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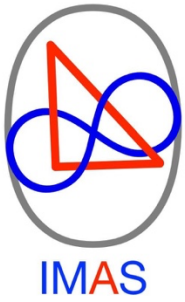

IMAS Project

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IMAS

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1.Introduction

From our previous experience dealing with educational taxonomies in successful past Erasmus+ projects like Vetiver, we have developed the taxonomy for the IMAS project. This taxonomy is based on the ones of the previous projects, with the objective of keeping the IMAS repository compatible with resources not only of this project but also of the previous ones.

We have revise existing taxonomies , and have taken the relevant metadata for the project, and have created new taxonomies for the STEAM areas, specially Mathematics. From the taxonomies we used, we have most of the set of metadata translated into Greek, Spanish, Dutch and English. So in IMAS project it has to translated mainly the metadata related with STEAM, plus some adaptations of the others.

It is important that we integrate in the taxonomy the LRE thesaurus from European Schoolnet which might facilitate in the future to federate our repository with other repositories using the same thesaurus. All the partners in IMAS project are directly or indirectly involved in education, so have the required experience to create this final taxonomy which will be useful to retrieve educational resources to be used in class.

In this report we present the final IMAS taxonomy to be used in the repository. It will facilitate to have more relevant retrievals from the repository of educational resources to be used in class using the information provided by the baseline tests. The information presented in the report for each metadata will have the following format:

- Type
  - What kind of data will be stored
- Description
  - What is this metadata about
- Searching
  - How will this metadata be used (or not) in the searching afterwards
- Controlled Vocabularies
  - The real data stored for this metadata is taken from a concrete list (controlled vocabulary)

And at the end, as annex 1, we will present the taxonomy in a table, so that all the metadata set can be seen together in a “big” page. This tables will be available in all the project languages, as these are the working documents that interested organisations in the different countries might for sure use, as all the info is compile in one big page.

2. IMAS Final Taxonomy

This is the final versión of the IMAS taxonomy. Each section from here will be the different fields present in the taxonomy, and besides that, we will add Annex 1 with all the tables for the whole taxonomy (metadata plus controlled vocabularies).

2.1. Resource Type

Type:	Enumeration
Description:	Which kind of resource is it
Searching:	YES. Searching in a unique selection option. If not selected, all types will be used
Controlled Vocabularies:	*Resources* *Publications* *Tools* *Teaching Sequences* *Template* *On-line Course or Seminar*

2.2. Teaching Sequence Type

Type:	Enumeration
Description:	There are several type of pedagogic documents related with teaching. This tries to make explicit those possibilities
Searching:	YES. Multiple choice selection box. If not selected, all types will be used
Controlled Vocabularies:	*Lesson planning* *Teaching units* *Assessment* *Curricular Adaptation* *Enforcing or empowering* *Formative Itinerary*

2.3. Template Type

Type:	Enumeration
Description:	Template options for different types of documents usual to teachers
Searching:	YES. Searching in a unique selection option. If not selected, all types will be used
Controlled Vocabularies:	*Schedule* *Support* *Proceedings* *Planning Sequences* *Reports* *Requests* *Observation Sheets* *Presentations* *Documents* *Activities*

2.4. Title

Type:	Text
Description:	This is the name given to the resource by the creator
Searching:	YES. It will be used in the searching of the repository as free words
Controlled Vocabularies:	This field has NO controlled vocabularies

2.5. Author

Type:	Text
Description:	Creator of the resource
Searching:	YES. It will be used in the searching of the repository as free words
Controlled Vocabularies:	This field has NO controlled vocabularies

2.6. Description

Type:	Text long
Description:	An explanation of what the resource is about
Searching:	YES. It will be used in the searching of the repository as free words
Controlled Vocabularies:	This field has NO controlled vocabularies

2.7. Organization

Type:	Text
Description:	Organisation responsible for the creation and publication of the resource
Searching:	YES. It will be used in the searching of the repository as free words
Controlled Vocabularies:	This field has NO controlled vocabularies

2.8. Year

Type:	Numeric
Description:	Year of creation of the resource
Searching:	YES. Searching as a period between years. If not selected, all years will be used
Controlled Vocabularies:	This field has NO controlled vocabularies

2.9. Publication Type

Type:	Enumeration
Description:	If the resource is a publication, what kind of publication is it
Searching:	NO used in the searching
Controlled Vocabularies:	*Proceedings* *Articles* *Chapters* *Communications* *Interviews* *Reports* *Papers* *Manuals*

2.10. ISBN

Type:	Text
Description:	ISBN number, if any
Searching:	NO used in the searching
Controlled Vocabularies:	This field has NO controlled vocabularies

2.11. Basic Skills

Type:	Enumeration
Description:	European Basic Competencies addressed by the resource
Searching:	YES. Multiple choice selection box.
Controlled Vocabularies:	*Communicating in a mother tongue* *Communicating in a foreign language* *Mathematical, scientific and technological competence* *Digital competence* *Learning to learn* *Social competences* *entrepreneurship* *Cultural awareness and interaction*

2.12. Education Level

Type:	Enumeration
Description:	Age of students the resource could be used with
Searching:	YES. Multiple choice selection box.
Controlled Vocabularies:	*0-3years.* *3-6 years* *6-8 years* *8-10 years* *10-12 years* *12-14 years* *14-16 years* *16-18 years* *18-24 years* *25+* *Special Education* *University.* *Adult Education* *Vocational Training* *VET*

2.13. VET Browse

Type:	Enumeration
Description:	Classification of the resources to be used as a navigation option
Searching:	It will be used in the searching of the repository as free words
Controlled Vocabularies:	*Agriculture* *Audiovisual Medias/ Photography* *Biomedical Technology* *Cooking / Catering* *Child Care and Education* *Classical Cultures* *Communication and Representation* *Construction Technology* *Cross-Cutting Issues* *Economy* *Electrical* *Entrepreneurship* *Food Industries* *Foreign Languages* *Forestry* *Glass and Ceramics* *Graphic Design* *Handicrafts/ Handmade Arts* *Health Care / Health Services* *ICT (Information and communication Tecnologies)* *Knowledge andAutonomy* *Environment Knowledge* *Literature* *Language* *Law* *Marble Industry* *Mathematics* *Mechanical* *Music Education* *Natural Sciences and Health* *Nutrition Science* *Philosophy* *Physics Education* *Shipping / Fishing* *Social Sciences* *Teaching and e-teaching* *Technology* *Textiles, Clothes and Leather Fashion* *Trade* *Tourism* *Values Education* *Veterinary Science* *Visual Arts*

2.14. School Browse

Type:	Enumeration
Description:	Classification of the resources to be used as a navigation option
Searching:	It will be used in the searching of the repository as free words
Controlled Vocabularies:	*Entrepreneurship* *Performing Arts and Dance* *Plastic Arts* *Biology* *Natural Sciences and Health* *Social Sciences* *Trade* *Communication and Representation* *Environmental Knowledge* *Knowledge and Independent Learning* *Scientific Culture* *Classical Cultures* *Economy* *Values Education* *Physical Education (Sport)* *Music Education* *Plastic, Visual and Audiovisual Education* *Electrical* *Philosophy* *Physics* *Geography* *Geology* *History* *Languages* *Spanish Language* *Foreign Languages* *Literature* *Mathematics* *Mechanical* *Programming* *Chemestry* *Religion* *Technology* *ICT (Information and Communication Tecnologies)* *Cross-Cutting Issues* *Ethical Values*

2.15. Thesaurus

Type:	Tags Thesaurus
Description:	Words that can be used in the retrieval of the resource. The thesaurus files are available independently
Searching:	YES. It will be used in the searching of the repository as free words
Controlled Vocabularies	The thesaurus is a controlled vocabulary for indexing resources. And are available in all the languages of the project

2.16. Keywords

Type:	Multiple Selection
Description:	Words that can be used in the retrieval of the resource
Searching:	YES. It will be used in the searching of the repository as free words
Controlled Vocabularies	This field has NO controlled vocabularies

2.17. Language

Type:	Text
Description:	Languages in which the resource is available
Searching:	NO used in the searching
Controlled Vocabularies:	This field has NO controlled vocabularies

2.18. Metadata Language Origin

Type:	Text
Description:	Languages in which the original metadata of the resource has been included
Searching:	NO used in the searching
Controlled Vocabularies:	This field has NO controlled vocabularies

2.19. Type Object

Type:	Enumeration
Description:	To show if the resource is a file or a link in Internet
Searching:	NO used in the searching
Controlled Vocabularies:	*File* *URL*

However, in the project we will only use URL, as the file option has some copyrigths issues that can not solve technically now inside the project

2.20. Format File

Type:	Enumeration
Description:	Format of the file or online service of the resource
Searching:	NO used in the searching
Controlled Vocabularies:	*Notebook (. NTBK)* *Flip Chart (. Flv)* *TeamBoardDraw* *Scrapbook (eBeam)* *Freemind (. Mm)* *CmapTools (. Cmap)* *Open Office (. Odt,. Ods,. Opd, ...)* *Microsoft Office (. Doc,. Ppt,. ..... Xls)* *NeoOffice (. Odt,. Ods,. Opd, ...)* *iWork (. pages,. key,. numbers)* *PDF* *Image (. Jpeg,. Gif,. Bmg, ...)* *Jclic* *Edilim* *Hot Potatoes* *Ardora* *NeoBook* *Video (. Avi,. Mov,. Flv,. Divx,. Wmv, ...)* *Video URL (youtube, vimeo, google video)* *Slideshare Presentation* *Audio (. Wav,. Mp3,. Mpg,. Ogg, ...)* *Blog (Terror, Blogos, wordpress ...)* *Platform (Moodle, Dokeos ...)* *Webquest, Treasure Hunt* *Prezi* *Glogster* *SlideShare* *Augmented Reality* *Wiki*

2.21. Number of pages

Type:	Numeric
Description:	If the resource is a document, then this is the number of pages
Searching:	NO used in the searching
Controlled Vocabularies:	This field has NO controlled vocabularies

2.22. URL

Type:	URL
Description:	This is the unique external (usually Internet) link to the resource
Searching:	NO used in the searching
Controlled Vocabularies:	This field has NO controlled vocabularies

2.23. Free

Type:	Yes / No
Description:	Does the resource have any monetary cost?
Searching:	YES. Searching in a unique selection option. If not selected, all types will be used
Controlled Vocabularies:	This field has NO controlled vocabularies

2.24. Copyright

Type:	Enumeration
Description:	Status of copyright of the resource
Searching:	NO used in the searching
Controlled Vocabularies:	*Unknown* *No* *Creative Commons Public Domain (CC0)* *Creative Commons Attribution (BY)* *Creative Commons Attribution-ShareAlike (BY-SA)* *Creative Commons Attribution-NoDerivatives (BY-ND)* *Creative Commons Attribution-NonCommercial (BY-NC)* *Creative Commons Attribution-NonCommercial-ShareAlike (BY-NC-SA)* *Creative Commons Attribution-NonCommercial-NoDerivatives (BY-NC-ND)* *All Rights Reserved*

2.25. Assessment: VET curriculum integration

Type:	0-5
Description:	Rate of how well the resource does integrates in VET curriculum
Searching:	There is no possibility of searching by rating, but results presented can be ordered by it
Controlled Vocabularies:	This field has NO controlled vocabularies

2.26. Assessment: user friendly

Type:	0-5
Description:	Rate of how well the resource can be used by a regular user
Searching:	There is no possibility of searching by rating, but results presented can be ordered by it
Controlled Vocabularies:	This field has NO controlled vocabularies

2.27. Assessment: user friendly

Type:	0-5
Description:	Rate of how well the resource can be used by a regular user
Searching:	There is no possibility of searching by rating, but results presented can be ordered by it
Controlled Vocabularies:	This field has NO controlled vocabularies

2.28. Assessment: Class aplicability

Type:	0-5
Description:	Rate of the resource by its possibility to be used in a classroom
Searching:	There is no possibility of searching by rating, but results presented can be ordered by it
Controlled Vocabularies:	This field has NO controlled vocabularies

2.29. Available

Type:	Yes/ No
Description:	Avaliability of the resource
Searching:	NO used in the searching
Controlled Vocabularies:	This field has NO controlled vocabularies

2.30. Way to use the resource

Type:	Text
Description:	How users have used the resource in their own practice
Searching:	NO used in the searching
Controlled Vocabularies:	This field has NO controlled vocabularies

2.31. Organization including the resource

Type:	Text
Description:	Organisation to which the user including the resource belongs. This data is automatically filled in by the system.
Searching:	NO used in the searching
Controlled Vocabularies:	This field has NO controlled vocabularies

2.32. STEAM

Type:	Enumeration
Description:	Steam is an acronym for different scientific disciplines: science, technology, engineering, art and mathematics.
Searching:	YES. Searching in a unique selection option. If not selected, all types will be used
Controlled Vocabularies:	*Science* *Technology* *Engineering* *Arts* *Mathematics*

2.33. Science Areas

Type:	Enumeration
Description:	These are the areas to be studied and that constitute the discipline of science.
Searching:	YES. Searching in a unique selection option. If not selected, all types will be used
Controlled Vocabularies:	*Chemistry* *Astronomy* *Physics* *Biology* *Environmental* *Geology*

2.34. Science Topics or Subareas

Type:	Enumeration
Description:	These are the topics to be studied and that constitute the topics of different science areas.
Searching:	YES. Searching in a unique selection option. If not selected, all types will be used
Controlled Vocabularies:	*Atomic structure* *State of matter* *Chemical elements* *Organis/inorganic chemistry* *Planets* *Stars* *Satellites* *Celestial movement* *Kinetics* *Gravity* *Mechanics* *Electromagnetism* *Botanics* *Zoology* *Genetics* *Cellular structure* *Recycling* *Climate change* *Energetic sostenibillity* *Pollution* *Earth structure* *Rock, minerals and its formation* *Orogenic movements* *Hydrology*

2.35. Mathematics Areas

Type:	Enumeration
Description:	These are the areas to be studied and that constitute the discipline of science.
Searching:	YES. Searching in a unique selection option. If not selected, all types will be used
Controlled Vocabularies:	*Algebra* *Geometry* *Statistics and probability* *Arithmetic* *Calculus and analysis* *Number theory*

2.36. Mathematics Topics or Subareas

Type:	Enumeration
Description:	These are the topics to be studied and that constitute the topics of different science areas.
Searching:	YES. Searching in a unique selection option. If not selected, all types will be used
Controlled Vocabularies:	*Logic (Algebra)* *Basic operations and factory (Algebra)* *Algebraic structures (Algebra)* *Equations (Algebra)* *Analytic geometry (Geometry)* *Transformations (Geometry)* *Fundamental objects and geometric figures (Geometry)* *Trigonometry (Geometry)* *Graphics (Statistics and probability)* *Frequency (Statistics and probability)* *Data classification and interpretation (Statistics and probability)* *Probability (Statistics and probability)* *Basic operations (Arithmetic)* *Complex operations (Arithmetic)* *Matrices (Arithmetic)* *Number factoring (Arithmetic)* *Functions (Calculus and analysis)* *Limits (Calculus and analysis)* *Derivatives (Calculus and analysis)* *Integral (Calculus and analysis)* *Divisibility (Number theory)* *Congruence (Number theory)* *Combinatorial number (Number theory)* *Numbers (N, Z, Q…) (Number theory)*

2.37. EQF Level (European Quality Framework)

Type:	Enumeration
Description:	Level in the Framework
Searching:	YES. Searching in a unique selection option. If not selected, all types will be used
Controlled Vocabularies:	*EQF 1* *EQF 2* *EQF 3* *(4 to 8 are out of the scope of the project)*

Annex I Taxonomies Tables

Metadata

Dependencies	Metadata	Type	Meaning	Searching type
In this field depend the other	Resource type Media Library	Enumeration	Which type of resource are we entering	Unique selection
	Teaching SequenceType	Enumeration	Organization of content and activities with educational objectives	Multiple Choice
	Templatetype	Enumeration	Model paper for various activities of teaching	Unique Choice
	Title	Text	Name given to the resource by the creator	Words
	Author / Responsible	text	Author of the resource or anonymous	Words
	Description	Text Long	An explanation of what the resource is about	Words
	Organization	Text	Organization responsible of the creation of the resource, if any	Words
	Year	Numeric	Year of creation of the resource	Period of years
	Publication Type	Enumeration	If the resource is a publication, what kind of publication is it	
	ISBN	Text	ISBNPublication	
	Basic Skills (European ones)	Enumeration	ClassificationBasic Skills	Multiple Choice
	Education Level	Enumeration	Education Level / Age	Multiple Choice
	(VET) Browse	Enumeration	Browse with resource that relates	Multiple Choice
		Enumeration	Browse with resource that relates	Multiple Choice
	Thesarurus	Tags Thesaurus	Thesaurus indexed keys for the resource	Words
	Keywords	Words that can be used in the retrieval of the resource	Keywords"Standardised". 6 Maximun	Words
	Language	Enumeration	Languages in which the resource is available	Multiple Choice
	Metadata Language Origin	Enumeration	Language in which the metadata was originated. Generated automatically from user language	
	Type Object	Enumeration	To show if the resource is a file or a link in Internet	
If "Object Type" = File	Format File	Enumeration	Format Referenced File	
If "Resource Type" = Publication	No.pages	Numeric	Number of Pages Document	
	URL	URL	URL Link to Resource	
	Free	yes / no	Is it a Free Software?	Unique Choice
	CopyRight	enumeration	©type	
	assessment: VET curriculum integration		How well resource goes with VET curriculum	
	assessment: User Friendly		How friendly the resourse can be used	
	assessment: Class Aplicability		How well we can use the resource directly in the class	
	assessment: Overall Rating	0-5	Rate of the resource by users	Retreived results could be ordered using it
	Available	yes no	yes,if the resource is available	
	Way to use the resource	Text	How users have used the resource in their own practice	Users can include their use of the resource together with the rating
	STEAM	Enumeration		
	Science areas	Enumeration		
	Science topics or subareas	Enumeration		
	Maths areas	Enumeration		
	Maths topics or subareas	Enumeration		
Automatico	Organization including the resource	Text		

Enumerations

Resource Type	Education Level	Type Object	File Format	VET Browse	School Browse
Resources	0-3years.	File	Notebook (.NTBK)	Agriculture	Entrepreneurship
Publications	3-6 years	URL	Flip Chart (.flv)	Audiovisual Media / Photography	Performing Arts and Dance
Tools or Social Media	6-8 years		TeamBoardDraw	Biomedical Technology	Plastic Arts
Teaching Sequences	8-10 years		Scrapbook (eBeam)	Cooking / Catering	Biology
Template	10-12 years		Freemind (.mm)	Child Care and Education	Natural Sciences and Health
on-line course or seminar	12-14 years		CmapTools (.cmap)	Classical Cultures	Social Sciences
	14-16 years		Open Office (.odt, .ods, .opd, ...)	Communication and Representation	Trade
	16-18 years		Microsoft Office (.doc, .ppt, .xls)	Construction Technology	Communication and Representation
	18-24 years		NeoOffice (.odt, .ods, .opd, ...)	Cross-Cutting Issues	Environmental Knowledge
	25+		iWork (.pages, .key, .numbers)	Economy	Knowledge and Independent Learning
	Special Education		PDF	Electrical	Scientific Culture
	University.		Image (.jpeg, .gif, .bmg, ...)	Entrepreneurship	Classical Cultures
	Adult Education		Jclic	Food Industries	Economy
	Vocational Training		Edilim	Foreign Languages	Values Education
	VET		Hot Potatoes	Forestry	Physical Education (Sport)
			Ardora	Glass and Ceramics	Music Education
			NeoBook	Graphic Design	Plastic, Visual and Audiovisual Education
			Video (.avi, .mov, .flv, .divx, .wmv, ...)	Handicrafts / Handmade Arts	Electrical
			Video URL (youtube, vimeo, google video)	Health Care / Health Services	Philosophy
			Slideshare Presentation	ICT (Information and Communication Tecnologies)	Physics
			Audio (.wav, .mp3, .mpg, .ogg, ...)	Knowledge and Independent Learning	Geography
			Blog (Terror, Blogos, wordpress ...)	Environmental Knowledge	Geology
			Platform (Moodle, Dokeos ...)	Literature	History
			Webquest, Treasure Hunt	Language	Languages
			Prezi	Law	Spanish Language
			Glogster	Marble Industry	Foreign Languages
			SlideShare	Mathematics	Literature
			Augmented Reality	Mechanical	Mathematics
			Wiki	Music Education	Mechanical
			Captivate (.cptx)	Natural Sciences and Health	Programming
			SCORM Package	Nutritional Science	Chemestry
				Philosophy	Religion
				Physical Education (Sport)	Technology
				Science Education	ICT (Information and Communication Tecnologies)
				Shipping / Fishing	Cross-Cutting Issues
				Social Sciences	Ethical Values
				Teaching and eLearning	
				Technology	
				Textiles, Clothes and Leather Fashion	
				Trade	
				Tourism	
				Values Education	
				Veterinary Science	
				Visual Arts	

Type Publication	CopyRight	TYPE SEQUENCE of TEACHING	TYPE Template	European Basic Competences
Proceedings	Unknown	Lesson planning	Schedule	Communicating in a mother tongue
Articles	No	Teaching units	Support	Communicating in a foreign language
Chapters	Creative Commons Public Domain (CC0)	Assessment	Proceedings	Mathematical, scientific and technological competence
Communications	Creative Commons Attribution (BY)	Curricular Adaptation	Planning Sequences	Digital competence
Interviews	Creative Commons Attribution-ShareAlike (BY-SA)	Enforcing or empowering	Reports	Learning to learn
Reports	Creative Commons Attribution-NoDerivatives (BY-ND)	Formative Itinerary	Requests	Social and civic competences
Papers	Creative Commons Attribution-NonCommercial (BY-NC)		Observation Sheets	Sense of initiative and entrepreneurship
Manuals	Creative Commons Attribution-NonCommercial-ShareAlike (BY-NC-SA)		Presentations	Cultural awareness and expression
	Creative Commons Attribution-NonCommercial-NoDerivatives (BY-NC-ND)		Documents	
	All Rights Reserved		Activities	

STEAM	SCIENCE AREAS	SCIENCE TOPICS OR SUBAREAS	MATHEMATICS AREAS	MATHEMATICS TOPICS OR SUBAREAS
Science	Chemistry	Atomic structure (Chemistry)	Algebra	Logic (Algebra)
Technology	Astronomy	State of matter (Chemistry)	Geometry	Basic operations and factory (Algebra)
Engineering	Physics	Chemical elements (Chemistry)	Statistics and probability	Algebraic structures (Algebra)
Arts	Biology	Organic / inorganic chemistry (Chemistry)	Arithmetic	Equations (Algebra)
Mathematics	Environmental	Planets (Astronomy)	Calculus and analysis	Analityc geometry (Geometry)
	Geology	Stars (Astronomy)	Number theory	Transformations (Geometry)
		Satellites (Astronomy)		Fundamental objects and geometric figures (Geometry)
		Celestial movement (Astronomy)		Trigonometry (Geometry)
		Kinetics (Physics)		Graphics (Statistics and probability)
		Gravity (Physics)		Frequency tables (Statistics and probability)
		Mechanics (Physics)		Data classification and interpretation (Statistics and probability)
		Electromagnetism (Physics)		Probability (Statistics and probability)
		Botanics (Biology)		Basic operations (Arithmetic)
		Zoology (Biology)		Complex operations (Arithmetic)
		Genetics (Biology)		Matrices (Arithmetic)
		Cellular structure (Biology)		Number factoring (Arithmetic)
		Recycling (Environmental)		Functions (Calculus and analysis)
		Climate change (Environmental)		Limits (Calculus and analysis)
		Energetic sostenibillity		Derivatives (Calculus and analysis)
		Pollution (Environmental)		Integral (Calculus and analysis)
		Earth structure (Geology)		Divisibility (Number theory)
		Rock, minerals and its formation (Geology)		Congruence (Number theory)
		Orogenic movements (Geology)		Combinatorial numbers (Number theory)
		Hydrology (Geology)		Numbers (N, Z, Q…) (Number theory)