

EUROPEAN FIRST YEAR EXPERIENCE CONFERENCE 2017

Learning Gained through Student-Staff Partnerships

Wednesday 28th June – Friday 30th June 2017

ABSTRACT SUBMISSION FORM

Proposals should be submitted to efye@bcu.ac.uk by the 20th February 2017.

Name(s) of speaker(s)	Tinne De Laet ¹ , Tom Broos ^{1,2} , Maarten Pinxten ³ , Joke Vanhoudt ⁵ , Katrien Verbert ² , Greet Langie ³ , Carolien Van Soom ⁴
School / Department / Institution	¹ KU Leuven, Faculty of Engineering Science, Tutorial Services ² KU Leuven, Faculty of Engineering Science, Computer Science ³ KU Leuven, Faculty of Engineering Technology ⁴ KU Leuven, Faculty of Science, Tutorial Services ⁵ KU Leuven, Study Advice Service
Email Address	Tinne.DeLaet@kuleuven.be
Biographical details for each speaker (50 words maximum <u>each</u> speaker)	
<p>Tinne DE LAET, PhD, is tenure track professor and head of the Tutorial Services at the Faculty of Engineering Science at KU Leuven. She is the chair of the Leuven Engineering and Science Education Center (LESEC) and the KU Leuven promotor of the Erasmus+ projects ABLE and STELA.</p> <p>Tom BROOS, is a PhD candidate at the Faculty of Engineering Science, Tutorial Services & Department of Computer Science at KU Leuven, where he focusses on scalable learning analytics interventions.</p> <p>Maarten PINXTEN, PhD, is a research associate at the Educational Support Services of the Faculty of Engineering Technology, KU Leuven. His main research topics are the academic self-concept, educational choice, and transition to higher education. In his current position he is project coordinator of the European readySTEMgo project.</p> <p>Joke VANHOUDT, Master in educational sciences, is study counsellor at KU Leuven since 1998. She is responsible for the study skills training in the Study Advice Unit and the support of the staff ‘study counselling’ in the faculties as regards study skills.</p> <p>Katrien VERBERT, PhD, is an Assistant Professor at the Human-Computer Interaction research group of the Computer Science Department of KU Leuven. Her research interests include learning analytics, visualisation techniques, recommender systems for learning and digital humanities.</p> <p>Carolien VAN SOOM, PhD, is associate professor and head of the Tutorial Services at the Faculty of Science at KU Leuven. Her research focuses on academic self-concept, motivation, and achievement of freshmen bachelors in STEM programs. She is a member of the steering committee of the Leuven Engineering and Science Education Center (LESEC).</p> <p>Greet LANGIE, PhD, is vice-dean of Education at the Faculty of Engineering Technology at KU Leuven. Her research focuses on the transition from secondary to university STEM-education. She is a member of the steering committee of the Leuven Engineering and Science Education Center (LESEC) and the project promotor of the European readySTEMgo project.</p>	
Statement of how the session links to the conference theme(s) (100 words maximum)	

Session/poster title
Learning and study strategies: a learning analytics approach for feedback
Session type – Paper, Poster or Show and Tell (please see advice on formats on page 1)
paper
Summary (50-word summary for programme)
To be successful in higher education, first-year students have to further develop their learning and study strategies. We will present a learning analytics approach to provide first-year students with feedback on and support for their learning and study strategies.
Abstract (500 words maximum, not including references if used)
<p>Due to the open admission in the Flemish (Belgium) higher education system, a substantial part of the first-year students enters without the right qualifications, resulting in a first-year drop-out rate of around 30% in the Faculties of Science & Technology at KU Leuven. Therefore, university staff heavily invest in advising students before and throughout their first year (Vanderoost et al. 2014; Vanderoost et al. 2015; Callens et al. 2016). For example, the readySTEMgo Erasmus+ project (“readySTEMgo Project” 2017) focused on identifying the key skills that are required to be successful in the first year of STEM bachelor programs. The project showed that five academic skills as measured in the LASSI (The Learning and Study Strategies Inventory) are important for STEM study success: concentration, performance anxiety, motivation, the use of test strategies, and time management (Pinxten et al. 2016). These results were actively disseminated to the KU Leuven faculties’ student support services and the central study advice center, who in return adapted their coaching and training based on the results.</p> <p>In the framework of the STELA Erasmus+ project (“STELA Project” 2017), Successful Transition from secondary to higher education using Learning Analytics, a dashboard was developed wherein students received individual feedback on their study and learning strategies. Learning analytics (LA) is “the measurement, collection, analysis, and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs” (Ferguson 2012). The objectives of learning analytics are manifold, from identification of at-risk students over predictive analytics to the personalization of learning content and contexts, to support teachers, students, study advisors, etc. (Verbert et al. 2012). Based on norm research at KU Leuven, five different norm groups for each of the five LASSI scales were discriminated: very weak, weak, average, good, very good . Students received individual feedback on their respective norm group for each of the five skills (Pinxten et al. 2016). Additionally the student received the following information:</p> <ul style="list-style-type: none"> • a short explanation regarding the obtained score, • a visualization of these individual scores with respect to the scores of their peers, • a “predictive” part that shows the study efficiency (CSE) past students in a similar nom group obtained at the end of the first year, • specific tips and recommendations regarding the particular skills, and • referral to counseling services (central + faculty). <p>The picture below provides a view of the dashboard. During the academic year 2016-2017 the Faculty of Science, Engineering Science, Engineering Technology, and Bio-engineering used this dashboard to provide feedback to 1406 first-year students regarding their learning and study strategies. The students received a personalized email with an invitation to the dashboard, where they could access their personal feedback by using the university’s login system.</p>

In the session we will present our experiences regarding the development and deployment of dashboard. In particular, a more detailed analysis of user interaction with the dashboard will be provided, which will highlight whether the students with weak study and learning strategies, interact most with the platform.

Callens, Riet (KU Leuven), Tinne (KU Leuven) De Laet, Koen (KU Leuven) Paes, Jef (KU Leuven) Vanderroost, An (KU Leuven) Vanfroyenhoven, and Jasper (KU Leuven) Witters. 2016. "Feedback Path for First Year Students Engineering Science: A Data-Based Approach." In *EUROPEAN FIRST YEAR EXPERIENCE CONFERENCE 2016*, 1–4.

Ferguson, R. 2012. "Learning Analytics: Drivers, Developments and Challenges." *International Journal of Technology Enhanced Learning* 4 (5/6): 304–317. doi:10.1504/IJTEL.2012.051816.

Pinxten, Maarten, Carolien Van Soom, Christine Peeters, Tinne De Laet, Pal Pacher, Peter Hockicko, and Greet (KU Leuven) Langie. 2016. "Learning and Study Strategies of Incoming Science and Engineering Students. A Comparative Study between Three Institutions in Belgium, Slovakia, and Hungary." In *Proceedings of the 44th Annual SEFI Conference*, 1–8. Tampere, Finland.

"readySTEMgo Project." 2017. <http://iiw.kuleuven.be/english/readystemgo>.

"STELA Project." 2017. 2015. <http://stela-project.eu/>.

Vanderroost, Jef (KU Leuven), Riet (KU Leuven) Callens, Joos (KU Leuven) Vandewalle, and Tinne (KU Leuven) De Laet. 2014. "Engineering Positioning Test in Flanders : A Powerful Predictor for Study Success ? Conference Topic : The Attractiveness of Engineering ; Education AI Research Methods INTRODUCTION." In *Proceedings of the 42nd Annual SEFI Conference*.

Vanderroost, Jef (KU Leuven), Carolien (KU Leuven) Vansoom, Greet (KU Leuven) Langie, Johan (KU Leuven) Van den Bossche, Riet (KU Leuven) Callens, Joos (KU Leuven) Vandewalle, and Tinne (KU Leuven) De Laet. 2015. "Engineering and Science Positioning Tests in Flanders : Powerful Predictors for Study Success ?" In .

Verbert, Katrien, Nikos Manouselis, Hendrik Drachsler, and Erik Duval. 2012. "Dataset-Driven Research to Support Learning and Knowledge Analytics." *Educational Technology & Society* 15: 133–48.

Inleiding

Concentratie

Faalangst

Motivatie

Teststrategie

Tijdsbeheer

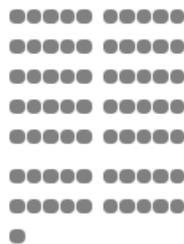
De **concentratieschaal** geeft aan in welke mate je je kan concentreren. Hieronder zie je hoe **jouw score** op concentratie is ten opzichte van de andere eerstejaarsstudenten **industrieel ingenieur**. Elk **grijs** bolletje stelt één student voor.

Je kan je uitstekend concentreren. Je laat je helemaal niet afleiden door storende gedachten en gevoelens of door zaken die er gebeuren rondom jou. Je controleert de interne en externe afleiders op een dusdanige manier dat je aandacht niet afdwaalt van de taken waarmee je bezig bent.

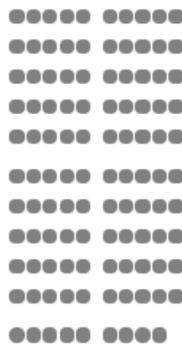
Zeer zwak
aantal: 22



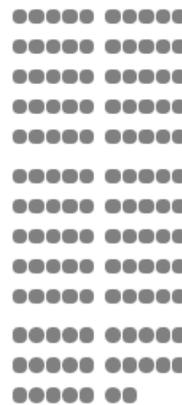
Zwak
aantal: 71



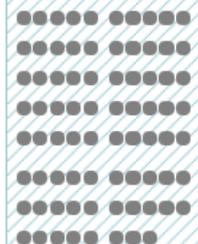
Gemiddeld
aantal: 109



Goed
aantal: 127

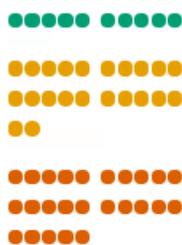


Zeet goed
aantal: 78

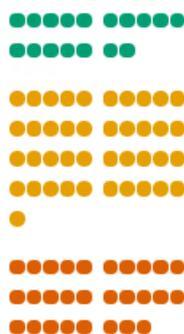


Hieronder zie je welke studie-efficiëntie (SE) de eerstejaarsstudenten industrieel ingenieur van vorig jaar in juni haalden, afhankelijk van hun score op concentratie. De groep met **jouw score** is nog eens expliciet aangeduid. Elk bolletje stelt één student voor met de volgende kleurcodering: een **groen** bolletje is een student met een studie-efficiëntie hoger dan 80% ($SE \geq 80\%$), een **geel** bolletje is een student met studie-efficiëntie tussen 30% en 80% ($30\% \leq SE < 80\%$), en een **oranje** bolletje is een student met studie-efficiëntie lager dan 30% ($SE < 30\%$).

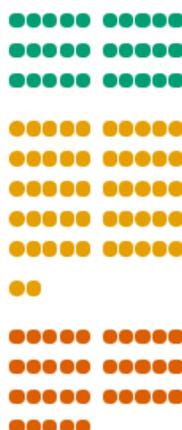
Zeet zwak
aantal: 57



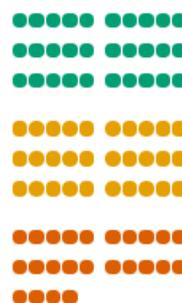
Zwak
aantal: 86



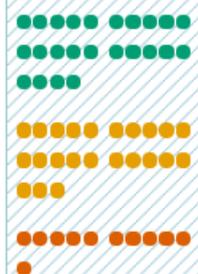
Gemiddeld
aantal: 117



Goed
aantal: 84



Zeet goed
aantal: 58



Ok, wat nu?



Main message of the session: “After this session the participant will know/have experienced/have gained...”

- The pros and cons of a learning analytics dashboard deployed at KU Leuven to support the live interaction between student advisor and first-year student.
- The future challenges of the use of learning analytics to support the first-year experience.

Keywords: every presentation will be categorized according to some keywords. Please check the box of the keywords applicable to your session. The keywords are based on interesting EFYE-topics for this conference.

- Active learning
- Belonging (socially, academic)
- Big Data
- Commuter (or local) students
- Counselling
- Curriculum
- Health and well-being
- Induction (Orientation)
- Institutional development
- International students
- Language (academic)
- Learning communities
- Library
- Parents
- Pastoral Care
- Peer mentoring

- Physical spaces
- Research on FYE
- Residential students
- Retention
- Service learning/volunteering
- Social cohesion
- Student diversity
- Student finance
- Student perspective
- Students as partners
- Study Skills
- Social Media
- Technology
- Transition from school/college to HE
- Transition to second year
- Work and study

Data Protection: The information you supply on this form will be stored in paper and/or electronic format for the purposes of conference administration. Additionally, speaker biographies, abstracts and summaries of sessions/posters may be published in delegate packs and on the EFYE 2016 website.