Country	No. of Working Days	Grant per Day	Grant Requested
999974941: THE UNIVERSITY OF EDINBURGH	O1	Teachers/Trainers/Researchers	United Kingdom	54	214.00	11556.00
999976784: THE UNIVERSITY OF WARWICK	O2	Teachers/Trainers/Researchers	United Kingdom	45	214.00	9630.00
949180212: European Lab for Educational Technology	O2	Teachers/Trainers/Researchers	Greece	45	137.00	6165.00
991207984: ITA-SUOMEN YLIOPISTO	O2	Teachers/Trainers/Researchers	Finland	45	214.00	9630.00
949531255: Helix5	O2	Teachers/Trainers/Researchers	Netherlands	5	241.00	1205.00
999841566: UNIVERZITA KOMENSKEHO V BRATISLAVE	O2	Teachers/Trainers/Researchers	Slovakia	5	74.00	370.00
999974941: THE UNIVERSITY OF EDINBURGH	O2	Teachers/Trainers/Researchers	United Kingdom	5	214.00	1070.00
999976784: THE UNIVERSITY OF WARWICK	O3	Teachers/Trainers/Researchers	United Kingdom	45	214.00	9630.00
949531255: Helix5	O3	Teachers/Trainers/Researchers	Netherlands	45	241.00	10845.00
999974941: THE UNIVERSITY OF EDINBURGH	O3	Teachers/Trainers/Researchers	United Kingdom	9	214.00	1926.00
<b>Total</b>				<b>636</b>	<b>Total</b>	<b>124154.00</b>

**H.4. Multiplier Events**

PIC of Organisation	Event Identification	No. of Local Participants	Grant per Local Participant	No. of Foreign Participants	Grant per Foreign Participant	Grant Requested
999976784: THE UNIVERSITY OF WARWICK	E1	100	100.00	50	200.00	20000.00
<b>Total</b>		<b>100</b>	<b>Total</b>	<b>50</b>	<b>Total</b>	<b>20000.00</b>

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NOTA BENE: AS DETAILED IN THE PROGRAMME GUIDE, THE GRANT SUPPORT FOR MULTIPLIER EVENTS WILL BE LIMITED TO A MAXIMUM AMOUNT OF 30.000 € PER PROJECT REGARDLESS OF ITS DURATION.

### H.5. Learning/Teaching/Training Activities

#### H.5.1. Travel

PIC of Organisation	Activity No.	Activity Type	No. of Participants	Distance Band	Travel Grant per Participant	Grant Requested
949180212: European Lab for Educational Technology	C1	Intensive Study Programmes for teaching staff	3	>= 2000 km	360.00	1080.00
991207984: ITA-SUOMEN YLIOPISTO	C1	Intensive Study Programmes for teaching staff	3	>= 2000 km	360.00	1080.00
949531255: Helix5	C1	Intensive Study Programmes for teaching staff	1	100 - 1999 km	275.00	275.00
999841566: UNIVERZITA KOMENSKEHO V BRATISLAVE	C1	Intensive Study Programmes for teaching staff	2	100 - 1999 km	275.00	550.00
999976784: THE UNIVERSITY OF WARWICK	C2	Short-term joint staff training events	4	>= 2000 km	360.00	1440.00
991207984: ITA-SUOMEN YLIOPISTO	C2	Short-term joint staff training events	3	>= 2000 km	360.00	1080.00
949531255: Helix5	C2	Short-term joint staff training events	1	>= 2000 km	360.00	360.00
999841566: UNIVERZITA KOMENSKEHO V BRATISLAVE	C2	Short-term joint staff training events	2	>= 2000 km	360.00	720.00
999974941: THE UNIVERSITY OF EDINBURGH	C2	Short-term joint staff training events	2	>= 2000 km	360.00	720.00
949180212: European Lab for Educational Technology	C3	Short-term joint staff training events	3	>= 2000 km	360.00	1080.00
991207984: ITA-SUOMEN YLIOPISTO	C3	Short-term joint staff training events	3	>= 2000 km	360.00	1080.00
949531255: Helix5	C3	Short-term joint staff training events	1	100 - 1999 km	275.00	275.00
999841566: UNIVERZITA KOMENSKEHO V BRATISLAVE	C3	Short-term joint staff training events	2	100 - 1999 km	275.00	550.00
949180212: European Lab for Educational Technology	C4	Short-term joint staff training events	3	>= 2000 km	360.00	1080.00
991207984: ITA-SUOMEN YLIOPISTO	C4	Short-term joint staff training events	3	>= 2000 km	360.00	1080.00



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PIC of Organisation	Activity No.	Activity Type	No. of Participants	Distance Band	Travel Grant per Participant	Grant Requested
949531255: Helix5	C4	Short-term joint staff training events	1	100 - 1999 km	275.00	275.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C4	Short-term joint staff training events	2	100 - 1999 km	275.00	550.00
991207984: ITA-SUOMEN YLIOPISTO	C5	Blended mobility of higher education students	10	>= 2000 km	360.00	3600.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C5	Blended mobility of higher education students	10	100 - 1999 km	275.00	2750.00
991207984: ITA-SUOMEN YLIOPISTO	C6	Blended mobility of higher education students	10	>= 2000 km	360.00	3600.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C6	Blended mobility of higher education students	10	100 - 1999 km	275.00	2750.00
991207984: ITA-SUOMEN YLIOPISTO	C7	Blended mobility of higher education students	10	>= 2000 km	360.00	3600.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C7	Blended mobility of higher education students	10	100 - 1999 km	275.00	2750.00
999976784: THE UNIVERSITY OF WARWICK	C11	Short-term joint staff training events	4	>= 2000 km	360.00	1440.00
949180212: European Lab for Educational Technology	C11	Short-term joint staff training events	3	>= 2000 km	360.00	1080.00
949531255: Helix5	C11	Short-term joint staff training events	1	100 - 1999 km	275.00	275.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C11	Short-term joint staff training events	2	100 - 1999 km	275.00	550.00
999974941: THE UNIVERSITY OF EDINBURGH	C11	Short-term joint staff training events	2	100 - 1999 km	275.00	550.00
999976784: THE UNIVERSITY OF WARWICK	C12	Short-term joint staff training events	4	>= 2000 km	360.00	1440.00
949180212: European Lab for Educational Technology	C12	Short-term joint staff training events	3	>= 2000 km	360.00	1080.00
949531255: Helix5	C12	Short-term joint staff training events	1	100 - 1999 km	275.00	275.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C12	Short-term joint staff training events	2	100 - 1999 km	275.00	550.00
999974941: THE UNIVERSITY OF EDINBURGH	C12	Short-term joint staff training events	2	100 - 1999 km	275.00	550.00

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999976784: THE UNIVERSITY OF WARWICK	C13	Short-term joint staff training events	4	>= 2000 km	360.00	1440.00
949180212: European Lab for Educational Technology	C13	Short-term joint staff training events	3	>= 2000 km	360.00	1080.00
949531255: Helix5	C13	Short-term joint staff training events	1	100 - 1999 km	275.00	275.00
999841566: UNIVERZITA KOMENSKOHO V BRATISLAVE	C13	Short-term joint staff training events	2	100 - 1999 km	275.00	550.00
999974941: THE UNIVERSITY OF EDINBURGH	C13	Short-term joint staff training events	2	100 - 1999 km	275.00	550.00
999976784: THE UNIVERSITY OF WARWICK	C14	Short-term joint staff training events	4	>= 2000 km	360.00	1440.00
991207984: ITA-SUOMEN YLIOPISTO	C14	Short-term joint staff training events	3	>= 2000 km	360.00	1080.00
949531255: Helix5	C14	Short-term joint staff training events	1	>= 2000 km	360.00	360.00
999841566: UNIVERZITA KOMENSKOHO V BRATISLAVE	C14	Short-term joint staff training events	2	100 - 1999 km	275.00	550.00
999974941: THE UNIVERSITY OF EDINBURGH	C14	Short-term joint staff training events	2	>= 2000 km	360.00	720.00
999976784: THE UNIVERSITY OF WARWICK	C15	Short-term joint staff training events	4	>= 2000 km	360.00	1440.00
991207984: ITA-SUOMEN YLIOPISTO	C15	Short-term joint staff training events	3	>= 2000 km	360.00	1080.00
949531255: Helix5	C15	Short-term joint staff training events	1	>= 2000 km	360.00	360.00
949531255: Helix5	C15	Short-term joint staff training events	2	100 - 1999 km	275.00	550.00
999974941: THE UNIVERSITY OF EDINBURGH	C15	Short-term joint staff training events	2	>= 2000 km	360.00	720.00
999976784: THE UNIVERSITY OF WARWICK	C16	Short-term joint staff training events	4	>= 2000 km	360.00	1440.00
991207984: ITA-SUOMEN YLIOPISTO	C16	Short-term joint staff training events	3	>= 2000 km	360.00	1080.00
949531255: Helix5	C16	Short-term joint staff training events	1	>= 2000 km	360.00	360.00
999841566: UNIVERZITA KOMENSKOHO V BRATISLAVE	C16	Short-term joint staff training events	2	100 - 1999 km	275.00	550.00
999974941: THE UNIVERSITY OF EDINBURGH	C16	Short-term joint staff training events	2	>= 2000 km	360.00	720.00

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991207984: ITA-SUOMEN YLIOPISTO	C17	Long-term teaching or training assignments	2	>= 2000 km	360.00	720.00
949180212: European Lab for Educational Technology	C18	Long-term teaching or training assignments	1	>= 2000 km	360.00	360.00
991207984: ITA-SUOMEN YLIOPISTO	C18	Long-term teaching or training assignments	1	>= 2000 km	360.00	360.00
<b>Total</b>			175		<b>Total</b>	57900.00

**H.5.2. Subsistence**

Long-term Learning/Teaching/Training Activities

PIC of Organisation	Activity No.	Activity Type	Duration (months)	Country of Destination	No. of Participants	Grant per Participant	Grant Requested
991207984: ITA-SUOMEN YLIOPISTO	C17	Long-term teaching or training assignments	6	United Kingdom	2	12744.00	25488.00
949180212: European Lab for Educational Technology	C18	Long-term teaching or training assignments	6	United Kingdom	1	12744.00	12744.00
991207984: ITA-SUOMEN YLIOPISTO	C18	Long-term teaching or training assignments	6	United Kingdom	1	12744.00	12744.00
<b>Total</b>			18	<b>Total</b>	4	<b>Total</b>	50976.00

Short-term Learning/Teaching/Training Activities

PIC of Organisation	Activity No.	Activity Type	Duration (days)	No. of Participants	Grant per Participant	Grant Requested
999974941: THE UNIVERSITY OF EDINBURGH	C16	Short-term joint staff training events	5	2	500.00	1000.00
949180212: European Lab for Educational Technology	C1	Intensive Study Programmes for teaching staff	5	3	500.00	1500.00
991207984: ITA-SUOMEN YLIOPISTO	C1	Intensive Study Programmes for teaching staff	5	3	500.00	1500.00



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PIC of Organisation	Activity No.	Activity Type	Duration (days)	No. of Participants	Grant per Participant	Grant Requested
949531255: Helix5	C1	Intensive Study Programmes for teaching staff	5	1	500.00	500.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C1	Intensive Study Programmes for teaching staff	5	2	500.00	1000.00
999976784: THE UNIVERSITY OF WARWICK	C2	Short-term joint staff training events	5	4	500.00	2000.00
991207984: ITA-SUOMEN YLIOPISTO	C2	Short-term joint staff training events	5	3	500.00	1500.00
949531255: Helix5	C2	Short-term joint staff training events	5	1	500.00	500.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C2	Short-term joint staff training events	5	2	500.00	1000.00
999974941: THE UNIVERSITY OF EDINBURGH	C2	Short-term joint staff training events	5	2	500.00	1000.00
949180212: European Lab for Educational Technology	C3	Short-term joint staff training events	5	3	500.00	1500.00
991207984: ITA-SUOMEN YLIOPISTO	C3	Short-term joint staff training events	5	3	500.00	1500.00
949531255: Helix5	C3	Short-term joint staff training events	5	1	500.00	500.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C3	Short-term joint staff training events	5	2	500.00	1000.00
949180212: European Lab for Educational Technology	C4	Short-term joint staff training events	5	3	500.00	1500.00
991207984: ITA-SUOMEN YLIOPISTO	C4	Short-term joint staff training events	5	3	500.00	1500.00
949531255: Helix5	C4	Short-term joint staff training events	5	1	500.00	500.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C4	Short-term joint staff training events	5	2	500.00	1000.00
991207984: ITA-SUOMEN YLIOPISTO	C5	Blended mobility of higher education students	5	10	275.00	2750.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C5	Blended mobility of higher education students	5	10	275.00	2750.00
991207984: ITA-SUOMEN YLIOPISTO	C6	Blended mobility of higher education students	5	10	275.00	2750.00

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999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C6	Blended mobility of higher education students	5	10	275.00	2750.00
991207984: ITA-SUOMEN YLIOPISTO	C7	Blended mobility of higher education students	5	10	275.00	2750.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C7	Blended mobility of higher education students	5	10	275.00	2750.00
999976784: THE UNIVERSITY OF WARWICK	C11	Short-term joint staff training events	5	4	500.00	2000.00
949180212: European Lab for Educational Technology	C11	Short-term joint staff training events	5	3	500.00	1500.00
949531255: Helix5	C11	Short-term joint staff training events	5	1	500.00	500.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C11	Short-term joint staff training events	5	2	500.00	1000.00
999974941: THE UNIVERSITY OF EDINBURGH	C11	Short-term joint staff training events	5	2	500.00	1000.00
999976784: THE UNIVERSITY OF WARWICK	C12	Short-term joint staff training events	5	4	500.00	2000.00
949180212: European Lab for Educational Technology	C12	Short-term joint staff training events	5	3	500.00	1500.00
949531255: Helix5	C12	Short-term joint staff training events	5	1	500.00	500.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C12	Short-term joint staff training events	5	2	500.00	1000.00
999974941: THE UNIVERSITY OF EDINBURGH	C12	Short-term joint staff training events	5	2	500.00	1000.00
999976784: THE UNIVERSITY OF WARWICK	C13	Short-term joint staff training events	5	4	500.00	2000.00
949180212: European Lab for Educational Technology	C13	Short-term joint staff training events	5	3	500.00	1500.00
949531255: Helix5	C13	Short-term joint staff training events	5	1	500.00	500.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C13	Short-term joint staff training events	5	2	500.00	1000.00
999974941: THE UNIVERSITY OF EDINBURGH	C13	Short-term joint staff training events	5	2	500.00	1000.00
999976784: THE UNIVERSITY OF WARWICK	C14	Short-term joint staff training events	5	4	500.00	2000.00
991207984: ITA-SUOMEN YLIOPISTO	C14	Short-term joint staff training events	5	3	500.00	1500.00

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949531255: Helix5	C14	Short-term joint staff training events	5	1	500.00	500.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C14	Short-term joint staff training events	5	2	500.00	1000.00
999974941: THE UNIVERSITY OF EDINBURGH	C14	Short-term joint staff training events	5	2	500.00	1000.00
999976784: THE UNIVERSITY OF WARWICK	C15	Short-term joint staff training events	5	4	500.00	2000.00
991207984: ITA-SUOMEN YLIOPISTO	C15	Short-term joint staff training events	5	3	500.00	1500.00
949531255: Helix5	C15	Short-term joint staff training events	5	1	500.00	500.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C15	Short-term joint staff training events	5	2	500.00	1000.00
999974941: THE UNIVERSITY OF EDINBURGH	C15	Short-term joint staff training events	5	2	500.00	1000.00
999976784: THE UNIVERSITY OF WARWICK	C16	Short-term joint staff training events	5	4	500.00	2000.00
991207984: ITA-SUOMEN YLIOPISTO	C16	Short-term joint staff training events	5	3	500.00	1500.00
949531255: Helix5	C16	Short-term joint staff training events	5	1	500.00	500.00
999841566: UNIVERZITA KOMENSKÉHO V BRATISLAVE	C16	Short-term joint staff training events	5	2	500.00	1000.00
<b>Total</b>			<b>265</b>	<b>171</b>	<b>Total</b>	<b>72000.00</b>

**H.5.3. Linguistic Support**

PIC of Organisation	Activity No.	Activity Type	No. of Participants (without accompanying persons)	Grant per Participant	Grant Requested
<b>Total</b>			<b>Total</b>	<b>Total</b>	

**H.6. Special Needs**

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PIC of Organisation	No. of Participants With Special Needs	Description	Please list the activities to which this item refers to	Grant Requested
Total				

### H.7. Exceptional Costs

PIC of Organisation	Description of Cost Item	Please list the activities to which this item refers to	Grant Requested
Total			

NOTA BENE: AS DETAILED IN THE PROGRAMME GUIDE, THE GRANT SUPPORT FOR EXCEPTIONAL COSTS WILL BE LIMITED TO A MAXIMUM AMOUNT OF 50.000 € PER PROJECT.



### I. Project summary

Please provide a short summary of your project. Please recall that this section [or part of it] may be used by the European Commission, Executive Agency or National Agencies in their publications. It will also feed the Erasmus+ dissemination platform.

Be concise and clear and mention at least the following elements: context/background of project; objectives of your project; number and profile of participants; description of activities; methodology to be used in carrying out the project; a short description of the results and impact envisaged and finally the potential longer term benefits.

In view of further publication on the Erasmus+ dissemination platform, please be also aware that a comprehensive public summary of project results will be requested at report stage(s). Final payment provisions in contract will be linked to the availability of such summary.

#### Background

The European Commission's Rethinking Education initiative has identified the need 'to scale-up use of ICT in learning and teaching' to exploit the opportunities that the digital revolution presents for enhancing education. It calls for innovation, work to 'define how, when and where ICT can be used effectively in pedagogical and assessment approaches' and activities to support teachers and learners to increase their digital competence.

#### Rationale for this project

One of the primary aims for an Erasmus+ Strategic Partnership is "enhancing the quality and relevance of the learning offer in education, training and youth work by developing new and innovative approaches and supporting the dissemination of best practices".

The proposed consortium, led by the Computer Science Department at the University of Warwick, propose to form a Strategic Partnership of pedagogical and technological experts with the aim of further developing, trialling, evaluating and disseminating a novel framework – developed by the Empirical Modelling research group at the University of Warwick – for 'creating knowledge and solving conceptual problems with the support of digital tools' (cf. the digital competence of the same name identified in EC DIGCOMP).

We shall introduce new principles and tools for a computing practice that enables educators and learners to collaborate in creating live interactive resources ("construals") that serve as personal, shareable 'working models' or understandings. Such a practice is more accessible than conventional programming but more expressive and powerful than conventional uses of ICT. Its adoption will lead to the online development of open educational resources that can be flexibly modified by educators and learners alike to give exceptionally rich support for blending educational practices combining instruction and construction.

This contributes to the wider aims for Strategic Partnerships to promote take-up of innovative practices in education, training and youth work and enhance the professional development of those working in these fields by increasing the quality and range of initial and continuing training.

The proposed consortium allows for the project to draw on a unique blend of skills and experience, and to access opportunities to trial and disseminate the activity through a number of learning activities covering learners of all ages across the EU.

#### Objectives and activities

The principal objective of our project is to promote 'making construals' as a new practice that promises to better support teachers and learners to create knowledge and solve conceptual problems with the support of digital tools.

As the framework has potential to address policy objectives, challenges and needs relevant to several fields of education, training and youth, our proposal is to form a Strategic Partnership covering more than one field.

The core activities of the Strategic Partnership will be to:

- Develop and refine the existing framework and tools, drawing on the pedagogical and technical expertise of our consortium
- Apply the framework in a number of educational contexts with a range of learners to explore and test its potential to enhance the teaching of computing/programming and other subjects
- Refine the framework and tools in light of its application in educational contexts and launch it as an open educational resource
- Conduct experimental studies to evaluate the efficacy of the framework for supporting learning
- Dissemination of the framework and tools as elaborated below.



Expected outcomes

The widespread adoption of making construals as a new digital skill to support personal learning and collaborative construal construction as way of developing open educational resources.

Greater awareness of the critical impact of the mode of construction upon the qualities of software.

Dissemination and longer term benefits

The results of the project will be disseminated via an international conference, and establishment of the proposed MOOC. A range of other dissemination channels – including development of a project website, newsletters, presentations/publications to conferences/workshops, online publications and presentations through social and contemporary media, and the Erasmus+ dissemination platform - will be used during the lifetime of the project to increase awareness of the activity and encourage wider contribution and support for the project.

We also expect project outputs to be disseminated through subsequent work, for which we will seek support during the life of the project. This will include web resources that embody explanatory mechanisms that can be readily explored, extended, remixed and customised for personal use. In the longer term, it is to be hoped that making construals will make an impact on the mainstream computing curriculum. If successful, the project also has the potential to contribute to a transformation in programming practice in the long term.



**I.1. Summary of participating organisations**

PIC of Organisation	Name of the Organisation	Country of the Organisation
999976784	THE UNIVERSITY OF WARWICK	United Kingdom
949180212	European Lab for Educational Technology	Greece
991207984	ITA-SUOMEN YLIOPISTO	Finland
949531255	Helix5	Netherlands
999841566	UNIVERZITA KOMENSKÉHO V BRATISLAVE	Slovakia
999974941	THE UNIVERSITY OF EDINBURGH	United Kingdom
Total number of participating organisations		6



**I.2. Budget Summary**

PIC of Organisation	Project Management and Implementation	Transnational Project Meetings	Intellectual Outputs	Multiplier Events	Learning/Teaching/Training Activities			Special Needs	Exceptional Costs	Total
					Travel	Subsistence	Linguistic Support			
999976784	18000.00	8380.00	50076.00	20000.00	10080.00	14000.00			120536.00	
949180212	9000.00	6285.00	13974.00		6840.00	21744.00			57843.00	
991207984	9000.00	6285.00	19902.00		19440.00	56982.00			111609.00	
949531255	9000.00	1910.00	22172.00		3640.00	5000.00			41722.00	
999841566	9000.00	3450.00	3478.00		13370.00	18250.00			47548.00	
999974941	9000.00	3820.00	14552.00		4530.00	7000.00			38902.00	
<b>Total</b>	<b>63000.00</b>	<b>30130.00</b>	<b>124154.00</b>	<b>20000.00</b>	<b>57900.00</b>	<b>122976.00</b>			<b>418160.00</b>	

**I.2.1. Project Total Grant**

Grant Calculated	418160.00
Grant Requested	418160.00

NOTA BENE: AS DETAILED IN THE PROGRAMME GUIDE, THE TOTAL GRANT SUPPORT FOR STRATEGIC PARTNERSHIPS IS LIMITED TO 450.000 € PER PROJECT FOR THREE YEARS. THIS MAXIMUM AMOUNT WILL BE REDUCED PROPORTIONALLY FOR PROJECTS OF A DURATION SHORTER THAN THREE YEARS.



### J. Checklist

Before submitting your application form to the National Agency, please make sure that it fulfils the eligibility criteria listed in the Programme Guide and check that:

- you have used the official Key- Action 2 application form.
- all relevant fields in the application form have been completed.
- the application form is submitted to the National Agency of the country in which your organisation is established.
- the application form has been completed using one of the official languages of the Erasmus+ Programme Countries.
- you have annexed all the relevant documents:
  - the Declaration of Honour signed by the legal representative mentioned in the application.
  - the mandates of each partner to the applicant signed by both parties.
  - the timeline for the project activities and outputs using the template provided.
- all participating organisations have uploaded the documents to give proof of their legal status in the participants' portal (for more details, see the section "Selection Criteria" in Part C of the Programme Guide).
- for grants exceeding 60 000 EUR, you have uploaded the documents to give proof of your financial capacity in the participants' portal (for more details, see the section "Selection Criteria" in Part C of the Programme Guide). Not applicable in the case of public bodies or international organisations.
- you are complying with the deadline published in the Programme Guide.
- for projects submitted in the field of school education, vocational education and training, higher education or adult education:
  - if the duration is 24 months: the start date is 1 September 2014 and the end date 31 August 2016.
  - if the duration is 36 months: the start date is 1 September 2014 and the end date 31 August 2017.
- for projects submitted in the field of youth for the deadline of 30 April 2014:
  - the start date is between 1 September 2014 and 28 February 2015.
  - the duration is between 6 and 24 months (the latest possible end date for a project of 24 months is thus 27 February 2017).
- you have saved or printed the copy of the completed form for yourself.



## K. Data Protection Notice

### PROTECTION OF PERSONAL DATA

The application form will be processed by computer. All personal data (such as names, addresses, CVs, etc.) will be processed in pursuant to Regulation (EC) No 45/2001 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data. Any personal data requested will only be used for the intended purpose, i.e.:

- In the case of grant application forms: the evaluation of your application in accordance with the specifications of the call for proposals,
- In the case of application for accreditation forms: the evaluation of your application in accordance with the specifications of the call for proposals,
- In the case of report forms: statistical and financial (if applicable) follow-up of the projects.

For the exact description of the collected personal data, the purpose of the collection and the description of the processing, please refer to the Specific Privacy Statement accompanying this form.

You are entitled to obtain access to your personal data on request and to rectify any such data that is inaccurate or incomplete. If you have any queries concerning the processing of your personal data, you may address them to your National Agency. You have the right of recourse at any time to your national supervising body for data protection or the European Data Protection Supervisor for matters relating to the processing of your personal data.

You are informed that for the purposes of safeguarding the financial interest of the Communities, your personal data may be transferred to internal audit services, to the European Court of Auditors, to the Financial Irregularities Panel and/or to the European Anti-Fraud Office (OLAF).

<http://www.edps.europa.eu/>



## L. Declaration of Honour

To be signed by the person legally authorised to enter into legally binding commitments on behalf of the applicant organisation.

I, the undersigned, certify that the information contained in this application form is correct to the best of my knowledge. I put forward a request of an Erasmus+ grant as set out in section BUDGET of this application form.

Declare that:

- All information contained in this application, is correct to the best of my knowledge.
- In the case of projects in the field of youth, the participants involved in the activities fall in the age limits defined by the Programme.
- The organisation I represent has the adequate legal capacity to participate in the call for proposals.

EITHER

The organisation I represent has financial and operational capacity to complete the proposed action or work programme

OR

The organisation I represent is considered to be a "public body" in the terms defined within the Call and can provide proof, if requested of this status, namely:

It provides learning opportunities and

- Either (a) at least 50% of its annual revenues over the last two years have been received from public sources;
- Or (b) it is controlled by public bodies or their representatives

I am authorised by my organisation to sign Community grant agreements on its behalf.

Certify that (in case the grant requested exceeds 60.000€):

The organisation I represent:

- is not bankrupt, being wound up, or having its affairs administered by the courts, has not entered into an arrangement with creditors, has not suspended business activities, is not the subject of proceedings concerning those matters, nor is it in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- has not been convicted of an offence concerning its professional conduct by a judgment which has the force of 'res judicata';
- has not been guilty of grave professional misconduct proven by any means which the National Agency can justify;
- has fulfilled its obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which it is established or those of the country where the grant agreement is to be performed;
- has not been the subject of a judgment which has the force of 'res judicata' for fraud, corruption, involvement in a criminal organisation or any other illegal activity detrimental to the Communities' financial interests;
- it is not currently subject to an administrative penalty referred to in Article 96(1) of the Financial Regulation (Council Regulation 1605/2002 of 25/06/02, as amended).

Acknowledge that:

The organisation I represent will not be awarded a grant if it finds itself, at the time of the grant award procedure, in contradiction with any of the statements certified above, or in the following situations:

- subject to a conflict of interest (for family, personal or political reason or through national, economic or any other interest shared with an organisation or an individual directly or indirectly involved in the grant award procedure);
- guilty of misrepresentation in supplying the information required by the National Agency as a condition of participation in the grant award procedure or has failed to supply this information.

In the event of this application being approved, the National Agency has the right to publish the name and address of this organisation, the subject of the grant and the amount awarded and the rate of funding.

Commit:



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- my organisation and the other partner organisations herein, to take part upon request in dissemination and exploitation activities conducted by National Agencies, the Executive Agency and/or the European Commission, where the participation of individual participants may also be required.

I acknowledge that administrative and financial penalties may be imposed on the organisation I represent if it is guilty of misrepresentation or is found to have seriously failed to meet its contractual obligations under a previous contract or grant award procedure.

Place: \_\_\_\_\_ Date (dd-mm-yyyy): \_\_\_\_\_

Name of the applicant organisation:

Name of legal representative:

Signature:

National ID number of the signing person (if requested by the National Agency):

Stamp of the applicant organisation (if applicable):

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**N. Submission**

Before submitting the form electronically, please validate it. Please note that only the final version of your form should be submitted electronically.

**N.1. Data Validation**

Validation of compulsory fields and rules

**N.2. Standard Submission Procedure**

Online submission (requires internet connection)

**N.3. Alternative Submission Procedure**

If you cannot submit your application online you can still do it by sending an email to your National Agency within the 2 hours following the official application deadline. The email must contain the complete electronic form and any file attachments you wish to send. You must also attach a snapshot of section "Submission Summary" indicating that this electronic form could not be submitted online. Your National Agency will analyse your situation and provide you with further instructions.

**N.4. Submission Summary**

This table provides additional information (log) of all form submission attempts, particularly useful for the National Agencies in case of multiple form submissions.

Number	Time	Event	Form Hash Code	Status
1	2014-03-12 09:33:52 *	Form has not been submitted yet	46C253195DBE19CA	Unknown

\* means local PC time, which cannot be considered authoritative and cannot be used for claiming that the form has been submitted in time

**N.5. Form Printing**

Print the entire form