THE DUTCH AND GRONINGEN EXPERIENCES WITH STUDENT MONITORING

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Overview

Two parts:
1. Groningen and NL context (JvR)
2. UG student monitoring (JvdK)
Part 1: Groningen and NL context

1. University of Groningen
2. Dutch organisation Institutional Research
3. National student database: 1cijferHO
Groningen
405 years of tradition and innovation

› Recognition of differences in talent and ambition
› Stimulation of cross-border research and education
› Student-oriented
› Investment in the highest quality
› Contributing to society by collaborations with public and private organizations
Founded in 1614
3,1500 students, 7,019 international, 120 nationalities
5,895 fte total personnel, 3,365 fte academic
11 Faculties
48 Bachelor’s degree programmes
>100 Master’s and specializations
24 Double degree programmes
6 Erasmus Mundus programmes
Total budget 667 M€
### Overall research performance

**Scholarly Output**
- 38,222 ▲
- Citation Count: 532,927

**Authors**
- 15,189 ▲
- Citations per Publication: 13.9

**Field-Weighted Citation Impact**
- 2.03

**H-index**
- 154

### Subject Areas
- **Other (10.7%)**
- **Social Sciences (6.3%)**
- **Psychology (4.4%)**
- **Arts and Humanities (2.9%)**
- **Neuroscience (3.3%)**
- **Pharmacology, Toxicology and Pharmaceutics (2.1%)**
- **Computer Science (2.9%)**
- **Mathematics (2.1%)**
- **Physics and Astronomy (6.1%)**
- **Chemistry (3.4%)**
- **Materials Science (2.5%)**
- **Engineering (3.4%)**
- **Earth and Planetary Sciences (2.6%)**
- **Agricultural and Biological Sciences (4.3%)**
- **Biochemistry, Genetics and Molecular Biology (10.8%)**
- **Immunology and Microbiology (2.6%)**
- **Medicine (27.6%)**
Dutch Higher Education (2017/18)

› 14 Universities
  • 290.000 students
  • 54.500 staff members

› 37 universities of applied science
  • 453.000 enrollments
  • 48.000 staff members
Association of Dutch HE professionals

IR: ‘Business Intelligence for HE’

Supports informed policy making

≠ Academic research (nor sloppy science)

Bridges IT – Policy domains

Covers all policy domains: Education, Research, HR, Finance
In February 2018 the VU published a Code of Practice Privacy & Ethics for Student Analytics.

This Code of Practice intends to inform:

I. **Students** about Student Analytics and its intentions, and in what way their personal data is processed and for what purposes it is analysed.

II. **Employees and researchers** how Student Analytics is allowed to be analysed and used within the VU and what safeguards must be in place.

**Code of Practice**

What does the VU stand for in the development and application of Student Analytics.
National database: 1cijferHO

›‘1-number HE’: 1 national student database
›Originates from VSNU initiative in 1990’s (KUO, built by IR colleagues, facultative)
›Prime goal: support internal external (national) Quality Assurance
›Universities + ‘Fach Hochschule’
›Detailed information (age, gender, nationality, educational history, enrollments, diplomas)
›Allows to track, benchmark and analyze educational careers of students.
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Part 2: UG student monitoring

1. UG databases
2. Business Intelligence portal
3. Pilot: monitoring on course level
UG databases: internal data

- Financial
- Human Resources
- ...
- Education and student data
  - Where? Student administration, Educational administrative system, *Online learning environment*
    - levels: course, degree programme, faculty, university
  - What? Degree programme applications and registrations, course registrations, diplomas, *grades*, course material
  - Who? Students, teachers, central and faculty support staff, quality assurance, management
UG Business Intelligence Portal (BI Portal)

- Data warehouse for collecting and visualizing data by combining internal AND external source
- Access via authorization rights: reading and editing
- Goals
  - Supporting management and staff
  - Offering reliable data / harmonizing use of data (same definitions!)
  - Providing options for tailored analyses by faculties
Wat zit er in de BI?

Progress

PEOPLE SOFT

PURE

Studielink (student registrations)

NSE (national student survey)

1cijferHO (benchmark file)

SOURCE FILES

Corporate Data warehouse

DASHBOARD

Reports

Monitoring

Analyses
Welkom op de BI-portal, het centrale dashboard overzicht van de Rijksuniversiteit Groningen. Mocht u rechten willen aanvragen tot een dashboard, kunt u dit doen via het "Aanv.-en afmeldformulier GAT" of door contact op te nemen met de BI-dek.
BI Portal: Education

- Created in May 2015
- Extended with ICT projects
- User group of central and faculty staff members
- Information on different levels
- Includes data about
  - Applications and enrollments
  - Strategic goals
  - Educational charts
  - Effects of interventions and policy changes
Applications and enrollments
Management Information
Strategic Goals: example
University Teaching Qualification

BKO Certificering Docenten
## National Student Survey results

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<td><strong>Your study programme in general</strong></td>
<td>22 3.94</td>
<td>22 3.95</td>
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<td>0</td>
<td>224 4.17</td>
<td>671 4.09</td>
<td>224 4.06</td>
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<td><strong>The content of the programme</strong></td>
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<td>22 4.05</td>
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<td><strong>The academic skills you acquire in your programme</strong></td>
<td>28 3.79</td>
<td>22 3.95</td>
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<td>0</td>
<td>246 3.95</td>
<td>664 3.96</td>
<td>3197 3.94</td>
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<td>22 3.87</td>
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<td>0</td>
<td>246 4.06</td>
<td>661 4.05</td>
<td>3190 4.01</td>
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<td>28 3.79</td>
<td>22 4.00</td>
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<td><strong>Academic guidance/counselling</strong></td>
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<td>22 3.68</td>
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<td>0</td>
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<td>656 3.70</td>
<td>3059 3.61</td>
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<td><strong>The general atmosphere within your study programme</strong></td>
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<td>0</td>
<td>245 4.37</td>
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<td>3191 4.30</td>
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<td><strong>The opportunities made available to you to help improve your programme</strong></td>
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<td>240 3.77</td>
<td>648 3.80</td>
<td>3126 3.66</td>
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<td><strong>The way your study programme challenges you in a positive way</strong></td>
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<td>246 3.95</td>
<td>662 4.09</td>
<td>3187 4.04</td>
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<td><strong>The attention for internationalisation (in the curriculum, studying abroad, etc)</strong></td>
<td>28 3.36</td>
<td>22 3.86</td>
<td>0</td>
<td>0</td>
<td>236 3.88</td>
<td>627 3.80</td>
<td>2968 3.66</td>
<td>4268 3.84</td>
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<td><strong>Would you recommend your study programme to friends, family or colleagues?</strong></td>
<td>26 4.15</td>
<td>18 4.06</td>
<td>0</td>
<td>0</td>
<td>226 4.19</td>
<td>587 4.22</td>
<td>2826 4.15</td>
<td>3984 4.13</td>
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Educational Charts (including diplomas and retention rates)
Layout options
Student monitoring: course level

› Stakeholders
  • Students
  • Teachers
  • Study advisors
  • Educational Advisor (instructional designer on course level)
  • Director of Education / Degree programme coordinator
  • Boards (faculty and university)
  • Policy advisors / Quality assurance

› Pilots
  • Early Warning Signals (EWS)
  • (Perussal see Addendum)
Pilot Early Warning Signals (EWS)
Video about EWS

Early Warning Signals project
EWS: Enable to become active

› Focused on 3 out of 7 stakeholders
  • **student**: find out about performance and behaviour compared with peers
  • **instructor**: real-time insights into online behaviour
  • **study advisor**: identify at-risk students earlier

› Infrastructure
  • Online learning environment
  • Blackboard Analytics for Learn (A4L)
Early Warning Signals (EWS)

1. Academic preparation
   • prior education, student characteristics

2. Student performance
   • student workload, attempts, grading

3. Student effort
   • activity in learning environment

+ signals
+ interventions
Early Warning Signals
Location: student portal intranet
Online course environment
For instructors: Grade Center
Activity & Grade Matrix
Personal report for students

Your Total Activity Compared to the Course Average

Accesses vs Course Average

Submissions vs Course Average

Interactions vs Course Average

Time in Course vs Course Average
Preliminary results (survey)

› students
  • support A4L (96%)
  • become active in course
  • some become alert on correct study choice
  • higher pass marks (but not conclusive)

› instructors
  • earlier & correct detection invisible students
  • effective remedial teaching
  • maybe better grade distribution

› study advisor
  • earlier contact
  • study advice (effective studying)
Discussion