

Core Research Area: *Personalization of Learning*

Research project proposals produced by the experts of the 4th STELLAR Delphi round

77. Personalization of Learning

Group: Researcher

Project title

Achieving Full Personalization of Learning

Project description

1. How can full personalization of learning be achieved for all students, anywhere, anytime using digital media and the cyber-infrastructure, while preserving the commonly held vision and mission of education to empower people to lead happier more productive lives and make contributions to society at large?
2. What new tools and affordances can help achieve #1?

Project partners

ASU, Univ of VA, Univ of North Texas, Michigan State, Boise State, Harvard, Stanford, Univ of Washington

Project justification

Motivation is essential for learning and formal education is notorious for eliminating motivation to learn except in a small fraction of students who fit the current pedagogy. Technology offers an infrastructure to expand beyond the boundaries and limitations of formal schooling and needs to do so quickly in order to leverage the talent and imagination of young people toward participating in solving the most pressing issues of the day. Knowledge is needed on "how to" achieve personalization as a daily experience in education in both formal and informal realms, while also building a sense of global community and shared commitment to work together to solve complex problems facing the world. The new knowledge will include unobtrusive measures of emotion, intention, persistence etc. acquired, felt and deployed during learning and other productive activities; also, social networking will form a new layer of trust and authority concerning useful knowledge and desired actions.

78. Personalization of Learning

Group: Researcher

Project title

personalization of learning to improve the general quality of education

Project description

Personalization can be used to stimulate the learning of learners at all levels, both underachievers and overachievers. It would be interesting to investigate this empirically

Project partners

-Project justification

This question has not been studied on a large scale and it could have a great impact on society in terms of raising the general level of knowledge and skills of learners at all levels and ages.

79. Personalization of Learning

Group: Researcher

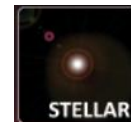
Project title

Self-regulated learning in technology enhanced learning environments

Project description

How can technology enhanced learning environments (TELEs) support self-regulated learning (SRL)? Self-regulation of learning is not limited to cognitive factors; emotional and motivational factors have

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also to be taken into consideration. Also, the relationship between didactical approaches in teaching and the use of digital technologies has to be taken into consideration. The introduction of digital technologies by themselves will not change teaching and learning in classrooms.

Project partners

European universities and schools

Project justification

As our classes become more and more heterogeneous, teaching and learning needs to be more individualised. Digital technologies have the potential to support this. At the same time, almost unlimited access to information on the Internet and a wide variety of technologies tools require some competence in the self-regulation of learning

80. Personalization of Learning

Group: Researcher

Project title

Unified Intelligent Management of Learning, Coaching, Tutoring, Teaching and Administrating processes.

Project description

Feasibility of developing a unified recursive model/system/technology for multilevel:

- (1) defining educational standards/goals, strategies and resources;
- (2) modeling/profiling objects of control (learner, class, school,...), and
- (3) dynamically adaptive planning, execution, monitoring and testing of educational processes
- (4) dynamically adaptive diagnosing and remediation of root-causes of educational problems.

Project partners

Open for all parties

Project justification

Educational processes deal with multidisciplinary objects of extreme complexity. Variety of existing theories are partial, contradictory and cannot provide good models for practice. In practice, variety of subjective, heuristic, implicit and oversimplified models are in use. Developing, broad exchange, implementation, critique and incremental improvement of explicit unified models of educational goals, objects and processes, as well as systems, tools and technologies would be a very beneficial for entire society.

81. Personalization of Learning

Group: Researcher

Project title

Developing personalized systems for teaching science and mathematics

Project description

- How can ubiquitous and pervasive tools be personalized for individual users?
- What is the role of user models to individualize tutoring systems?
- How can researchers mine large data bases of student data to further individualize system responses?

Project partners

Any institutions that have done significant work in this area (e.g., Carnegie Mellon, Arizona State University, University of Memphis, North Carolina State).

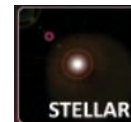
Project justification

This research has societal, technological, and scientific relevance. It will improve education, create new and relevant technology and improve our understanding of learning and teaching.

82. Personalization of Learning

Group: Researcher

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**Project title**

Learner Centric Approach to Teaching and Learning

Project description

Does Learning by Discovery work for the adult population?

Project partners

K-16 Institutions
Engineering and Technology Content
Educational Assessment Team

Project justification

Learner driven methods, just in time learning seems to have advantages and relevance in modern technical settings.

83. Personalization of Learning**Group: Researcher****Project title**

Exploiting digital footprints of learning to improve tracking learning

Project description

How to capture information from learning activities in a manner that it can be effective for monitoring learning?

How to use this to improve the learning of the individual?

How to use it to make every classroom teacher an educational researcher who can assess the effectiveness of their own teaching.

Project partners

Would need more time to consider this.

Project justification

This should be low hanging fruit - something that should be easy to do but which could give excellent results.

84. Personalization of Learning**Group: Researcher****Project title**

Competence-based individual lifelong learning

Project description

Competence-based learning: oriented to achieving specific individual outcomes

Individualization in all learning activities: setting objectives, choosing learning path, choosing learning strategy, choosing learning activities, choosing types of learning resources etc.

Project partners

Several partners representing different nations and cultures with strong experience and research background.

Project justification

This project will aim to pave the ground for the education in the future

85. Personalization of Learning**Group: Researcher****Project title**

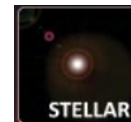
Intelligent Agent for Student Arranged Curriculum in Computer Science

Project description

Is it possible to realize

1. a generalizable online intelligent agent (assistant) to assist and monitor
2. students in arranging and executing

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3. standardized building blocks for Computer Science (as a Proof of Concept),
4. to reach a predefined accredited level of expertise
5. building secure personalized (student owned) databanks

Project partners

- CS department(s) AI, cryptography, datamining
- legal department
- commercial party for computing and storage resources
- Education research departments
- (Cognitive) Psychologist research departments
- Organizations for collections of Open Access Educational Resources
- NVAO (accreditation organization)

Project justification

- personalize education
- reduce the workload for faculty, to focus on student support
- create quality assurance for society
- exploit abundance of personalized data by datamining
- secure privacy (and portability) by student control of his/her data

it will enhance our understanding of individual learning paths in relation to personal differences, the granularity needed for Open Educational Resources (OER), the procedures needed for accrediting OER and arrangements,

86. Personalization of Learning

Group: Researcher

Project title

Tailored and on-demand learning

Project description

- how can we effectively assess a learner's knowledge state and guide him/her through semi-structured didactic content towards specific learning objectives?
- it has been demonstrated that individualized tutoring is much more effective than a one-size-fits-all approach; however it requires proper assessment of the learner's state and needs, and proper adaptation of the learning content to non standard learning paths

Project partners

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Project justification

- individualized learning can extend from standard academic program to on-the-job training and provide substantial advantages in learning effectiveness and motivation (better paced to individual characteristics and flexible).
- the technology is ripe from the assessment perspective and from the perspective of ubiquitous access to a large amount of knowledge, but it raises difficult research challenges

87. Personalization of Learning

Group: Researcher

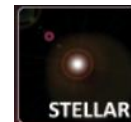
Project title

Know Yourself!

Project description

- Can TEL cater for different personalities in learning?
- Can TEL support individually tailored learning from primary to higher education?
- Can TEL provide families with more effective means to support students?
- Can innovative and creative use of technology (e.g. looking at mobile technology and affective computing) help individual fulfill their potential in terms of intellectual ability as much as emotional and social development? To the point of helping individuals in getting a better knowledge of themselves, in terms of inclinations and talents.
- Can TEL help educators identifying and support different abilities and skills in each learner? And then match them with the most appropriate approach to learning and teaching?

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Project partners

Schools(directors, teachers and students), families, legislators, educational content providers, mobile technology experts.

Project justification

Children have different personalities and inclinations also when it comes to education. Traditionally educators and parents have been responsible for matching learners with the most appropriate learning approach even if the formal educational framework does not provide much flexibility in terms of both content (syllabi) and methods. This project will bring together all relevant stakeholders and help them match learners with the most suitable combination of technology driven delivery methods in order support a personalised learning style and achieve each individual full educational potential.

88. Personalization of Learning

Group: Researcher

Project title

Intelligent Tutoring Systems

Project description

There is a lot of research on this topic currently, and I think that it is a very promising area of research:

- how to reduce the cost of developing such systems
- how to apply these systems to ill-defined domains such as language learning, etc.
- how to integrate more elaborated pedagogical strategies in these systems

But one very promising area of research is the use of data mining in e-learning system to extract useful knowledge from the data about learners. I would do research on this.

Project partners

Universities

Companies developing e-learning software

Project justification

To improve current e-learning system by making them provide better assistance to learner (more tailored assistance and more effective, that will help the student to learn more or quickly).

89. Personalization of Learning

Group: Researcher

Project title

One tutor per child

Project description

Make available to each student a virtual tutor that will guide them through their life-long learning

Project partners

Researchers in:

Human computer interaction

Software Engineers

Cognitive Scientist

Pedagogs

Project justification

All students will be able to develop to their potential guided by an always patience and personalized tutor. That is the way in which education should function.

90. Personalization of Learning

Group: Researcher

Project title

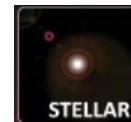
AI-supported Web 2.0 learning

Project description

How to use AI to enable individual support in using the tools of today's Web 2.0?

Project partners

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AI expert
Test-bed
Pedagogical practitioners

Project justification

- increases knowledge of tools, digital literacy
- further develops Web standards
- combines AI, Web, and pedagogy

91. Personalization of Learning

Group: Researcher

Project title

Adaptative learning for Professional and Amateurs Sportmans and Sportwomans.

Project description

Which are the better ways to make the Users Model for this Use Case?
How is the adaptation to the final users going to be developed?
Which degree of personalization is necessary to create a real learning and personalized environment?
Wich contents provided by the system are going to ber recomended for each user?

Project partners

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Project justification

Nowadays, more and more people starts to practice any kind of sport. This suppose an oppotunity to create a learning environment system to explain and create a personal evaluation system for each person that wants to start a sport.
The system will recomend the time, the exercises and all kind of staff necessary to make a correct and a useful training for a healthy way o life. Besides the system may be complemented with healthy eating habits. Take into account that nowadays we live in a sedentary society in which obesity is a real problem.
In this way chidren will learn healthy habits for living. This the main advantage of the project regarding social issues.

92. Personalization of Learning

Group: Researcher

Project title

detection of learner's profile

Project description

Find the optimum method to recognize the user's cognitive characteristics
Find an easy way to identify the user's emotional state (during his/her involvment with TEL procedures)
Monitor and assess the user's progress on aquiring knowledge
Use standards to describe user profile
Explore methods for adaptive learning objects retrieval form Learning Objects repositories

Project partners

Department for Computer Sciences, Univeristy of Cyprus
Institut of Educational Technology (Athena Research Center) Greece
Institut of Informatics and Telematics, National Reserch Center (EKETA), Greece

Project justification

The project aims to the development of an Adaptive Educational Hypermedia System, that may be justified as a pure technological web tool.

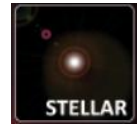
93. Personalization of Learning

Group: Researcher

Project title

Personalization of Learning for Gifted Children

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Project description

Gifted children have special educative needs. An important proportion of these children leave their studies.

The questions are:

- How to model the learning process of these children so that their motivation keeps high during a learning process and their learning is effective?
- What technology system could be appropriate for them?
- How to model the knowledge of these children?

Project partners

Centres working with gifted children (as Centro Huerta del Rey in Spain)

Project justification

Societal relevance. These children have special educative needs that should be satisfied.

94. Personalization of Learning

Group: Researcher

Project title

Owning learning

Project description

What is the impact of designing ones own learning on motivation to learn?
What is the impact of personalised learning on learning achievement?

Project partners

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Project justification

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95. Personalization of Learning

Group: Researcher

Project title

Adaptive systems on user learning style

Project description

Each individual has his/her own paths of knowledge. This project shall study the influence of learning styles in learning. The main aim of the project would be to short out different learning styles theories and models and propose a unified learning style model. In addition an adaptive system that exploits the proposed model should be implemented

Project partners

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Project justification

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96. Personalization of Learning

Group: Researcher

Project title

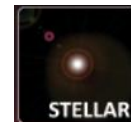
The Intelligent Branch by level of learner through diagnosis.

Project description

Is it how to develop about diagnosis method of learner's level ?
Is it enough main contents for achivement of objective
and so on..

Project partners

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KERIS

Project justification

It is important to provide contents according to knowledge level of learner. Here diagnosis of learner is core issue.

97. Personalization of Learning

Group: Researcher

Project title

Self-improving adaptive preparation systems

Project description

In the classroom of the future, lecturing is rare and most work is done in groups or long-term projects. What is the best way to provide outside-of-classroom preparation for students so that their classroom activities are pedagogically optimal? Jigsaw methods and personalized learning suggest that different students should be prepared differently. Moreover, can the technology be self-improving by taking in measures of the successfulness of the classroom activities and adjusting its preparation policies?

Project partners

A strong social psychology group. A strong classroom practices group.

Project justification

Jigsaw research; studies of team creativity and innovation; old studies of learning rates

98. Personalization of Learning

Group: Researcher

Project title

Personalising Collaboration

Project description

How personalisation may be designed to support both individual and group processes in a collaborative context

How individual and collaborative tasks may be efficiently be combined?

How the individual data reflect group work and vice versa?

Project partners

e.g.

Educational Technologies and Adaptive Learning Environments Research,
Electronic, Electrical and Computer Engineering, University of Birmingham

Institute for Communicating and Collaborative Systems, Human Communication Research Centre,
School of Informatics, University of Edinburgh

Open University of Catalonia, Department of Computer Science, Multimedia and Telecommunications,
Barcelona, Spain.

London Knowledge Lab, Institute of Education

School of Pedagogical & Technological Education (ASPETE)

Project justification

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99. Personalization of Learning

Group: Researcher

Project title

The interaction between Learning Management Systems and Personal Learning Environment

Project description

Which functions of an Learning Management System will be used by students? What is the relevance of an Learning Management System? Is the interaction between Learning Management Systems and Personal Learning Environment forming a new Learning Environment? Which ways Learning Management

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Systems/Personal Learning Environment have to go? Which didactical consequences have the respond of this questions? ...

Project partners

Universities, Provider for Web-Learning-Utilities

Project justification

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100. Personalization of Learning

Group: Researcher

Project title

Integrating Personal Digital Libraries and Personal Learning Environments

Project description

The research would explore the role of new enhanced knowledge technologies (such eBooks or other mobile devices for digital content) in the development of a framework for integration between PLEs and PDLs as an opportunity to extend access to learning resources and improve personalized strategies.

Project partners

A network of secondary schools and universities (as testers in-the-field)
A panel of researchers and monitors

Project justification

This research, especially if focus on eBook's role and perspectives of development, is at now extremely actual and useful for practioneers, teachers and learning organization.

101. Personalization of Learning

Group: Researcher

Project title

Impact of different TEL approaches on learning outcome

Project description

Compare the impact of different TEL approaches for different types of learners on the learning

Project partners

outcome.

Other educataional instutions in the same or similar field.

Project justification

Help eductaors and decision makers in choosing the best TEL approach and in making a decision on the effort put into providing mutliple approaches for differenttypes of learners.

102. Personalization of Learning

Group: Researcher

Project title

Cross-platform management and analysis of of Personal Learning Flows

Project description

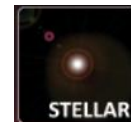
How to document, track and analyse the 'digital learning footprints' via interoperable personal learning/knowledge profiles in the manner which:

- does not intrude the privacy of the learner
- can be connected with various software and hardware platforms (e.g. mobile devices, social media)
- allows to build powerful scaffolding and recommender tools
- is based on strong methodological framework allowing deep pedagogical analysis

Project partners

I am not sure if I understood this question - do you expect me to list my preferred partners from EU TEL research arena for above mentioned project? In this case: OUNL CELSTEC, OU UK KMI, RWTH Aachen, Catholic University of Leuven, KTH, Aalto University...

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Project justification

Both the hardware (smartphones, tablet/slate PCs, etc) and software/services are rapidly developing towards increasing personalisation, which conflicts radically with current classroom/curriculum practices and mainstream TEL approaches (LMS). Researchers and industry have to involve pilot schools, universities and companies in extensive and large-scale participatory design research focusing on next-gen personalised learning environments.

103. Personalization of Learning

Group: Researcher

Project title

Learning via Apps - mobile and personalized

Project description

how can we improve learning just-in-time by providing appropriate tools

Project partners

tugraz, salzburg research, open uk

Project justification

in general from interest

104. Personalization of Learning

Group: Researcher

Project title

Development of teaching resources which can be personalized

Project description

How resources should be prepared to allow personalization and customization?
Which tools are necessary? What can be done automatically and what is the role of teacher in this process of customization of the resources?

Project partners

As broad cooperations of various types as possible:

- * publishers
- * practitioners
- * researchers
- * ...

Project justification

We live in society where everything is personalized (for example: in the store we pick an appropriate pre-built model of a bicycle, but afterwards we are "allowed" to personalize it according to our needs). And education needs personalization as well. An important part of it is also personalization of resources - how this can be performed by teachers and end-users.

105. Personalization of Learning

Group: Researcher

Project title

Developing chaos pilots (learners) that navigate the learning landscape

Project description

How do we emphasise ill-structured and ill-defined learning?
How do we teach and learn about dealing with ambiguity?

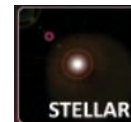
Project partners

Universities from 4-5 countries

Project justification

Societal justification. How do we expose students to handling ambiguity in daily life as they navigate diverse cultural and ill-defined settings

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106. Personalization of Learning

Group: Researcher

Project title

Study and implementation of adaptive learning scenarios complementary to formal education.

Project description

Adaptation and formal education seem completely antagonistic right now, but they do not need to remain like this. In this work we would study how to design adaptive e-learning systems that can co-exist with existing formal education settings, and provide reinforcement to disadvantaged students and expand the learning of advantaged students.

Project partners

UCM (obviously!)
Universities with strong pedagogical research record
Universities with strong technological research record
Public school representatives
Private school representatives

Project justification

Educational standardization is not making us ready to cope with the rapid changes that our society is experiencing, we need to move beyond that, but the school system is not ready to change. We must seek complementary and compatible approaches.

107. Personalization of Learning

Group: Researcher

Project title

At the Crossroads of Shared and Personal Learning Spaces

Project description

What is the relation of individual (personal) and group-level (shared) activities in virtual and physical learning spaces? How to integrate individual (personal) and group-level (shared) activities into meaningful learning scenarios in virtual and physical spaces?

Project partners

We'll see..

Project justification

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108. Personalization of Learning

Group: Researcher

Project title

Personalization in Communities of Learning for Distance Education

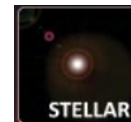
Project description

How can we improve in personalisation of learning while, at the same time, promoting collaborative learning and the formation of communities of practice?
I believe this can be achieved through developing knowledge-based support for learning management systems, improving socialisation facilities in them, and introducing more community work in courses. Students could then remediate their learning and exploring new individualised learning paths coached by the system+tutors (e.g. through open learner modelling) while, at the same time, work with other.

Project partners

María Elena Chan (expert in educational communication at my university).
Enrique Sucar (expert on knowledge representation and reasoning at INAOE, Mexico).
David Roldan (technology expert working in Sakai's new social learning environment at the Universidad Politécnica de Valencia, Spain)
Researchers in the Learner Modelling for Reflection group (e.g. Paul Brna, Susan Bull, Judy Kay, Nicholas van Labeke)

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Project justification

There is a widespread believe, particularly in third world countries, that technology is the key to open education to a broader audience. However, we are falling into providing standardised distance learning courses to all our students, while the diversity of contexts and needs is much greater among our students (e.g. 18-70 years old, all over our country and abroad, diversity of work experience). They feel isolated but have difficulties to learning in collaboration. All this leads to poor quality in education, dissatisfaction and abandonment of studies.

109. Personalization of Learning

Group: Researcher

Project title

Personalising genuinely exploratory computer environments

Project description

Can a computer really behave as a talented teacher in such environments?

Project partners

Who knows -- it depends!

Project justification

The demands of formal education are simply too great to be achieved without computational support. But we need to have 21st century pedagogy as well as 21st century technology, and real learning requires investigation, exploration, and play. ITS - however sophisticated - just won't work.

110. Personalization of Learning

Group: Researcher

Project title

Learning designs for personalised learning

Project description

What learning designs best support personalised learning?
How transferable are these between disciplines?
How to create sharable and reusable learning designs?
How to promote and sustain teacher interest and enthusiasm?

Project partners

Australian universities
UK universities
US universities

Project justification

need to ensure technology is used effectively
learning with technology
creating better learning opportunities

111. Personalization of Learning

Group: Researcher

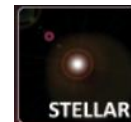
Project title

Effect of prior knowledge and style on learning achievements and satisfaction of learners.

Project description

What is the effect of prior knowledge on learning achievements and motivation of learners?
What is the effect of cognitive styles on learning achievements and motivation of learners?
What is the effectiveness and efficiency of TEL application for personalised learning?
What is the effect of preferential vs compensation learning personalisation?
Before designing any TEL application for personalisation of learning a number of conceptual issues need to be resolved. For example, many studies do not distinguish between level type of constructs (ability, intelligence, level of knowledge; the question here is how much?) and style constructs

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(cognitive style, learning style; the question here is in what way?). Research has indicated that level and style construct do not correlate at all. This conceptual confusion leads to wrong technological solutions.

We would design a software application as a sort of test bed for evaluating different options for personalised learning.

Project partners

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Project justification

Conceptual issues with personalisation of learning as described above, need first to be addressed and they are most difficult to solve. Once we have a satisfactory solution on it, it is easier to progress further with technological solutions.

112. Personalization of Learning

Group: Researcher

Project title

Knowing what your student knows

Project description

1. How can educators assess and record the knowledge and skills students have acquired, regularly and effectively?
2. Why are traditional educational reports not as important today in education as pathology lab. reports and medical imaging are in medicine? Are they not analytical enough? Are they not action oriented?
3. How do compare possible multiple answers to the above questions and evaluate their veracity?
4. How can we create tools for creating action-oriented and effective educational reports of large numbers of students without regimentation in school?
5. Will the creation of easy-to-use tools for such formative assessments of individual learners make a significant contribution in countries which wish to improve the effectiveness of school education urgently?

Project partners

International Institute of Information Technology

Project justification

Feedback to teachers, students and others who could contribute to individual student's progress is very poor in many educational systems. It is a reasonable hypothesis that ICT can help create such tools. Real world experimentation is needed to verify this hypothesis. The insights generated by research in this field could contribute to addressing the digital-divide.

113. Personalization of Learning

Group: Researcher

Project title

How can instructional explanation be adapted to the learners?

Project description

How can instructional explanations be adapted to the learners' prior knowledge and to possible misconceptions in computer-based learning environments?
Adaptation based on natural language processing

Project partners

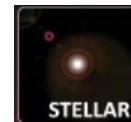
Jörg Wittwer
University of Göttingen

Project justification

relevant for educational practice; explanations can be integrated in the learners prior knowledge; thereby, the effectiveness of explanations should be increased to a large extent.

114. Personalization of Learning

Group: Researcher



Project title

personalized learning technologies: what to adapt, how to adapt it and how to make it work

Project description

e.g.

what variables are essential to assess when adapting instruction to individual learner's needs?
how do these variables interact -how should they be weighed in an assessment or task selection algorithm?

who's responsible for personalization? the system or can we put the learner in the driving seat? what is necessary to achieve the latter without losing effectiveness and efficiency of the learning process?
does a personalized trajectory lead to better learning than one size fits all?
does it lead to more motivation and less frustration

Project partners

e.g.

Carnegie Mellon University
Open University of the Netherlands

Project justification

allowing learners different routes to attaining a certain standard of knowledge can greatly enhance the effectiveness and efficiency of education: more knowledgeable or more able students will take less time, less knowledgeable or less able students will take more time, but since they are all working at their own pace, this doesn't bother the teacher or other students. Moreover, this is less frustrating for these students as they do not have to wait for slower students or have to struggle to keep up with faster students

115. Personalization of Learning

Group: Researcher

Project title

Personalisation of Learning in a Learner Centric manner

Project description

To build an approach to personalisation that is controlled entirely by the learner incorporating a wide range of advances in issues connected with personalisation, empowerment, data sharing/privacy, motivational and emotional issues, social aspects of learning....

Project partners

A really good group researching CSCL
A really good group researching open learner modelling
A really good group of educational researchers with access to schools and parents that will willingly cooperate
A really good group of computer scientists looking at mechanisms relating to trust, privacy, sharing
A really good group of sociologists interested in how learners can be empowered

Project justification

Tackles (at least) one of the core tensions of the survey.

116. Personalization of Learning

Group: Educator

Project title

Combining course-level learning goals with personal goals

Project description

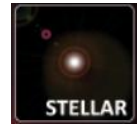
How can we design courses that engage students both in all of meaningful project-oriented learning, collective knowledge building and acquisition of curricular facts, concepts, procedures, heuristics, etc.

Project partners

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Project justification

STELLAR Delphi Study - research project proposals by the experts of the 4th STELLAR Delphi round for the Core Research Area *Personalization of Learning*



Students should acquire whole task capacities and be motivated and at the same time acquire "boring" know-how in order to remain competitive.

117. Personalization of Learning

Group: Educator

Project title

Crowdsourcing recommendations for personal learning

Project description

What characteristics of learners and learning experiences are most important for establishing effective matches?

How can the experience of past learners be effectively aggregated to inform recommendations for intending learners?

Project partners

Australian Digital Futures Institute

Project justification

In a networked world it is possible to access any one of a wide variety of learning opportunities. Selecting what is appropriate to personal needs is challenging. Determining the characteristics that should inform matches and developing means of aggregating data from other learners to inform choices is a potential solution.

118. Personalization of Learning

Group: Educator

Project title

Tailoring Learning to the Middle School Student

Project description

Can technology be used to capitalize on the strengths of the student to help them improve their understanding of the core subjects?

Use technology to design an overall program from which students could select appropriate topics, using general guidelines, to design their own programs for advancing their learning in the core subjects.

The project would allow for working with professionals and researchers through the internet on almost any topic in social sciences, STEM, or the arts.

119. Personalization of Learning

Group: Business Person

Project title

Intelligent organisation of disparate learning/knowledge

Project description

How can the semantic web enable better connections between the many disparate technological tools we have available to us for learning?

Project partners

E-learning/technology business

Education department at a University

Web Science department at a University

Project justification

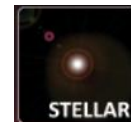
Personalisation of learning

Productivity for business

120. Personalization of Learning

Group: Business Person

STELLAR Delphi Study - research project proposals by the experts of the 4th STELLAR Delphi round for the Core Research Area *Personalization of Learning*



Project title

Recommender Service

Project description

The project will collect two types of recommendations within the VLE and any other resource management systems (e.g. library system, digital repository): (a) machine generated use data and (b) user contributions such as ratings and reviews. That data will be used to make recommendations regarding choices of resources (e.g. learners who downloaded this also read that

The major research questions are

- 1) Do learners welcome this feedback and do they start to participate by making their own contributions?
- 2) Are the trends and recommendations of value to teachers in designing learning and supporting learners?
- 3) Does the system become more useful as it scales and does it become more useful if data is collected across institutions?

Project partners

Scale is key to testing this and an above campus or even international dimension would add to the research. It would also be important to test the hypotheses in different educational phases - e.g. undergraduate and Key Stage 4 (14-16)

Project justification

The business world exploits activity data and user recommendation to personalise services and to gain Business Intelligence (e.g. Amazon, supermarkets). The implementation across systems (different types of resources, different institutions), and the objective of delivering better education would use similar techniques within a more complex frame of investigation that is of societal, technological and scientific relevance.

121. Personalization of Learning

Group: Business Person

Project title

longitudinal comparison of personalised / standardised learning

Project description

I would like to see a comparison done between the long-term outcomes of personalised vs standardised learning environments.

Project partners

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Project justification

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122. Personalization of Learning

Group: Policy-Maker

Project title

Multi-Dimensional Support Frameworks

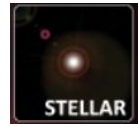
Project description

Is it possible to build a generic framework (e.g. an authoring language extension) which allows the builder who knows their subject well to structure sets of learning objects to scaffold the journey of the learner, while at the same time bringing agent technology to enhance content? The framework would know something about the learner's profile but apart from that would adapt according to cues from interactive responses to the material/experiences the learner faces?

Project partners

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STELLAR Delphi Study - research project proposals by the experts of the 4th STELLAR Delphi round for the Core Research Area *Personalization of Learning*



Project justification

Profilers like ELLI allow us an insight into a learners needs - what are we doing about it? A good tutor knows how to respond to problems in many dimensions of learning. In the absence of that good tutor can we model their behaviour?

This can help address social inequality where an individual does not fit into the classical academic mold. It is technologically challenging to build the generic framework and the interdisciplinary nature of the problem, understanding the cognitive processes to which the computer must respond is intriguing