



SQELT PROJECT

SUSTAINABLE QUALITY ENHANCEMENT IN HIGHER EDUCATION LEARNING AND TEACHING. Integrative Core Dataset and Performance Data Analytics



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Intellectual Output 3:

Baseline Report on Project Partner HEIs' Performance Data Management Models

The Case of Ghent University (UGent)

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List of acronyms

HEI – Higher education institution

L&T – Learning and teaching

PDRLA – Personalized data required for Learning Analytics

PI – Performance indicator

QA – Quality assurance

QEI – Quality evaluation instrument

QM – Quality management

SPC – Study Program Committee

TBDE – To be determined by evaluation

UGent – Ghent University

UGI – Ghent University Integrated Policy Information System

Executive summary

Through the present report Ghent University (UGent) is contributing to Output 3 - “Baseline Report on Project Partners HEIs’ Performance Data Management Models” - of the SQELT project.

The UGent case study implied 6 focus group meetings with selected and informed stakeholders. In sum 31 stakeholders participated: 8 higher education institution (HEI) leaders, 7 teaching staff members, 10 quality management (QM) staff members and 6 students. The on average 2 hour meeting was divided in 2 parts. In the first part the stakeholders filled in a questionnaire pertaining to a selection of the more uncommon, less widespread or novel core data, performance indicators and evaluation instruments used for quality monitoring and improvement in learning and teaching. They gave their own opinion on the usefulness of the item and on the collection/ monitoring/application at Ghent University. Furthermore they gave their opinion on the use of Learning Analytics (LA) at Ghent University, its possible functions and made a SWOT analysis of LA. This written exercise was followed by a second part: a focus group debate on monitoring instruments/indicators/LA. The active SQELT participants/UGent SQELT team members filled in the elaborate questionnaires on the same subjects.

The results from both the questionnaires and the debate were very similar. The stakeholders think the monitoring of the data/indicators in the Learning and Teaching process should **primarily focus on the core elements of the learning and teaching process**. During the focus group debates on Ghent University’s educational quality assurance monitoring, performance indicators such as (students’) assessment of the structure of the program, the didactical approach, the course material quality, the learning effect,... are regarded indispensable. This is mirrored in their answers to the closed questions, especially in the core data section (e.g. pedagogical quality of the teaching process, student interactions with the LMS) and the performance indicators section (e.g. quality of teaching and teaching staff engagement, student workload, activity learning offers, training in study skills,...).

Items, more distant from the core learning and teaching process, are in general considered useless: e.g. library features, student contacts outside the study environment, quality offer of campus activities,...

This tendency was confirmed by the UGent SQELT team members, who filled in the more elaborate version of the questionnaire.

The assessment of the collection of the indicators shows considerable 'don't know' answers. This, obviously, can be linked to the uncommon, less wide spread or novel character of the items presented. A substantial number of Ghent University's educational quality monitoring is listed in the elaborate version of the questionnaire.

A huge majority of the respondents thinks **Learning Analytics is put into practice at Ghent University**. It means that data about learners and their context are measured, collected, analysed and reported and are used to understand and optimize the learning environment. Course evaluations and program evaluations by students and the follow up of both by respectively the individual teacher and the Study Program Committee are the best illustrations.

The **functions attributed to LA** are in accordance with the UGent context. A huge majority agrees on **LA supporting the quality improvement of courses, the improvement of course design and the verification of student workload**.

From the discussions with the different stakeholder groups and the SWOT on LA possible pitfalls, related to data collection, surfaced. They are especially related to the use of data by the stakeholders. Monitoring for the sake of monitoring is useless. An overload of data is unmanageable. Therefore a vision on the need for and choice of data/indicators is needed. In order to avoid misinterpretation by the user, the context of the data should be provided. Qualitative data provide a valuable and essential complement to quantitative data. Privacy remains a key issue, especially for use of data on an individual level. An ethical code on access to and use of data is essential.

Introduction

This report is Ghent University's contribution to Output 3 ("Baseline Report on Project Partners HEIs' Performance Data Management Models") of the SQELT project. A selected number of informed stakeholders – higher education institution (HEI) leadership, teaching staff, quality management (QM) staff and students – filled in a questionnaire pertaining to a selection of the more uncommon, less widespread or novel core data, performance indicators and evaluation instruments. They gave their own opinion on the usefulness of the item and on the collection/monitoring/application at Ghent University. Furthermore they gave their opinion on the use of Learning Analytics at Ghent University, its possible functions and made SWOT analysis of LA. This written exercise was followed by a focus group debate on monitoring instruments/indicators/LA. The UGent SQELT team members filled in the elaborate questionnaires on the same subjects. The present report tries to reproduce the findings from the above mentioned sources. Finally the main findings from this case study are summarized and some recommendations for the future are made.

Sample, time schedule and data types of the baseline case study

For the UGent case study a sample of HEI leadership, teaching staff, quality management staff and students was contacted. The selection criterion for the participants in the different groups was their knowledge of/experience with educational policy, monitoring and processing data, Learning Analytics,... The UGent SQELT team members invited about 15 to 20 persons per stakeholder group. They all received a mail, explaining the project and the objectives of the questionnaire and focus groups and asking them to participate in a 2 hour meeting, during which the questionnaire was to be filled in and a focus group meeting was to be held, discussing performance indicators and Learning Analytics (LA). A doodle pointed out a best-fitting date and time for as much members as possible for each group. Focus groups were organized in Ghent University's offices and generally took about 2 hours. The schedule shows that for some groups, 2 focus groups were organized.

In order not to reveal the identity of the participants, they are linked to the type of faculty they belong to. Below, Ghent University's faculties and their affiliation to the type is listed:

Alfa:

- Arts and Philosophy
- Law and Criminology
- Economics and Business Administration
- Psychology and Educational Sciences
- Political and Social Sciences

Beta:

- Sciences
- Engineering and Architecture
- Bioscience Engineering

Gamma:

- Medicine and Health Sciences
- Veterinary Medicine
- Pharmaceutical Sciences

Schedule of the focus group meetings

- **Monday November 6th, 14-16h: QM-staff central level: 4**
4 colleagues, working at the central level, Department of Educational Policy
- **Monday November 19th, 10-12h: students: 6**
6 student representatives, members of Ghent University's student's union, members of central councils, such as the Educational Council,...
Composition: alfa: 3, beta: 2, gamma: 1
- **Tuesday November 20th, 10-12h: teaching staff: 7**
7 teaching staff members, familiar with Learning Analytics or teaching Statistics/Methodology/ICT,...
Alfa: 5; beta: 2
- **Thursday November 22nd, 10-12h: HEI leadership: 2**
2 faculty directors of study
Alfa: 2
- **Wednesday November 28th, 15-17h: HEI leadership: 6**
6 chairs of Study Program Committees (SPC)
Alfa: 4; beta: 1; gamma: 1

- **Friday November 30th, 10-12h: QM staff, faculty level: 6**
6 QM staff members
Alfa: 2, beta: 1, gamma: 3

On a total of 27 faculty members, 16 work or study in an alfa faculty, 6 in a beta faculty and 5 in a gamma faculty. The 4 colleagues at the central level (Department of Educational Policy) have no faculty affiliation.

Concerning the gender composition of the respondents, 18 are male, 13 are female.

Concrete organization

The participants were asked to fill in the 4 parts of the questionnaire. This took on average about 45 minutes. The UGent SQELT team members were present at each meeting and answered some questions about unclear items. Afterwards a group discussion took place. The participants were asked to rank some selected performance indicators or instruments, used by UGent, along their importance/usefulness in quality monitoring of the learning and teaching process. The process of reaching a shared point of view, in combination with some questions about Learning Analytics, caused lively debate.

As can be seen below, the applied questionnaires and key questions can be used to generate nominal and ordinal data, but not genuinely metric data. Methodologically, for nominal data only information about frequencies and shares can justifiably be extracted from the data. In addition, ordinal data have a 'natural' order and mathematical comparison operations such as 'larger than' are properly defined. Only with genuinely metric characteristics, however, all arithmetic operations can be carried out in a meaningful way, for example calculating average values, correlations or regressions. Metric data are therefore also the basis for the application of the 'normal distribution' (Gaussian distribution).

However, often pseudo-metric scaling is applied to ordinal data, i.e. numerical values are 'arbitrarily' assigned to the (discrete) ordinal scale, which results in a 'rating scale'. Then, some metric methodologies like those mentioned above can be applied, though with restricted methodological justification, i.e. results are to be interpreted with caution (specifically when the sample sizes are small).

Particularly, computations of averages, (standard deviations, and the normal distribution) are now also possible, although it is not a metric scale. For example, such averages are therefore not ‘real’ averages, since no measured values are defined on a pseudo-metric scale between the discrete defined measured values; nevertheless such averages etc. can still be informative in descriptive statistics.

Against that backdrop, in this case study nominal, ordinal and pseudo-metric ordinal data are used, since metric data are not available.

Stakeholders’ assessment of core data

Structured survey about core data

The approached stakeholders were asked to fill in a questionnaire (Table 1), which is about university data that can be collected for quality monitoring and improvement in learning and teaching (L&T). For example, such data may be included in mandatory or non-obligatory quality reporting requirements, target agreements, rankings, etc.

Particularly, representatives of the stakeholder groups of students, teaching staff, quality management (QM) staff, and higher education institution (HEI) leadership were asked which of the following features apply to the 25 presented quantitative data (“core data”), which are listed in Table 1: “indispensable”, “useful”, “useless” as well as “regularly collected in my HEI”, “occasionally collected in my HEI” and “not collected in my HEI”. Respondents also had the choice of answering “do not know”. Moreover, respondents had an option to give open answers and add any comments or make further suggestions.

Table 1: Surveyed ‘core data’ items

Core data, selection of “the more uncommon or less widespread or novel items” from a more comprehensive set of core data	
L&T Environment	
Student interactions	1. Number & duration of student interactions with student admission system (SAS) (PDRLA)
	2. Number & duration of student interactions with student information system (SIS) (PDRLA)
	3. Number & duration of student interactions with students (e.g. via the HEI’s learning management system - LMS) (PDRLA)
Attraction of master & doctorate students	4. Number of master students who graduated at another institution
	5. Number of doctorate students who graduated at another institution
Teaching Competences & Processes	
	6. Number of teaching staff who participated in formal pedagogical training

Quality of teaching staff	7. Number of teaching staff who were awarded for their outstanding engagement in teaching based on a merit system
	8. Number of refereed publications during a certain period of time [TBD] per full time equivalent members of teaching staff
	9. Number of papers or reports presented at academic conferences during a certain period of time [TBD] per full time equivalent members of teaching staff
Learning Competences & Processes	
Quality learning & student engagement	10. Number & duration of student interactions with course activities (e.g. solution of exercises, watching videos, listening to lecture, participation in working groups, etc.) (e.g. via the HEI's LMS) (PDRLA)
	11. Number & duration of student interactions with course contents (e.g. via the HEI's LMS) (PDRLA)
	12. Number of repetitive visits to learning contents (e.g. during online learning) (PDRLA)
Learning Outcomes & Learning Gain & their Assessment	
Assessment of learning outcomes	13. Percentage of credits given in service-learning activities (e.g. students in community service activities & social work), in relation to total number of credits
Contact with work environment	14. Number of Bachelor degree theses made in cooperation with industry/external organisations 15. Number of Master degree theses made in cooperation with industry/external organisations
Gender balance in the transition from students to doctorate graduates	16. Ratio of female to male students who complete a doctorate
Employability	17. Number of Bachelor graduates who within a period of time [TBD] after graduation are unemployed
	18. Number of Bachelor graduates who found their first job (after graduation) in the region where the HEI is located
	19. Number of Bachelor graduates who within a period of time [TBD] after graduation are enrolled in further study
	20. Number of Master graduates who within a period of time [TBD] after graduation are unemployed
	21. Number of Master graduates who found their first job (after graduation) in the region where the HEI is located
	22. Number of Master graduates who within a period of time [TBD] after graduation are enrolled in further study
	23. Number of doctorate graduates who within a period of time [TBD] after doctorate are unemployed
	24. Number of doctorate graduates who found their first job (after doctorate) in the region where the HEI is located
	25. Number of doctorate graduates who within a period of time [TBD] after doctorate are enrolled in further study
Space for additions and comments	
Other, namely	

Assessments: overview

An overview of the pseudo-metric means gives some information on the attributed usefulness of the indicators per group. The option 'don't know' got the score 0, which means that it counts in the mean and lowers it in case of many 'don't knows'. Since 'don't know' is informative as well (e.g. on the quality of the question), it isn't removed from the data. Computing a mean excluding 'don't know' would also distort the data. It has to be repeated that these pseudo-metric data only provide a rough explorative tendency and shouldn't be used for calculations or statistics.

Since the groups are small (6 to 10 persons) an analysis of the item types per group is scientifically not appropriate.

Further discussion on the relationship between usefulness and collection will be made through a crosstabulation combining the sums of both item scores for all respondents. The crosstab per 'type' is the aggregate of the crosstabs of the items.

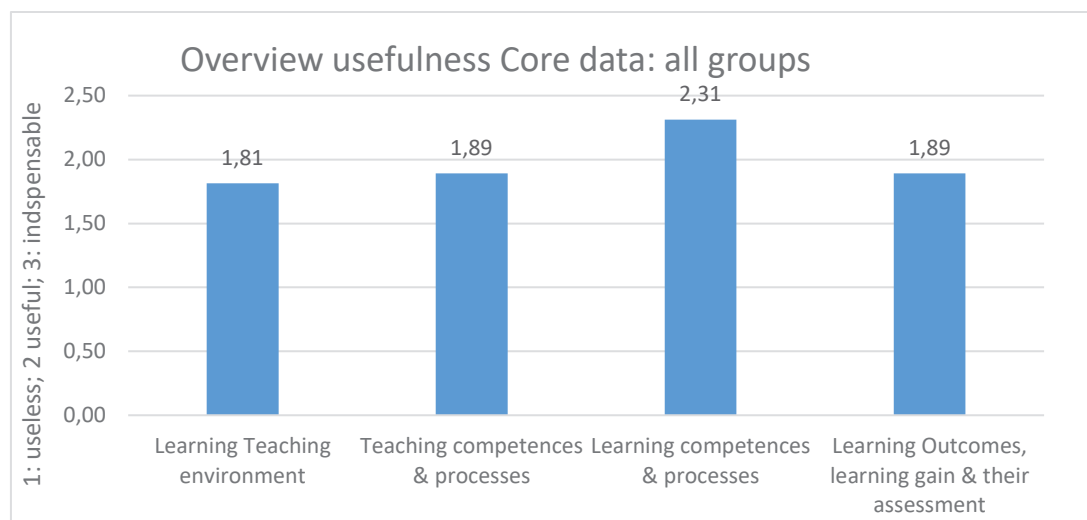


Figure 1: Usefulness of core data related to university quality performance in L&T as assessed by all respondents. 3: indispensable, 2: useful, 1: useless, 0: don't know; on the y-axis the arithmetic mean is plotted.

A first investigation of the data shows that there's little differentiation in assumed usefulness, except for learning competences and processes. The submitted core data on learning competences and processes are considered most useful by the whole group.

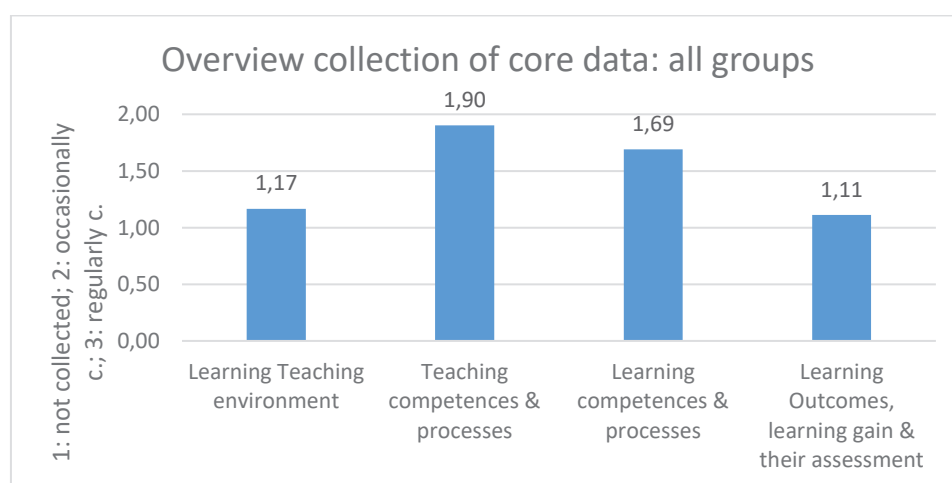


Figure 2: Collecting of core data related to university quality performance in L&T as assessed by all respondents. 3: regularly collected; 2: occasionally collected; 1: not collected; 0: don't know.

Compared to the graph above, some differences can be observed. It's the group's opinion that the questioned 'Teaching competences and processes' and 'Learning competences and processes' are collected most often. In this case the don't know may lower the mean for some questions.

Assessments: per type and per group

The subdivision in the 4 types of data and the interpretation of the means per type have to be treated with care. When the number of items per type is small, the impact of one item on the type score can be quite essential.

Learning and teaching environment

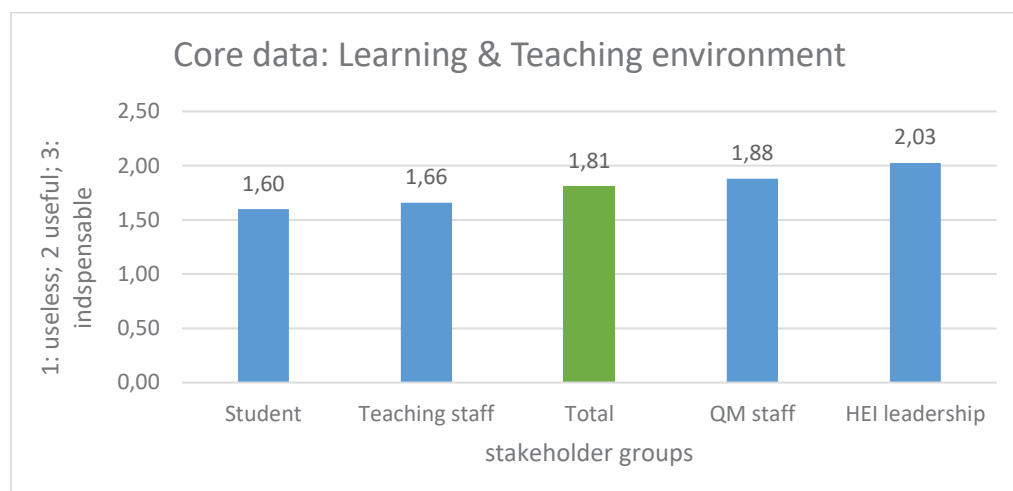


Figure 3: Usefulness of core data (Learning and teaching environment) related to university quality performance in L&T as assessed by all respondents

The usefulness of core data on 'Learning and teaching environment' is estimated a little higher by HEI leadership and QM staff than by teaching staff and students.

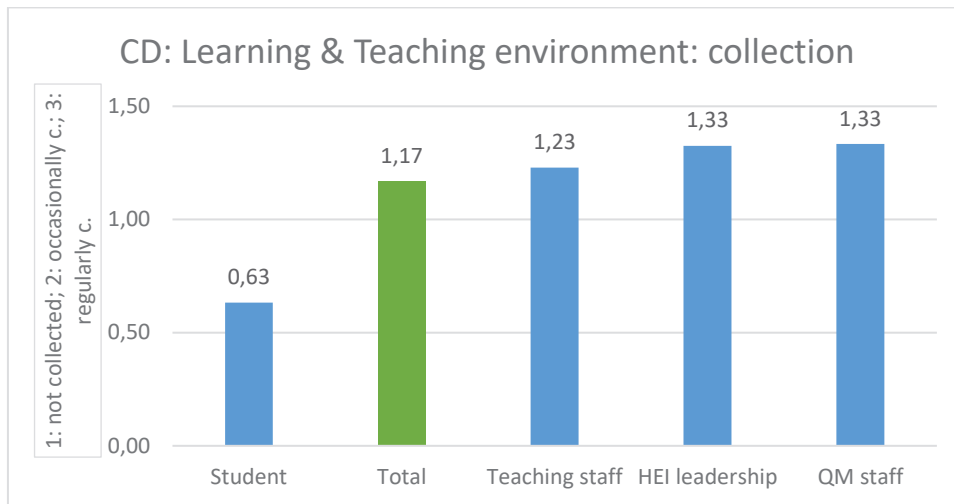


Figure 4: Collection of core data (Learning and teaching environment) related to university quality performance in L&T as assessed by all respondents

It's clear that students have little knowledge on the collection of core data on learning and teaching environment. There isn't much differentiation between the other groups.

Table 2: Crosstabulation of usefulness and collection of CD on Learning and teaching environment

Collection of data: L & T environment					
Usefulness	Don't know	Not collected	Occasionally	Regularly	Total
Don't know	12	3	3	0	18
Useless	22	1	3	0	26
Useful	34	4	13	27	78
Indispensable	9	4	3	16	32
Total	77	12	22	43	154

An important observation is that for half of the core data on Learning and teaching environment the stakeholders don't know if they are collected at Ghent University. The link indispensable/ useful and regularly/occasionally collected is quite ok, but still for a reasonable number of items the stakeholders don't know if they are collected.

Discussion on specific items:

The first 2 items on student interactions, 'Number & duration of student interactions with student admission system (SAS)' and 'Number & duration of student interactions with student information system (SIS)' are considered useless by

respectively 11 and 9 persons/31. For each item also 4 'don't knows' are registered. Respectively 22 and 24 persons don't know if these data are collected.

The other 3 items are considered useful or indispensable by a majority of the respondents. For items 3 and 5 half of the respondents don't know if it's collected or think it's not. Student interactions with students are considered useful or indispensable but 4 people think they're not collected and 9 don't know.

Teaching competences and processes

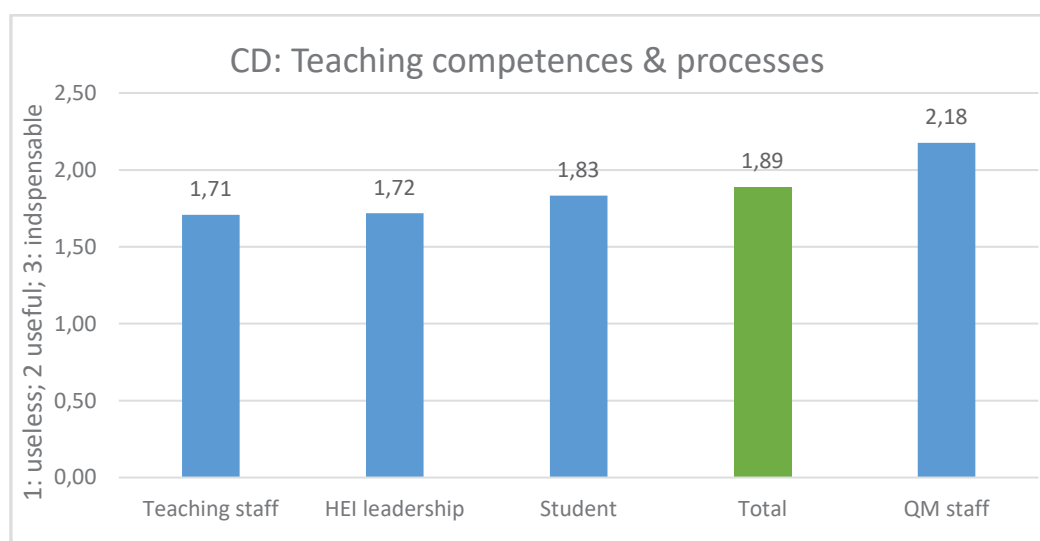


Figure 5: Usefulness of core data (Teaching competences and processes) related to university quality performance in L&T as assessed by all respondents

Here especially QM staff highly estimates the usefulness of the data on Teaching competences and processes.

All the items are considered useful (or more) by a majority of respondents. Information on pedagogical quality of the teaching staff is however viewed as more useful than data on research quality. The latter (item 8 and 9) are considered useless by respectively 7 and 9 persons.

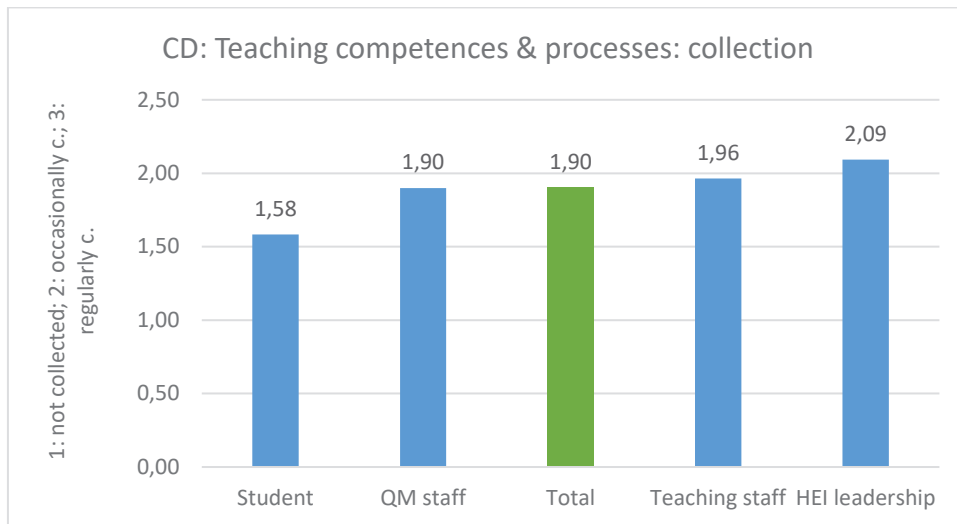


Figure 6: Collection of core data (Teaching competences and processes) related to university quality performance in L&T as assessed by all respondents

There’s hardly any difference between the groups. Here also students have lesser knowledge on the collection or more often think they aren’t collected.

Table 3: Crosstabulation usefulness and collection of CD on Teaching competences and processes

Collection of data: Teaching competences & processes					
Usefulness	Don't know	Not collected	Occasion ally	Regularly	Total
Don't know	0	1	3	4	8
Useless	8	1	4	7	20
Useful	19	8	13	33	73
Indispensable	2	2	2	16	22
Total	29	12	22	60	123

Compared to the previous type fewer ‘don’t know’ answers are registered. They are mainly due to items 7 (9), 8 (7) and 9 (10).

The few useful data that are seen as not collected are strongly due to item 7 (7 mentions). The collection of number of teaching staff awarded for outstanding engagement in teaching is causing some doubt. Of those, regarding it as at least useful, 4 people think it’s regularly collected, 6 occasionally and 7 don’t know.

The 7 useless things that are supposed be regularly collected, pertain to the research quality of teachers (items 8 and 9).

Learning competences and processes

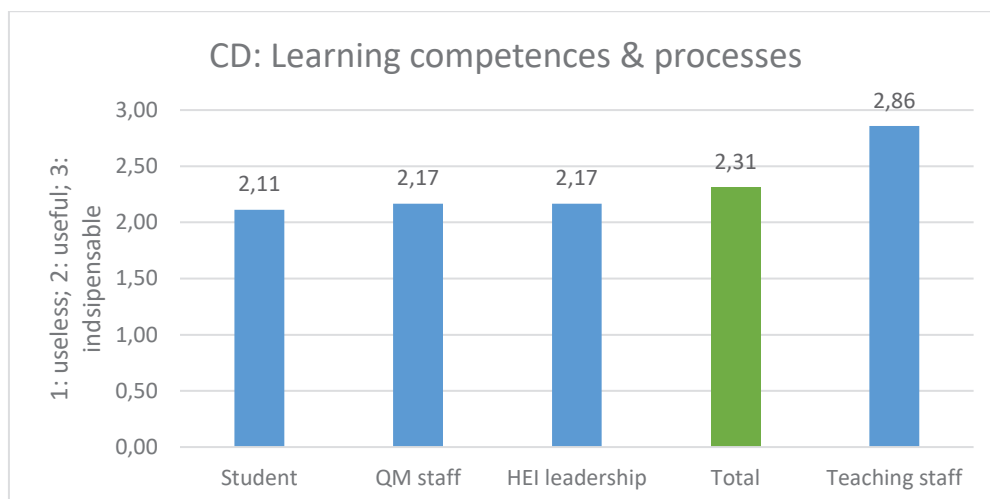


Figure 7: Usefulness of core data (Learning competences and processes) related to university quality performance in L&T as assessed by all respondents

For the whole group ‘Learning competences and processes’ are considered as the most useful core data. The 3 items relate to on student interactions with the Learning Management System. Maybe not surprisingly teaching staff is rating this higher than the other groups. They all have experience with the LMS through their own courses and can extract these data themselves, for their own course. The other groups haven’t got such an inside view on this matter.

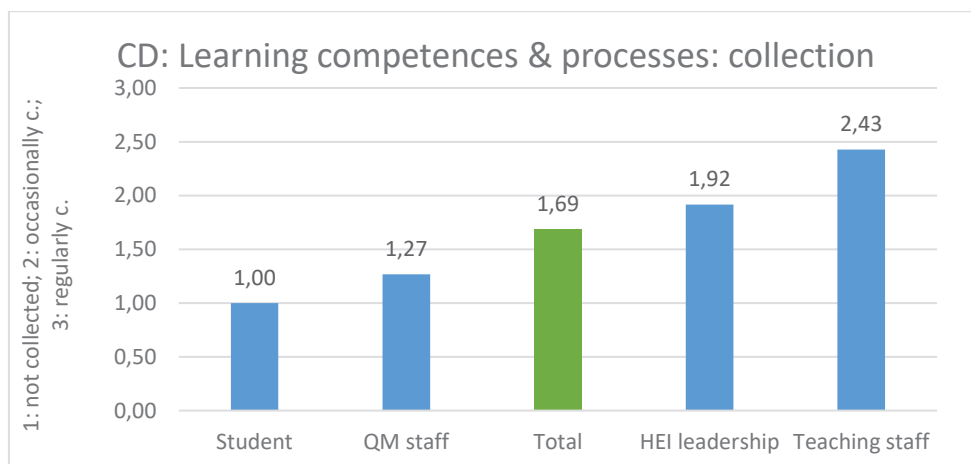


Figure 8: Collection of core data (Learning competences and processes) related to university quality performance in L&T as assessed by all respondents

A huge difference between people with teaching experience and QM staff and students. From the graph above, the usefulness for teaching staff stands out. This

graph shows that teaching staff and HEI leadership are more confident about the collection of the data on student interactions with course activities and contents.

Table 4: Crosstabulation usefulness and collection of CD on Learning competences and processes

Collection of data: Learning competences & processes					
Usefulness	Don't know	Not collected	Occasionally	Regularly	Total
Don't know	4	0	0	0	4
Useless	2	1	0	0	3
Useful	16	3	10	13	42
Indispensable	5	3	10	22	40
Total	27	7	20	35	89

Quite some 'don't know' on useful (and indispensable) items are observed.

The uncertainty on the collection (don't know and not collected) is spread over the 3 items.

Learning outcomes, learning gain and their assessment

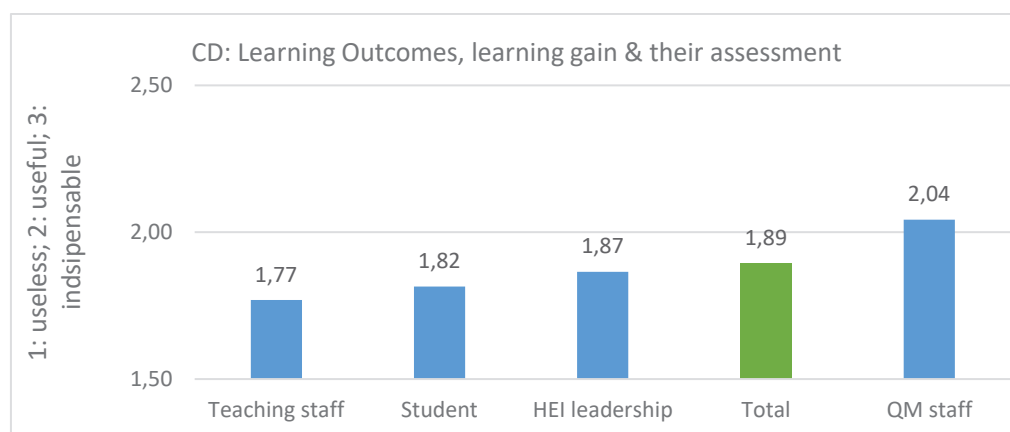


Figure 9: Usefulness of core data (Learning outcomes, learning gain and their assessment) related to university quality performance in L&T as assessed by all respondents

Especially QM staff thinks these items are useful. Assessment of learning outcomes, employability, contact with work environment,... are linked to the QM job. They're also promoted by the central Department of Educational Policy.

The items on finding a first job in the region, as well for bachelors, masters or doctorate graduates, are most often considered 'useless' (resp. 9, 9 and 12 times) or get a 'don't know' (5, 6 and 5).

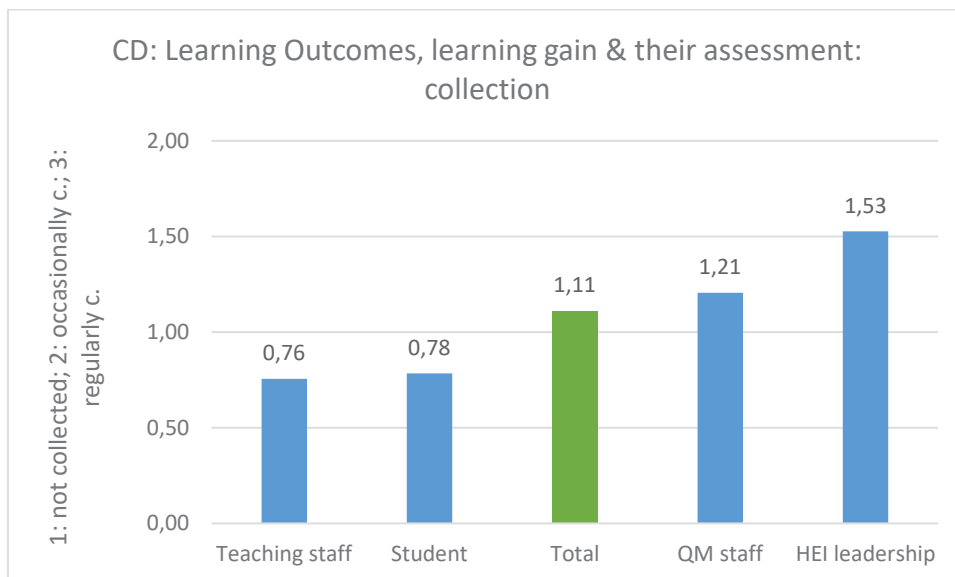


Figure 10: Collection of core data (Learning outcomes, learning gain and their assessment) related to university quality performance in L&T as assessed by all respondents

Just as the QM staff; also HEI leadership thinks quite some learning outcomes information is collected. Here, 13 items are involved. All of them receive from 8 to 18 ‘don’t know’ answers. Apparently the groups aren’t that well informed on the collection of these data.

Table 5: Crosstabulation usefulness and collection of CD on Learning outcomes, learning gain and their assessment

Collection of data: Learning outcomes, learning gain and their assessment					
Usefulness	Don't know	Not collected	Occasionally	Regularly	Total
Don't know	28	4	1	6	39
Useless	21	26	3	1	51
Useful	101	51	24	46	222
Indispensable	15	16	22	26	79
Total	165	97	50	79	391

The ‘don’t know’ answers were discussed in the previous topic.

There are quite some items that are considered to be useful (indispensable) and not collected or not known. There’s no real tendency, they appear to be spread over the items. 9 items pertain to employability. The last central employment survey was organized some years ago. Since then, there were only some local initiatives. In this context it’s not surprising that ‘don’t know’ is quite often chosen.

Additional assessments by active SQELT project participants

In addition to the items presented in Table 1, the active SQELT project participants were asked for their assessments on further core data, which are depicted in Table 6.

Table 6: Further surveyed performance data items (“core data”) as assessed by active SQELT project participants

Further surveyed performance indicators supplementing those in Table 2a to build a comprehensive set	
L&T Environment	
Learning resources	1. Number of book titles held in library
	2. Number of periodical print subscriptions held in library
	3. Number of periodical online subscriptions held in library
	4. Number of student workplaces held in library
	5. Number & duration of student interactions with library
	6. Average processing time of a library orders
Teaching resources	7. Number of Bachelor programs offered
	8. Number of Bachelor programs that are offered in a foreign language
	9. Number of joint/dual degree Bachelor programs
	10. Number of Master programs offered
	11. Number of Master programs that are offered in a foreign language
	12. Number of joint/dual degree Master programs
	13. Ratio of teaching staff number to student number
	14. Number of female teaching staff
	15. Number of teaching staff with foreign citizenship
	16. Number of teaching staff with verified doctorate qualifications (PhD or equivalent)
	17. Number of teaching staff with verified teaching qualifications
	18. Number of teaching staff participating in professional development activities
	19. Number of broad educational subject fields (ISCED97/2011) in which students have graduated in the latest year (disciplinary diversity)
	20. Number of beds available for teaching in university hospital & affiliated hospitals per 100 students (medicine)
Facilities & equipment	21. Number of students allowed to enrol in a subject/subject field
	22. Total institutional expenditure (per full-time student) on ICT for L&T
	23. Accessible internet bandwidth per student user
	24. Total institutional expenditure on laboratory resources
	25. Ratio of students to administrative staff
Financial income & investment	26. Percentage of total institutional expenditure dedicated to L&T activities (core education expenditure)
	27. Percentage of total institutional expenditure dedicated to the provision of student services (other than accommodation & student allowance)
	28. Percentage of total institutional expenditure dedicated to student accommodation & allowance
	29. Amount of third party funding/extra funding income in L&T per student (e.g. funded research projects for the advancement of L&T)
Student composition & special support	30. Number of Bachelor students enrolled
	31. Number of Master students enrolled
	32. Number of female (& male) Bachelor students enrolled
	33. Number of female (& male) Master students enrolled
	34. Number of female postgraduate students
	35. Number of male postgraduate students
	36. Number of full-time students
	37. Number of part-time students
	38. Number of international students
	39. Number of international incoming exchange student
	40. Number of international outgoing exchange students
	41. Number of students in international joint degree programmes
	42. Number of students with certain social origins [TBD]
Supportive environment	43. Number of students who need special access offerings (e.g. because of physical handicaps, dyslexia, autism, visual deficits, ...) (personalized data required for Learning Analytics – PDRLA)
	44. Number of students who need support for minorities (PDRLA)
	45. Number of students who use official HEI network options that meet their social, cultural, study interests (PDRLA)

	46. Number of students who use official HEI network options for linking to community/collaborating with the world of work (e.g. internships) (PDRLA)
Quality of incoming students	47. Grades of student entrance score/secondary school grades (PDRLA)
	48. Grades of university admission tests (PDRLA)
	49. Grades of introductory courses/examinations (e.g. in mathematics) (PDRLA)
Teaching Competences & Processes	
Quality of teaching staff	50. Number of teaching staff who participated in support activities for their adaptation of technology-enhanced L&T
	51. Number of teaching staff who participated in peer support systems for teaching staff/teaching observation
Learning Competences & Processes	
Quality learning & student engagement	52. Number & duration of student interactions with course activities (e.g. solution of exercises, watching videos, listening to lecture, participation in working groups, etc.) (e.g. via the HEI's LMS) (PDRLA)
	53. Number & duration of student interactions with course contents (e.g. via the HEI's LMS) (PDRLA)
	54. Number of repetitive visits to learning contents (e.g. during online learning) (PDRLA)
Learning Outcomes & Learning Gain & their Assessment	
Student success	55. Coursework marks (PDRLA)
	56. Number of students who do not complete the program modules they had started (PDRLA)
	57. Number of students who do not successfully complete the first year of study (PDRLA)
	58. Number of students who do not successfully complete undergraduate programs (Bachelor graduation)(PDRLA)
	59. Number of students who do not successfully complete undergraduate programs within the planned program duration (Bachelor graduation on time) (PDRLA)
	60. Number of students who do not successfully complete graduate programs (Master graduation) (PDRLA)
	61. Number of students who do not successfully complete graduate programs within the planned program duration (Master graduation on time) (PDRLA)
	62. Number of students who do not successfully complete their long first degree (long first degree graduation)(PDRLA)
	63. Number of students who do not successfully complete their long first degree within the planned program duration (long first degree graduation on time) (PDRLA)
	64. Number of students who do not successfully complete postgraduate programs (postgraduate graduation) (PDRLA)
	65. Number of students who do not successfully complete postgraduate programs within the planned program duration (postgraduate graduation on time) (PDRLA)
	66. Number of students who exit HEI per year (PDRLA)
	67. Number of students who exit HEI per year to change to another HEI (PDRLA)
	Assessment of learning outcomes
69. Examination marks (PDRLA)	
70. Grades of students' final examinations (PDRLA)	
71. Number of Bachelor degrees awarded	
72. Number of Master degrees awarded	
73. Number of doctorate degrees (PhD or equivalent) awarded	
Contact with work environment	74. Number of doctorate degrees that are awarded to international doctorate candidates
	75. Number of Bachelor students actually doing an internship (PDRLA)
	76. Number of Master students actually doing an internship (PDRLA)
Employability	77. Number of Bachelor teaching practitioners from outside the HEI departments
	78. Number of Master teaching practitioners from outside the HEI departments
	79. Number of Master graduates who within a period of time [TBD] after their long first degree graduation are unemployed
	80. Number of Master graduates who within a period of time [TBD] after their long first degree graduation are enrolled in further study

The 105 items were scored in a quite similar way by the 2 members. The scores by the third member are somewhat divergent and more severe. Since it's impossible to discuss all items, some general tendencies will be recorded.

Most of the items are considered useful or even indispensable by the majority of the respondents. Types that are unanimously regarded as useful or indispensable are

'student success' and **'quality of incoming students'**. Some specific items are unanimously considered at least useful, namely some items on **'teaching resources'**: staff student ratio, number of teaching staff with verified doctorate and teaching qualifications, number of teaching staff participating in teaching development activities. Some more items, spread over different types: **examination marks, grades of students' final examinations**, total institutional expenditure on ICT for LA, percentage of total institutional expenditure dedicated to LA, percentage of total institutional expenditure dedicated to student services.

Indispensable, for 2 participants, are **student composition items**, and **number of bachelor and master and doctorate degrees awarded**.

None of the 'Learning resources' items are considered indispensable. Two are considered useless by everyone, namely number of student workplaces in the library and average processing time of library orders. Some other predominantly useless items: number of teaching staff who participated in peer support systems, number of female teaching staff, number of beds available for teaching, number of students allowed to enrol (free entrance in most programs in Flanders), percentage of institutional expenditure dedicated to student accommodation, number of refereed publications, number of papers or reports presented at conferences, number of bachelor, master and doctorate graduates who found their first job in the region of the HEI.

As to the collection, **teaching resources, student composition, student success** (for bachelor and master), and **assessment of learning outcomes** are regularly collected at Ghent University.

Some data, e.g. library and research data, belong to the area of the Research Department. They do appear in annual reports of the central library, but aren't always known by or easily available to other departments, as Educational Policy. Contacts with the environment aren't clear either; this is especially a faculty and even a program issue, which isn't always recorded. Central surveys on employability have been put on hold the last years, which explains that the participants don't know if these data are collected.

Stakeholders' assessment of performance indicators

Structured survey about performance indicators

The approached stakeholders were asked to fill in a questionnaire (Table 7), which is about university performance indicators (PIs), broadly construed, that can be reported for quality monitoring and improvement in L&T. For example, such PIs may be included in mandatory or non-obligatory quality reporting requirements, target agreements, rankings, etc.

Particularly, representatives of the stakeholder groups of students, teaching staff, QM staff, and HEI leadership were asked which of the following features apply to the 31 presented PIs which are listed in Table 7: “indispensable”, “useful” and “useless” as well as “regularly monitored in my HEI”, “occasionally monitored in my HEI” and “not monitored in my HEI”. Respondents also had the choice of answering “do not know”. Moreover, respondents had an option to give open answers and add any comments or make further suggestions.

Table 7: Surveyed performance indicators (PIs), broadly construed

Performance indicators, selection of “the more uncommon or less widespread or novel items” from a more comprehensive set of performance indicators	
L&T Environment	
Learning resources	1. Learning diversity offered with respect to course structures to do justice to different learner types & learning processes (PDRLA)
Student interactions	2. Student interactions with academic advisors (TBDBE)
Further education & lifelong learning	3. Student interactions with faculty (e.g. communication, work) outside of class & coursework (TBDBE)
Stakeholder participation in L&T quality development & evaluation	4. Compatibility of studies & work (e.g. flexible models for adapting study times to working hours) (TBDBE)
	5. Recognition of non-academic achievements (TBDBE)
	6. Student participation in curriculum development
	7. Employer participation in curriculum development
Teaching Competences & Processes	
Quality teaching & teaching staff engagement	8. Teaching staff subject-matter competences (TBDBE)
	9. Teaching staff methodological competences (TBDBE)
	10. Teaching staff encouraging students' autonomous thinking & acting (TBDBE)
	11. Fostering sustainability values (social, ecological, economical) (TBDBE)
	12. Teaching staff feedback to students (e.g. on work in progress, test, completed assignments) (TBDBE)
Learning Competences & Processes	
Quality learning & student engagement	13. Student workload (TBDBE)
	14. Activity learning offers (e.g. problem-based learning; research-based learning; internships) (TBDBE)
	15. Provision of training in study skills & self-regulated learning techniques (TBDBE)
	16. Quality flexible learning (flexibility in the requirements, time & location of study, teaching, assessment & certification) (TBDBE)
	17. Quality mobile learning (learning across multiple contexts, through social & content interactions, using personal electronic devices) (TBDBE)
	18. Quality personal (bespoke) learning (TBDBE) (PDRLA)
Learning Outcomes & Learning Gain & their Assessment	

Constructive alignment of programs/ courses	19. Design & adjustment of teaching & assessments/examinations to defined intended learning outcomes (TBDBE)
Study experience satisfaction	20. Freshman satisfaction with study experience (TBDBE) (PDRLA)
	21. Undergraduate satisfaction with study experience (TBDBE) (PDRLA)
	22. Graduate satisfaction with study experience (TBDBE) (PDRLA)
	23. Postgraduate satisfaction with study experience (TBDBE) (PDRLA)
Learning gain	24. Alumni satisfaction with study experience/student life cycle (TBDBE)
	25. Student learning gain in subject-matter competences (TBDBE) (e.g. by comparison of knowledge & skills before & after learning phases) (PDRLA)
	26. Student learning gain in methodological competences (TBDBE) (e.g. by comparison of knowledge & skills before & after learning phases) (PDRLA)
	27. Student learning gain in learning strategies (TBDBE) (e.g. by comparison of knowledge & skills before & after learning phases) (PDRLA)
	28. Student learning gain in social competences (e.g. team, communication & leadership competences; empathy; ability to cooperate; ability to solve conflicts) (TBDBE) (e.g. by comparison of knowledge & skills before & after learning phases) (PDRLA)
Employability	29. Student learning gain in self-competences (e.g. self-determination; capability of decision & learning; flexibility of action; ability to reflect; sovereignty) (TBDBE) (e.g. by comparison of knowledge & skills before & after learning phases) (PDRLA)
	30. Possibility of inclusion of work experience & elements related to work practice (TBDBE)
	31. Employer satisfaction with graduates (TBDBE)
Space for additions and comments	
Other, namely	

Assessments: overview

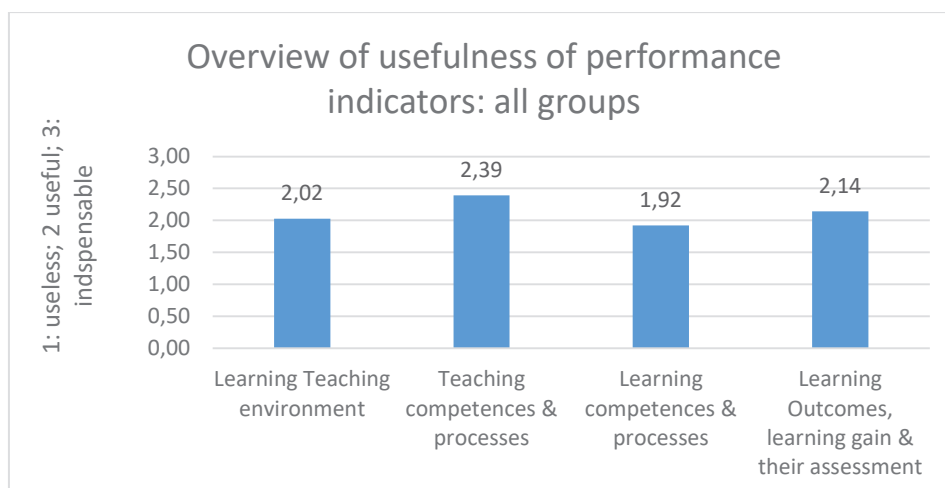


Figure 11: Usefulness of performance indicators related to university quality performance in L&T as assessed by all respondents. 3: indispensable, 2: useful, 1: useless, 0: don't know; on the y-axis the arithmetic mean is plotted.

With regard to performance indicators, there isn't much difference between the esteemed usefulness. Instruments measuring/assessing 'Teaching competences and processes' are judged most useful (by all stakeholders). Total scores are a little higher than those of core data.

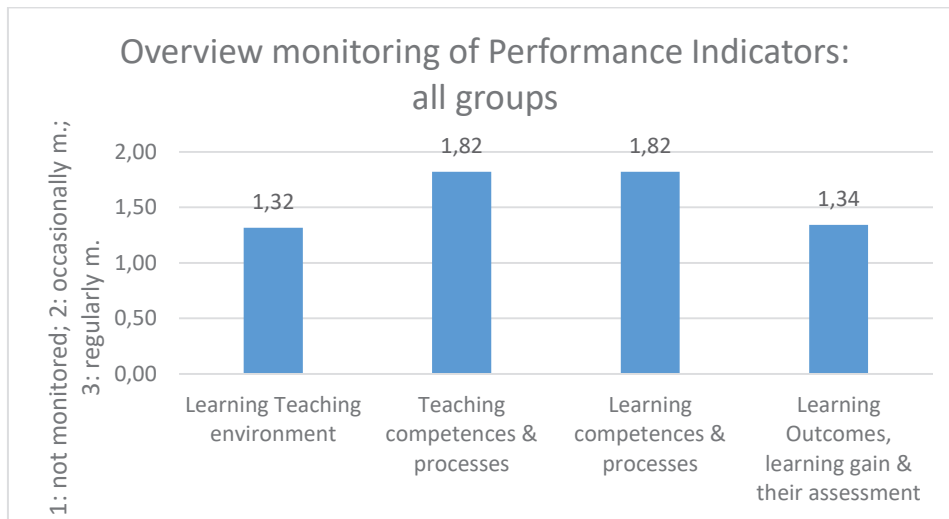


Figure 12: Monitoring of performance indicators related to university quality performance in L&T as assessed by all respondents. 3: regularly monitored, 2: occasionally monitored, 1: not monitored, 0: don't know; on the y-axis the arithmetic mean is plotted.

The group thinks that 'Teaching competences and processes' and 'Learning competences and processes' are most often collected. Most of the items under the 'Teaching competences and processes' are collected through the course evaluations by students. This is also the case for part of the items for 'Learning competences and processes'. Since the course evaluations belong to the backbone of the educational Quality monitoring, their contents is well known by all the stakeholders.

Assessments: per type and per group

Learning and teaching environment

The items under this heading are quite diverse. Items on learning resources are put next to further education, student interactions and stakeholder participation in curriculum development.

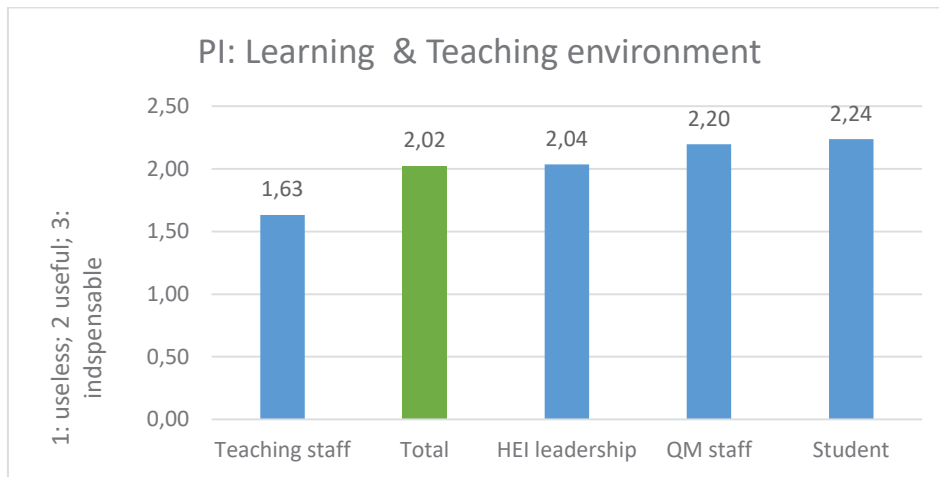


Figure 13: Usefulness of performance indicators (Learning and teaching environment) related to university quality performance in L&T as assessed by all respondents

The groups consider these items quite useful. The teaching staff is somewhat less enthusiastic.

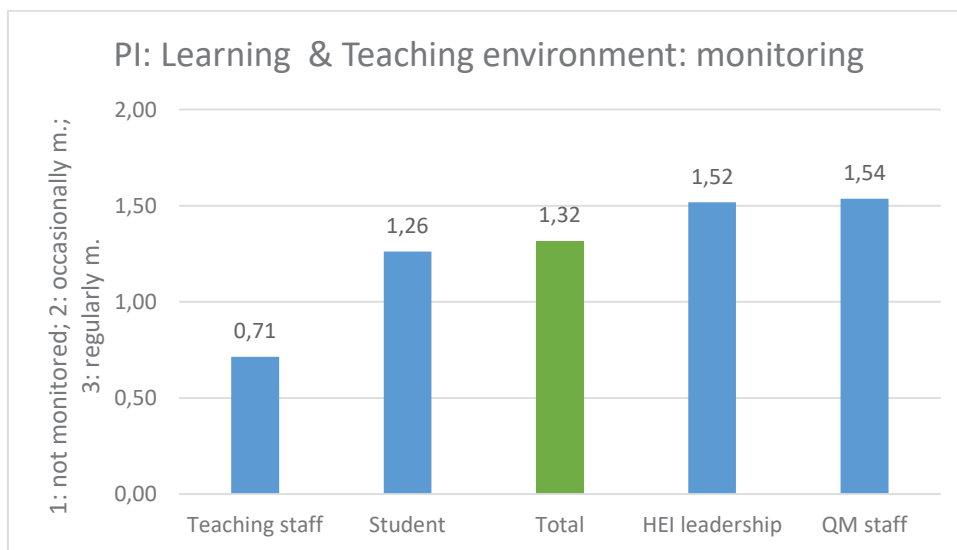


Figure 14: Monitoring of performance indicators (Learning and teaching environment) related to university quality performance in L&T as assessed by all respondents

The teaching staff also has more doubts on the collection of the items at Ghent University than the other groups.

Table 8: Crosstabulation usefulness and collection of PI on Learning and teaching environment

Collection of data: L & T environment					
Usefulness	Don't know	Not collected	Occasionally	Regularly	Total
Don't know	18	3	2	0	23
Useless	5	7	2	0	14
Useful	33	27	29	18	107
Indispensable	8	13	12	34	67
Total	64	50	45	52	211

As is the case nearly everywhere: hardly any useless PI's are collected. The majority of the indispensable PI's are regularly or occasionally collected. There's more doubt about the useful PI's: for a reasonable number the respondents don't know if they are collected or think they're not.

Items with the best link usefulness/collected are item 6 (student participation in curriculum development), 1 (learning diversity) and 2 (student interactions with academic advisors). Student participation in curriculum development is a common practice at Ghent University. Learning diversity is an important topic, which has recently gained impact through the central policy focus on active learning.

The item on student interactions with faculty (item 3) is not clear to the respondents. The usefulness is doubtful as is the collection: 11 persons don't know and 14 think it's not collected. The item on compatibility between studies and work also causes doubt: 12 persons don't know about collecting and 7 think it's not collected.

Teaching competences and processes

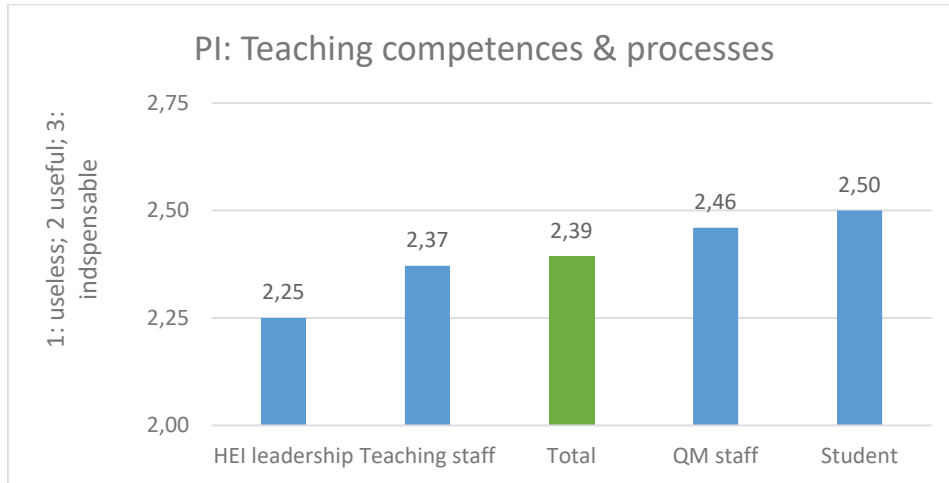


Figure 15: Usefulness of performance indicators (Teaching competences and processes) related to university quality performance in L&T as assessed by all respondents

From the overview it was clear that Teaching competences are seen as the most useful performance indicators. Hardly any item is seen (by anyone) as useless. Scores of all groups are quite high. HEI leadership has a somewhat lower score. As said before, items 8, 10 and 12 are part of the course and programme evaluations by students. It's rather clear that teachers expect more from the students in the L & T process than from themselves. Maybe they take teacher competences for granted. For students and QM staff they are very useful.

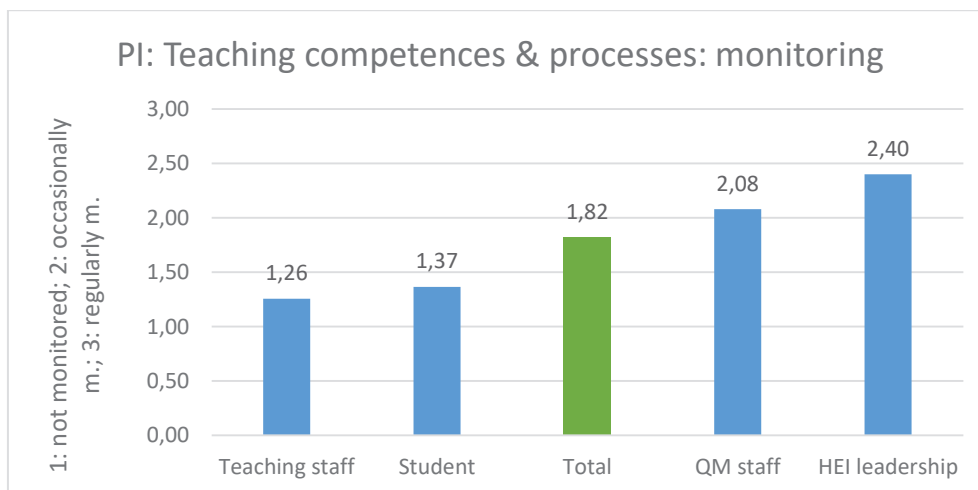


Figure 16 : Monitoring of performance indicators (Teaching competences & processes) related to university quality performance in L&T as assessed by all respondents

People most close to QA are quite confident in the collection of the data. They are closely involved in the processing and follow up of the evaluations by students. Teachers and students have more doubts. Strangely enough.

Table 9: Crosstabulation usefulness and collection of PI on Teaching competences and processes

Collection of data: Teaching competences & processes					
Usefulness	Don't know	Not collected	Occasionally	Regularly	Total
Don't know	9	1	2	1	13
Useless	0	1	0	0	1
Useful	16	3	19	14	52
Indispensable	16	9	17	46	88
Total	41	14	38	61	154

There's a nice link between usefulness and collection. The few indispensable and not collected links are spread over 4 items. The most highly valued item is item 12, (teaching staff feedback to students).

Learning competences and processes

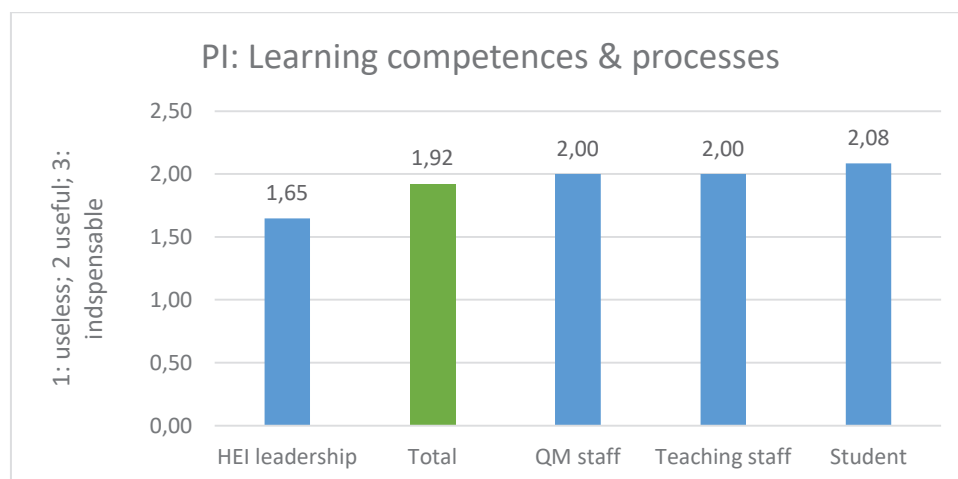


Figure 17: Usefulness of performance indicators (Learning competences and processes) related to university quality performance in L&T as assessed by all respondents

The results are quite homogenous, except for HEI leadership.

The items 13 to 15 are unanimously considered to be useful or indispensable. Quite some 'don't know' on the items 16 and 17 (quality flexible and mobile learning). Item 18 is ambiguous and results in 13 'don't know' and 3 'useless' answers.

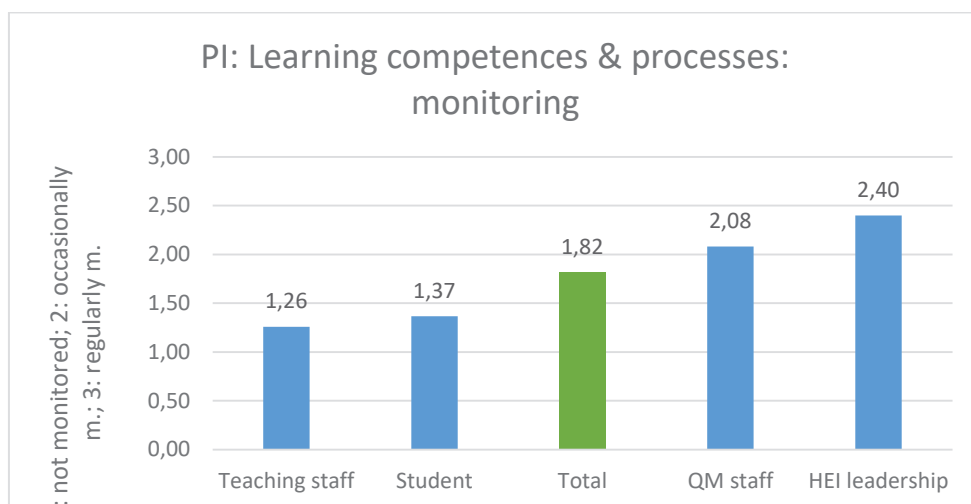


Figure 18: Monitoring of performance indicators (Learning competences and processes) related to university quality performance in L&T as assessed by all respondents

As well as for teaching competences, those professionally involved in QA seem to be best informed on the collection of PI’s on learning competences. Teachers are well informed on learning competence core data, but less on possible PI’s on the matter.

Student workload (item 13) is the ‘clearest’ item. Quality personal (bespoke) learning (item 18) is not clear. 13 persons don’t know if it’s useful and 3 consider it useless. 21 don’t know if it’s collected and 8 think it’s not collected. There are also serious doubts on the collection of quality of flexible learning (16) and quality of mobile learning (17). The difference between both couldn’t be made clear.

Table 10: Crosstabulation usefulness and collection of PI on Learning competences and processes

Collection of data: Learning competences & processes					
Usefulness	Don't know	Not collected	Occasionally	Regularly	Total
Don't know	29	2	0	0	31
Useless	5	3	0	0	8
Useful	36	15	20	17	88
Indispensable	10	9	16	23	58
Total	80	29	36	40	185

The less clear items mentioned above, are responsible for the red numbers.

This topic is a bit ‘blurred’ by the items 16 to 18.

Learning outcomes, learning gain and their assessments

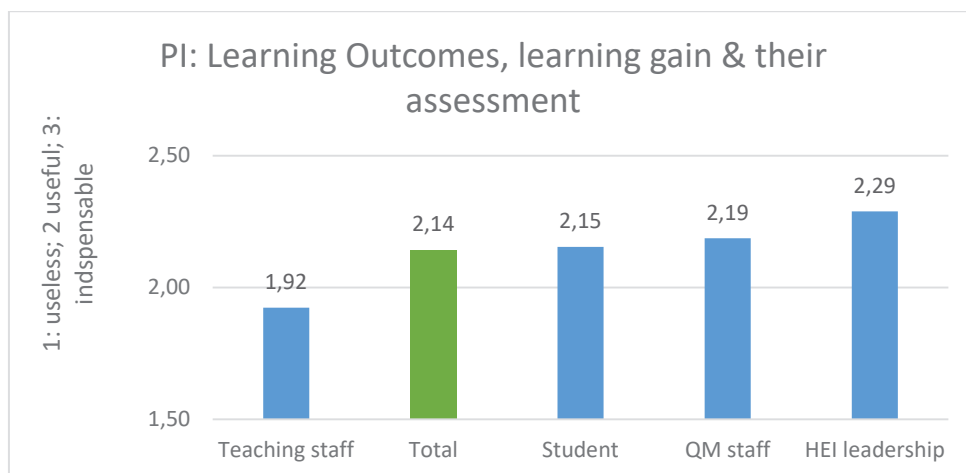


Figure 19: Usefulness of performance indicators (Learning outcomes, learning gain and their assessment) related to university quality performance in L&T as assessed by all respondents

This type is dominated by 5 items on study experience satisfaction and 5 on learning gain. The scores are quite high. Most of the items are considered to be at least useful.

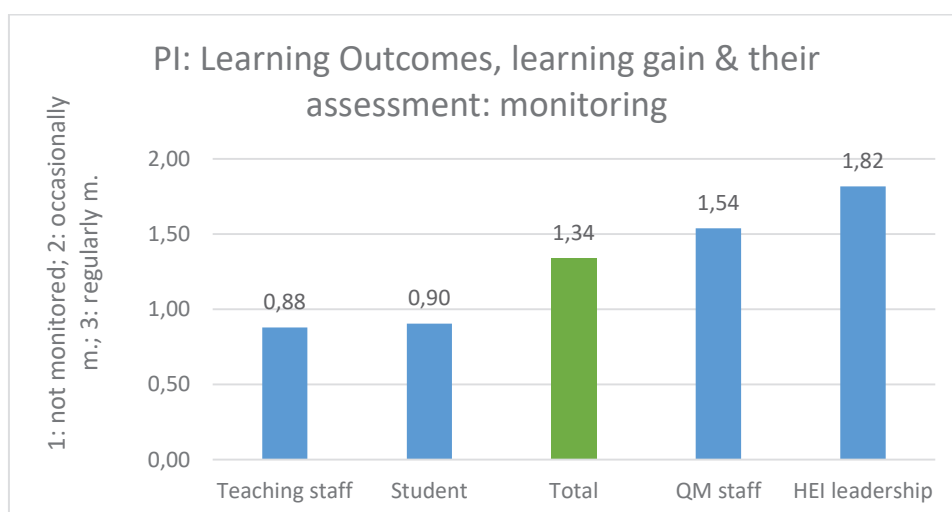


Figure 20: Monitoring of performance indicators (Learning outcomes, learning gain and their assessment) related to university quality performance in L&T as assessed by all respondents

The scores on the monitoring of these items are rather low. This pertains to the fact that people have no idea how student learning gain (item 25 till 29) is collected.

Table 11: Crosstabulation usefulness and collection of PI on Learning outcomes, learning gain and their assessment

Collection of data: Learning outcomes, learning gain and their assessment					
Usefulness	Don't know	Not collected	Occasionally	Regularly	Total
Don't know	39	1	1	0	41
Useless	8	2	4	8	22
Useful	58	35	54	37	184
Indispensable	31	27	35	75	168
Total	136	65	94	120	415

The 'don't know' and 'not collected' are primarily caused by the items on student learning gain. It could be interesting, but isn't collected or one doesn't know.

Additional assessments by active SQELT project participants

In addition to the items presented in Table 7, the active SQELT project participants were asked for their assessments on further core data, which are depicted in Table 12.

Table 12: Further surveyed performance indicators (PIs), broadly construed, as assessed by active SQELT project participants

Further surveyed performance indicators supplementing those in Table 2a to build a comprehensive set	
L&T Environment	
Learning resources	Quality of library services (TBDBE)
	Diversity of courses offered (with respect to topics, class options & sizes, time, place, lecturers, etc.) to guarantee that the study programs can be completed within the regular time period (TBDBE)
	Quality organization of study programs (e.g. transparency of entrance requirements/admission regulations, access to classes, average class size, completeness of courses offered compared to the study guide, transparency of the examination system) (TBDBE)
Teaching resources	Opportunity offers for studying abroad (TBDBE) (PDRLA)
	Possibility of inclusion of Bachelor study periods abroad Possibility of inclusion of Master study periods abroad
Facilities & equipment	Quality of lecture halls & seminar rooms (TBDBE)
	Quality of IT services (TBDBE)
Supportive environment	Quality of laboratory facilities (TBDBE)
	Provision of student support to succeed academically (TBDBE)
	Quality of learning support services (e.g. tutoring services, writing centre, student exchange centre, learning management system) (TBDBE) (PDRLA)
	Measures of encouraging contact among students from different backgrounds (social, ethnic, religious, etc.)
	Provision of opportunities for students to be involved socially (TBDBE)
	Provision of student support for managing non-academic responsibilities (e.g. work, family, etc.) (TBDBE)
Provision of student support for overall well-being (e.g. recreation, health care, sports, counselling, etc.) (TBDBE)	
	Quality offer of campus activities & events for students (e.g. performing arts, sports events, etc.) (TBDBE)

	Quality offer for students to attend events that address important social, economic, sustainability, or political issues (TBDBE) (PDRLA)
	Equity student support (TBDBE)
	Institutional recognition of teaching (TBDBE)
Student interactions	Student interactions with students (TBDBE)
	Student interactions with student services staff (e.g. career services, student activities, housing, etc.) (TBDBE)
	Student interactions with other administrative staff & offices (e.g. registrar, financial aid, etc.) (TBDBE)
	Student experience in discussions with diverse others (TBDBE)
Further education & lifelong learning	Mediation of motivation for lifelong learning (TBDBE)
Stakeholder participation in L&T quality development & evaluation	Student participation in student evaluations of courses & teaching (SECT)
	Student participation in decision-making related to student evaluations of courses & teaching
	Teaching staff participation in student evaluations of courses & teaching
	Teaching staff participation in decision-making related to student evaluations of courses & teaching
Teaching Competences & Processes	
Teaching staff workload	Teaching workload of teaching staff (TBDBE)
Quality teaching & teaching staff engagement	Teaching quality in general (TBDBE)
	Quality organization of course sessions (TBDBE)
	Teaching staff respect & interest for students (TBDBE)
	Teaching staff pedagogical knowledge & skills (e.g. knowledge of teaching models & learning processes) (TBDBE)
	Teaching staff sensitivity to class level & progress (TBDBE)
	Teaching staff social competences (e.g. team, communication & leadership competences) (TBDBE)
	Bedside teaching (medicine) (e.g. concerning mentoring, suitability of rooms & variety of diagnostic techniques applied) (TBDBE)
	Integration of pre-clinical/theoretical & clinical courses (medicine) (TBDBE)
	Quality skills labs & training centres (e.g. maintenance, accessibility, technical facilities, mentoring) (medicine) (TBDBE)
Teaching staff satisfaction with teaching quality (TBDBE)	
Learning Competences & Processes	
Quality learning & student engagement	Course quality (TBDBE)
	Training offers to reflect upon student learning approaches (TBDBE)
	Student experience of learning quality in general (TBDBE)
	Development of student competences of self-learning (TBDBE)
	Teaching staff assistance in organising peer learning activities (TBDBE)
	Integration of practical experience with patient contact into the study program (medicine) (TBDBE)
	Student engagement in general (TBDBE)
Learning Outcomes & Learning Gain & their Assessment	
Constructive alignment of programs/ courses	Clearly formulated intended learning outcomes (e.g. goals of study modules & courses) (TBDBE)
	Teaching staff awareness of existing intended learning outcomes (TBDBE)
Learning gain	Student learning gain in higher-order learning (TBDBE) (e.g. by comparison of knowledge & skills before & after learning phases) (PDRLA)
	Student learning gain in reflective & integrative learning (TBDBE) (e.g. by comparison of knowledge & skills before & after learning phases) (PDRLA)
	Student learning gain in quantitative reasoning (TBDBE) (e.g. by comparison of knowledge & skills before & after learning phases) (PDRLA)
	Student learning gain in collaborative learning (TBDBE) (e.g. by comparison of knowledge & skills before & after learning phases) (PDRLA)
	Student learning gain in interdisciplinarity (TBDBE) (e.g. by comparison of knowledge & skills before & after learning phases)
	Student learning gain in transdisciplinarity (TBDBE) (e.g. by comparison of knowledge & skills before & after learning phases)
Assessment quality	Fairness of assessments/examinations
	Timeliness of assessments/examinations
	Quality of assessment/examination formats (TBDBE)
Contact with work environment	Possibility of inclusion of internships/ phases of practical experience or external projects in the Bachelor curriculum
Employability	Possibility of inclusion of internships/ phases of practical experience or external projects in the Master curriculum
	Academic & career counselling for students (TBDBE)

For PI's, the score 'useful' is clearly more prominent than the score 'indispensable'. Altogether, most of the items are considered at least useful. No notable observations are made. Some predominantly indispensable items are mentioned below:

Provision of student support to succeed academically
Student participation in student evaluations of courses & teaching
Teaching quality in general
Teaching staff subject-matter competences
Teaching staff feedback to students (e.g. on work in progress, test, completed assignments)
Student workload
Course quality
Clearly formulated intended learning outcomes (e.g. goals of study modules & courses)
Undergraduate satisfaction with study experience
Graduate satisfaction with study experience
Quality of assessment/examination formats
Possibility of inclusion of internships/ phases of practical experience or external projects in the Master curriculum

They all pertain to **the core of the learning and teaching experience** and play a central role in Ghent University's quality assurance. The items cover the full process from learning outcomes, over the study experience, teaching methods, internships, student support, teaching quality to quality of examinations and satisfaction with the study experience.

Some items, however, are considered useless, namely provision of student support for managing non-academic responsibilities, quality offer of campus activities and events, student interactions with students, student interactions with other administrative staff.

The following items provoke a majority of 'don't know' answers: student experience in discussions with diverse others, integration of pre-clinical/theoretical and clinical courses (medicine), training offers to reflect upon student learning approaches, student learning gain in higher order learning, student learning gain in reflective and integrative learning.

As to the monitoring of the data, the following items are monitored regularly: study experience satisfaction of freshmen, undergraduates and graduates, clearly formulated intended learning outcomes, student workload, course quality, teaching staff feedback to students, teaching staff encouraging students' active and autonomous thinking, student participation in student evaluations of courses and teaching, teaching staff participation in decision making related to student evaluations.

Not monitored and/or no knowledge about monitoring:

Measures of encouraging contact among students from different backgrounds (social, ethnic, religious, etc.)
Mediation of motivation for lifelong learning
Teaching staff sensitivity to class level & progress
Teaching staff social competences (e.g. team, communication & leadership competences)

It's clear that the items on learning gain cause serious doubt.

Stakeholders' assessment of quality evaluation instruments

Structured survey about quality evaluation instruments

The approached stakeholders were asked to fill in a questionnaire (Table 13), which is about quality evaluation instruments (QEI) that can be used for quality monitoring and improvement in L&T.

Particularly, representatives of the stakeholder groups of students, teaching staff, QM staff, and HEI leadership were asked which of the following features apply to the 15 presented QEIs which are listed in Table 13: “indispensable”, “useful” and “useless” as well as “regularly applied in my HEI”, “occasionally applied in my HEI” and “not applied in my HEI”. Respondents also had the choice of answering “do not know”. Moreover, respondents had an option to give open answers and add any comments or make further suggestions.

Table 13: Surveyed quality evaluation instruments (QEIs)

Quality evaluation instruments, selection of “the more uncommon or less widespread or novel items” from a more comprehensive set of quality evaluation instruments	
Teaching Competences & Processes	
Quality teaching & teaching staff engagement	1. Quality procedures of teaching staff recruitment (e.g. responsibilities; recruitment & selection process) for lecturers & associate professors
	2. Quality procedures of teaching staff recruitment (e.g. responsibilities; recruitment & selection process) for full professors
	3. Teaching staff peer review or participating observation of courses
Learning Competences & Processes	
Quality learning & student engagement	4. Reports generated from Learning Analytics tools such as BlackBoard, Moodle, Desire2Learn (e.g. individual user tracking, course based) (PDLRA)
	5. Social network analysis generated from Learning Analytics tools such as SNAPP (Social Networks Adapting Pedagogical Practice) (e.g. visualization of student relationships established through participation in LMS discussions) (PDLRA)
	6. Individual & group monitoring generated from Learning Analytics tools such as GLASS (Gradient's Learning Analytics System) (e.g. visualization of student & group online event activity) (PDLRA)
	7. Discourse analysis generated from Learning Analytics tools such as COHERE (e.g. visualization of social & conceptual networks & connections) (PDLRA)
	8. Student self-reports on their dispositions, values & attitudes towards learning, i.e. collection of learner data & pedagogical descriptors (e.g.

	students' ability in deactivating negative learning emotions, students' learning strategies) (PDRLA)
Learning Outcomes & Learning Gain & their Assessment	
Learning gain	9. Student dashboards & monitoring generated from Learning Analytics tools such as Student Activity Meter (e.g. visualization of student activity for promotion of self-regulated learning processes) (PDRLA)
	10. Learning content interaction generated from Learning Analytics tools such as LOCO-Analyst (e.g. providing insight into individual & group interactions with the learning content) (PDRLA)
Assessment quality	11. Student evaluation of assessments/examinations (peer grading)
Prediction of student success	12. Predictive models for student performance
	13. Predictive models for student attrition
Accreditation	14. Accreditation (external) of study programs
	15. Institutional accreditation (external) of QMS in L&T (program accreditation carried out by HEIs themselves)
Space for additions and comments	
Other, namely	

Assessments: overview

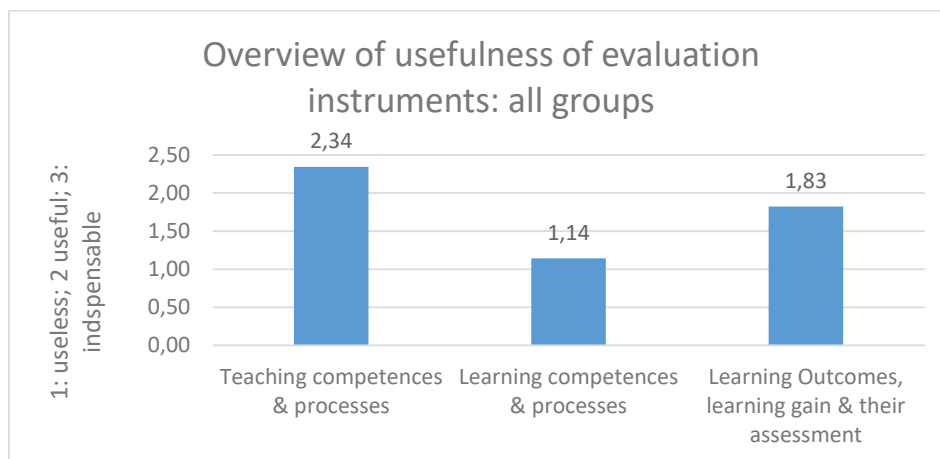


Figure 21 : Usefulness of evaluation instruments related to university quality performance in L&T as assessed by all respondents. 3: indispensable, 2: useful, 1: useless, 0: don't know; on the y-axis the arithmetic mean is plotted.

There's a huge differentiation in the usefulness of the different types. It's clear that our stakeholders aren't familiar with SNAPP, GLASS, COHERE, and reports from Learning Analytics tools. Consequently, they have no idea about the application at Ghent University. The Learning outcomes topic is quite heterogeneous. Learning gain again isn't well known.

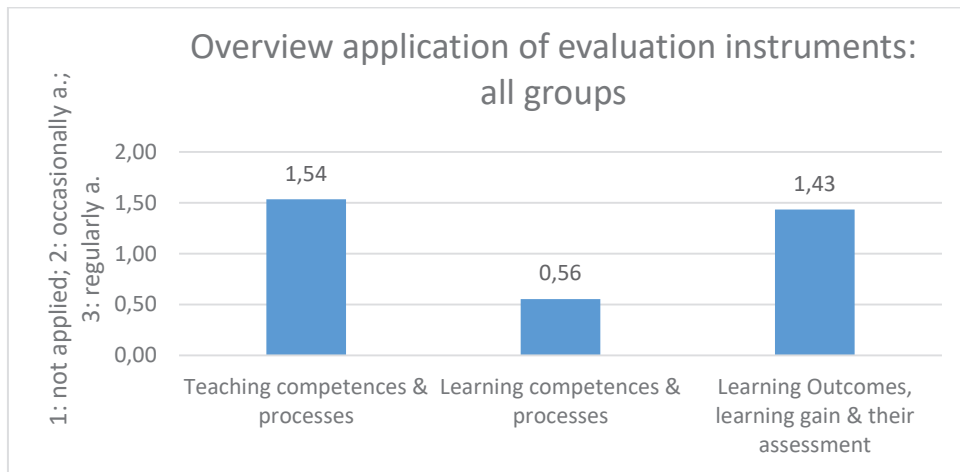


Figure 22: Application of evaluation instruments related to university quality performance in L&T as assessed by all respondents. 3: regularly applied, 2: occasionally applied, 1: not applied, 0: don't know; on the y-axis the arithmetic mean is plotted.

The data on the collection mirror those on usefulness.

Assessments: per type

Teaching competences and processes

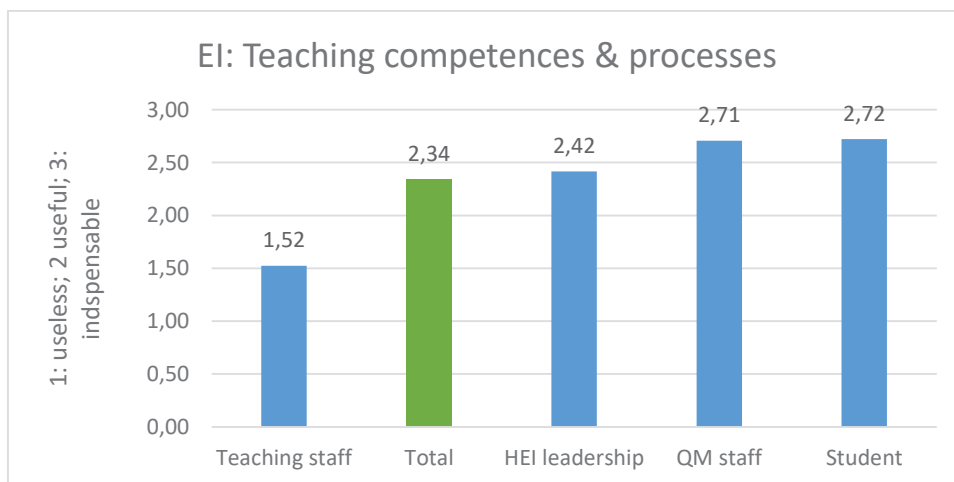


Figure 23: Usefulness of evaluation instruments (Teaching competences and processes) related to university quality performance in L&T as assessed by all respondents

Quality procedures of teaching staff recruitment and teaching staff peer review are regarded almost indispensable, but not by teaching staff.

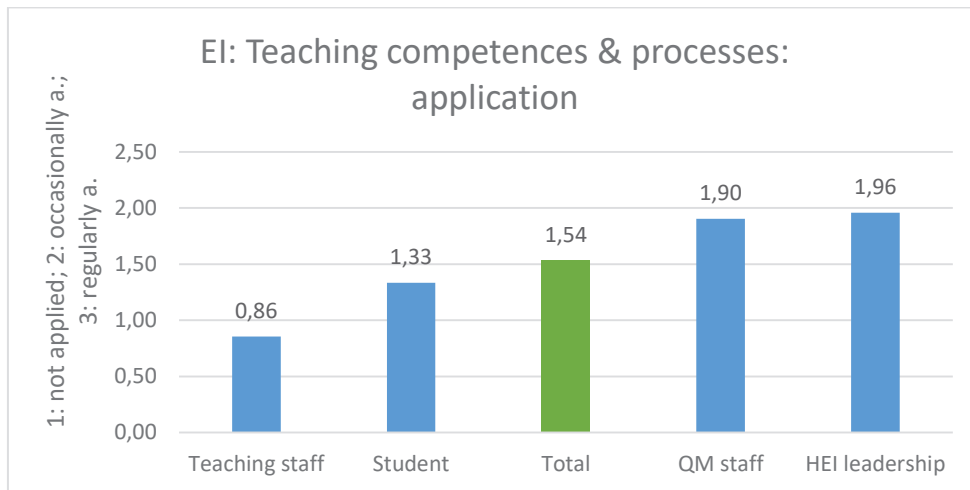


Figure 24 : Application of evaluation instruments (Teaching competences and processes) related to university quality performance in L&T as assessed by all respondents

For item 1 and 2, 8 persons don't know if they're collected. Item 3 (teaching staff peer review or participating observation) is not collected according to 12 people and 11 don't know. The latter item also creates most of the red figures in the table below.

Table 14: Crosstabulation usefulness and application of evaluation instruments on Teaching competences and processes

Collection of data: Teaching competences & processes					
Usefulness	Don't know	Not collected	Occasionally	Regularly	Total
Don't know	5	3	0	0	8
Useless	1	3	0	0	4
Useful	14	2	4	5	25
Indispensable	7	6	10	26	49
Total	27	14	14	31	86

The table again shows that the stakeholders can consider evaluation instruments as useful, but don't necessarily know if they are used at Ghent University.

Learning competences and processes

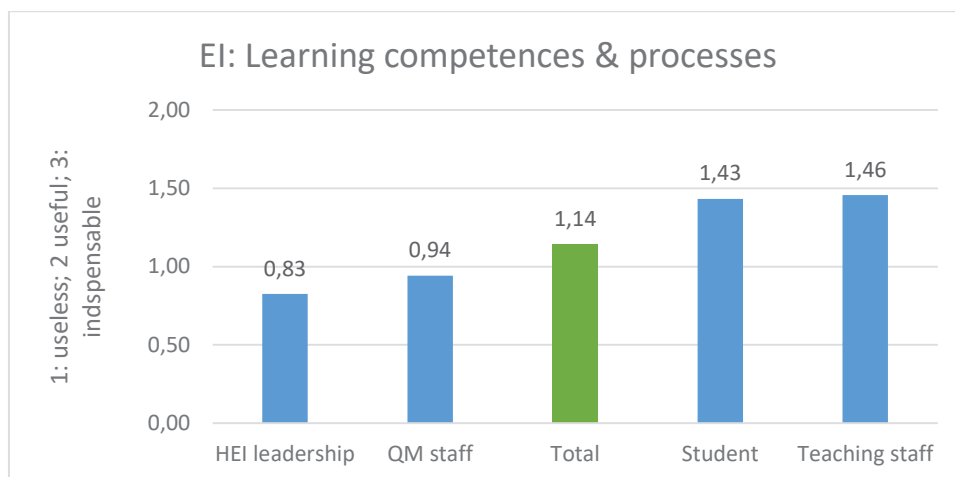


Figure 25: Usefulness of evaluation instruments (Learning competences and processes) related to university quality performance in L&T as assessed by all respondents

As was mentioned before, most of the stakeholders aren't familiar with the Learning Analytics tools, mentioned under this heading. This is reflected in the scores.

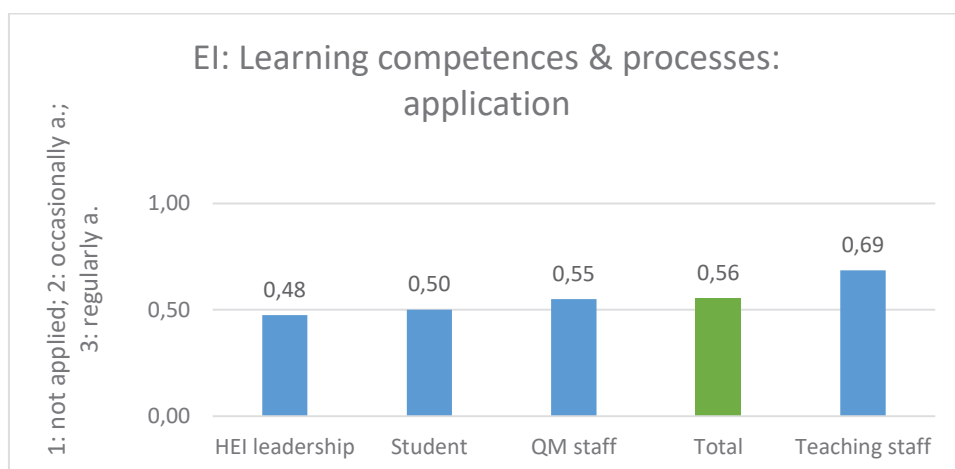


Figure 26: Application of evaluation instruments (Learning competences and processes) related to university quality performance in L&T as assessed by all respondents

The very low scores are already explained above.

Table 15: Crosstabulation usefulness and application of evaluation instruments on Learning competences and processes

Collection of data: Learning competences & processes					
Usefulness	Don't know	Not collected	Occasionally	Regularly	Total
Don't know	50	11	1	0	62
Useless	7	5	3	0	15
Useful	25	12	11	0	48
Indispensable	2	5	5	2	14
Total	84	33	20	2	139

The crosstab clearly illustrates the unfamiliarity with the LA tools.

Learning outcomes, learning gain & their assessment

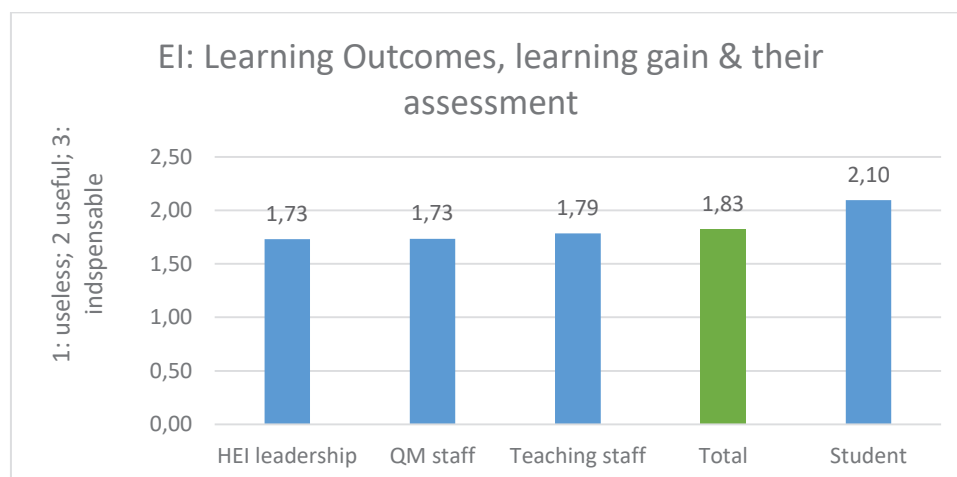


Figure 27: Usefulness of evaluation instruments (Learning outcomes, learning gain and their assessment) related to university quality performance in L&T as assessed by all respondents

Here a rather high score can be observed. Especially students consider the items more than useful. A diversity in items can be observed here as well.

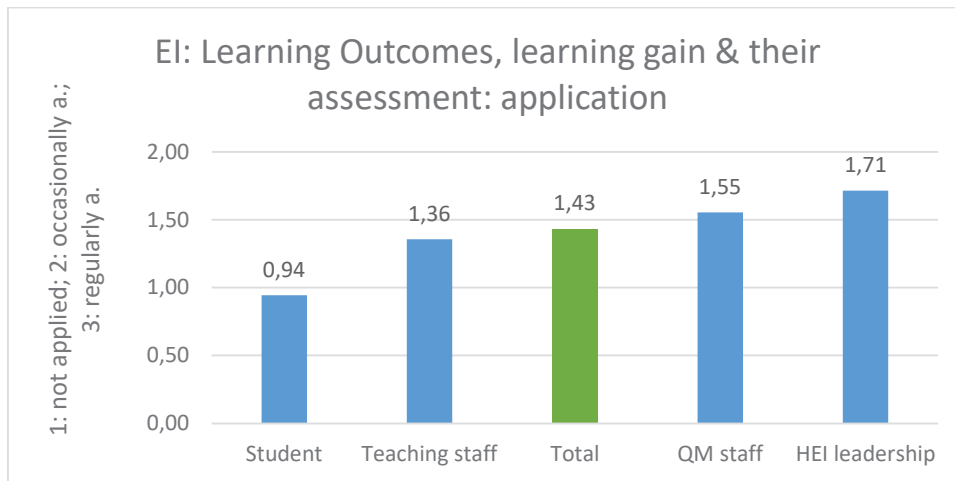


Figure 28 : Application of evaluation instruments (Learning outcomes, learning gain and their assessment) related to university quality performance in L&T as assessed by all respondents

There's some doubt on the application of the items. The stakeholders are certain about the use of program and institutional accreditation, but have serious doubts on the use of instruments measuring learning gain and prediction of student success.

Table 16: Crosstabulation usefulness and application of evaluation instruments on Learning outcomes, learning gain and their assessment

Collection of data: Learning outcomes, learning gain and their assessment					
Usefulness	Don't know	Not collected	Occasionally	Regularly	Total
Don't know	29	10	1	0	40
Useless	7	3	0	1	11
Useful	31	10	21	27	89
Indispensable	3	11	9	35	58

Additional assessments by active SQELT project participants

The active SQELT project participants were also asked for their assessments on the same list of quality evaluation instruments (QEIs) which were presented to the university's respondents, see Table 13.

The 3 items on 'Teaching competences' are considered useful. The Learning Analytics tools aren't known, which results in 'don't know' and 'not applied' answers for the Learning competences items. From the 'Learning outcomes' type, program and institutional accreditation is useful/indispensable, as well as student evaluations of assessments/examinations and predictive models for student attrition. In accordance with the previous type, the item on LOCO-Analyst also causes 'not applied', 'don't know'.

Regularly applied at UGent are program and institutional accreditation and student evaluations of assessments/examinations; Occasionally applied are quality procedures of teaching staff recruitment, predictive models for student performance and attrition, Not applied are all the Learning Analytics tools, including LOCO and Student Activity Meter.

Stakeholders' assessment of Learning Analytics

Structured survey about Learning Analytics

Respondents, focus group and interview participants were presented the commonly used definition that 'Learning Analytics is the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environment in which it occurs' (Siemens 2011a; HEC 2016, p. 4).

Then, respondents were asked whether Learning Analytics is put into practice in their HEI. The answer options were "Yes", "No", and "Cannot answer, because ..."

Out of 31 respondents 27 answered yes to the question; 2 of them added that it was put into practice on a small basis. 2 stakeholders answered no, 1 between yes and no and there was 1 missing value. These positive answers are obviously connected to the broad definition of LA.

Further questions about Learning Analytics were addressed only at those respondents who answered the question positively whether Learning Analytics is put into practice in their HEI. The approached stakeholders (students, teaching staff, QM staff, and HEI leadership) were asked to fill in a questionnaire about certain items relating to Learning Analytics, which are depicted in Table 17. The question was "Which of the listed functions of Learning Analytics are realized in your HEI?" Respondents were also asked to give some information and detail about their answer.

Table 17: Surveyed functions of Learning Analytics

Functions of learning analytics, which are realized in universities or not	yes	no	Total
1. Supporting concrete pedagogical decisions as actionable results	16	8	24
2. Supporting the study of learning-related emotions such as enjoyment, curiosity, frustration, or anxiety, & their interactions	4	20	24
3. Supporting the quality improvement of courses	27	2	29
4. Supporting the improvement of course design	23	5	28
5. Supporting the verification of student workload	24	5	29
6. Supporting the monitoring of students learning progress (stages)	17	9	26
7. Supporting the prediction of student learning effectiveness/success	18	10	28
8. Supporting the identification of students failures of study	12	13	25
9. Supporting the identification of deficits in learning support for students	14	10	24
10. Supporting the identification of deficits in environment support for students	9	15	24
11. Supporting the targeted counselling of individual students	12	13	25
12. Supporting the improvement of admission & recruitment practices	10	12	22
Other, namely.....			

Some illustrative comments to the questions:

1. **Supporting concrete pedagogical decisions**; the illustrations of what this could mean in practice are diverse. 3 participants mention the adaptation of the program (course contents, evaluation methods,...) based on the course evaluations by students. 2 mention more proactive actions by the study counselling officers, 2 mention didactical interventions, namely the promotion of active learning (which has become a central strategic goal of the university last year) and changing learning strategies.
2. **Supporting the study of learning-related emotions** clearly isn't realized in our university.
3. **Supporting the quality improvement of courses**. This is **one of the essential functions of many of our monitoring instruments**. 9 respondents mention the course evaluations by students. The results of these evaluations are used for the improvement of the course in all its aspects. The first step in the improvement process is a meeting of the teacher with the faculty Director of Education and the chair of the Study Program Committee. The follow up by and the role of the Study Program Committee is also mentioned. Teacher training is mentioned as a possible action. Individuals also mention the teacher survey, the portfolio which a program has to fill and the peer learning visit – a type of internal program evaluation.
4. **Supporting the improvement of course design**. Here the central role of the Study Program Committee (SPC) is mentioned. A number of instruments provide information on the program and are discussed and reflected upon

during the SPC's meetings. Amongst these instruments are course and program evaluations by students, alumni surveys, study time measurements, internal program evaluations (peer learning visits), external program evaluations (visitation/accreditation). Those interpreting LA in a more restricted way mention feedback on the online course and several modules in the LMS.

5. **Supporting the verification of student workload.** 13 participants mention the study time measurement, which used to be a commonly used tool at UGent. It consisted of the registration of daily activities during 2 weeks by (alternating) small groups of students. The course evaluations also contain one general question on study load. This means that information on student workload is well known over the institution.
6. **Supporting the monitoring of students learning progress (stages).** 17 yes and 9 no: some more doubt on this. 2 respondents don't know. Several means of monitoring progress are mentioned: general data from UGI (Ghent University Integrated Policy Information System) and specific data from OASIS (the student administration and information database), permanent evaluation results,...
7. **Supporting the prediction of student learning effectiveness/success.** 18 yes and 10 no is not a univocal answer. UGent has a SIMON test, which is filled in by freshmen at the start of the academic year. The non-binding test is informing new students on their interests and skills they need to successfully complete different study programs. Recent research has shown that there's quite some predictive power in the test.
8. **Supporting the identification of students failures of study.** This causes even more doubt. Some people mention the SIMON test here as well.
9. **Supporting the identification of deficits in learning support for students.** No unanimous response here as well. Some people think information on this topic is gathered through the course or program evaluations by students.
10. **Supporting the identification of deficits in environment support for students.** The majority of the respondents doesn't see this as a function of LA realized at UGent. Those who answered yes, think it can be found in the course evaluations or through personal feedback,...
11. **Supporting the targeted counselling of individual students.** No single-minded answer again. Some people mention this could be realized through

faculty based learning path counselling. This is a kind of counselling, especially aimed at helping students compose a suited curriculum/learning path. Since the introduction of flexible learning and a credit system (students get a credit for every course score 10/20 or more) students can follow quite divergent learning paths towards the diploma.

12. Supporting the improvement of admission & recruitment practices.

Different opinions again. Some people mention admission requirements, but currently Flemish law is very lenient on admission to higher education. For Medicine and Dentistry, there's a (rather severe) admission test. For a lot of other programs, an 'ijkingsstoets' is available: it procures information on the mathematical and scientific skills and knowledge of the student, compared to what's expected in the chosen program. Participation in the test has become obligatory for new students in (civil) Engineering and Veterinary Medicine, but the results are non-binding.

Conclusion: Ghent University's stakeholders are of the opinion that data about learners and their contexts, are measured, collected, analyzed and reported for optimizing **the quality of courses, of course design and the verification of student work load**. The information concerned is collected through the course and program evaluations and is processed and followed up through proscribed procedures. This is considered to be Learning Analytics on a general level.

A smaller majority of respondents also includes the prediction of student learning effectiveness and supporting concrete pedagogical actions. For the former the SIMON test is important, the latter is a more general aggregation of different actions.

In addition, respondents were asked the open questions listed in Table 18.

Table 18: Further open questions addressed at stakeholders

Functions of Learning Analytics in HEIs
13. In which ways could/can you participate in the development of Learning Analytics?
14. Which ethical framework or policy for Learning Analytics is available at your HEI (e.g. referring to data privacy, data reliability, control of data access)?
15. How are appropriate data access controls ensured for different stakeholders?

13. Participation in the development of LA ? How ? Some respondents (student, QM staff, director of education) see an important role for the Study

Program Committee and the Educational Quality Control Committee and their members. They are processing the results of the evaluations and possible other monitoring instruments and set up follow up actions. Some of the teachers have analyzed data of their students and one of them even has developed a predictive model, based on the way students work with programming exercises (ICT), available through a specific website. Someone is also mentioning the importance of working groups, for the further development and optimization of internal databases as OASIS, UGI,...

14. Which ethical framework or policy for Learning Analytics is available at your HEI (e.g. referring to data privacy, data reliability, control of data access)?

Our respondents haven't yet got a good view on this issue, but do consider it as important. Some educated guesses are the GDPR (General Data Protection Regulation), legally enforced in Belgium since May 2018. Other participants mention an internal ethical code of conduct, or a faculty specific ethical committee. Two members of the teaching staff are a member of a working group on Learning Analytics. This group contains a representation of teaching staff, researchers and governance of Flemish universities and university colleges. They have produced an elaborate policy report for the Flemish government on Learning Analytics, describing it extensively, taking into account the preconditions. Privacy issues and ethical code is predominant. They advise that protection of data and privacy is built in in LA-systems (by design and by default).

15. How are appropriate data access controls ensured for different stakeholders ?

Selective data access for different roles/functions is most cited.

Finally, the respondents were asked, which strengths, weaknesses, threats and opportunities (SWOTs) they see for Learning Analytics, and how they would strategically deal with them. Particularly, they were confronted with the questions listed in Table 19.

Table 19: Preliminary SWOT analysis questionnaire for Learning Analytics

16. What are, in your view, strengths of Learning Analytics?
17. What are, in your view, weaknesses of Learning Analytics?
18. What are, in your view, opportunities of Learning Analytics?
19. What are, in your view, threats of Learning Analytics?
20. What ideas do you have using the strengths to overcome the weaknesses?
21. What ideas do you have using the strengths to exploit the opportunities?
22. What ideas do you have using the strengths to avoid the threats?

16. Strengths:

- the collection of data (university wide)
- it gives an objectification of some parameters and the remediating actions resulting from the monitoring
- Information based decision making on micro, meso and macro level is made possible.

17. Weaknesses:

- a. overload and complexity of the data
- b. quality of data
- c. data aren't always suited for the purpose
- d. data collection privacy
- e. a vision is needed to put the use of the data in some perspective

18. Opportunities:

- a. improvement of QA in the university
- b. better insight in and improvement of the teaching process
- c. improvement of the learning process
- d. promotion of good practices
- e. improvement of individual learning paths
- f. prediction of drop-outs
- g. base for reflection

19. Threats:

- a. data overload can lead to misinterpretation of data. Misinterpretation of data is mentioned by several respondents
- b. Privacy + ethical issues, Big Brother has taken over
- c. Overload of data
- d. not enough personnel to analyse all the data properly

20. Using strengths to overcome the weaknesses:

- a. start with a vision on LA, put effort into the development of the vision
- b. choose the right indicators and not too many.

- c. pay attention to the validity and reliability of measures.
 - d. invest in pilot projects that explore the practice of LA and educational data mining
21. Using strengths to exploit the opportunities:
- a. improving and finetuning of the datasets
 - b. better coordination between institutional ICT and LA tools.
 - c. maximization of the measuring efficiency without creating new (extra) measuring instruments.
 - d. straightforward presentation of the data.
22. Using strengths to avoid threats:
- a. be reasonable and pragmatic,
 - b. always combine quantitative and qualitative monitoring.
 - c. well considered rationalization (limiting the number of measured variables)
 - d. don't limit the questioning to students, but also involve other stakeholders.

The assessment by the UGent SQELT team members is fully in line with the responses of the stakeholders and didn't reveal any novel ideas.

Main findings from the focus group meetings

During the first part of the meeting the participants filled in the questionnaires on core data, performance indicators, evaluation instruments and Learning Analytics. This took on average about 45 minutes.

The second part of the meeting consisted of a debate on performance indicators/monitoring instruments used by Ghent University and on Learning Analytics, if suited. Translations to Ghent University's real life were made in order to talk about concrete issues and get real life answers instead of theoretical assumptions.

In order to provoke the debate, the group was asked to perform a small task, namely ranking performance indicators and/or instruments used at Ghent University, along their importance for learning and teaching. The list of indicators is primarily

composed of dimensions, measured by means of the program and course evaluations by students. The list of instruments contains instruments used at UGent in the educational quality process.

List of indicators:

Core data (info via Oasis, UGI, ...) Hard numbers such as: #BA&MA graduates, #teaching staff who followed BDT (basic teachers' training), ratio female/male PhD's, ...

Internationalisation component of programs (program evaluation: 3 item dimension)

Active Learning component of programs and courses (program evaluation: 5 item dimension & course evaluation)

Learning Effect component of programs and courses (program evaluation: 5 item dimension & course evaluation: 2 item dimension)

Structure of program and courses (program evaluation: 3 item dimension & course evaluation: 2 item dimension)

Didactical approach of program and courses (program evaluation: 3 item dimension & course evaluation: 2 item dimension)

Workload for students (program evaluation: 1 item & course evaluation: 1 item)

Societal Engagement of program (program evaluation: 3 item dimension)

Entrepreneurship (program evaluation: 3 item dimension)

Quality Of Course Material (course evaluation: 2 item dimension)

List of instruments

Program portfolio: digital portfolio, comprising all the information on the program: aims and objectives, course program, learning paths and teaching methods, assessment + the program's processes, actions, procedures and practices relating to the educational quality (PDCA)

Competence matrix: overview of the program learning outcomes and the courses that contribute to the realization

Program evaluation: bi-annual survey for students who have obtained the diploma of bachelor or master. The questionnaire contains closed items on the program as a whole, which contribute to several dimensions (see above) and open answering space.

Course evaluation (by students): survey on individual courses, organized every semester, containing closed questions and open answering space.

Alumni survey: survey of students who graduated at Ghent University. Centrally organized in 2009 and 2012. Due to a low response rate, no longer organized centrally.

Teachers evaluation: survey of the teaching staff

Course sheet: a sheet gathering all important information on a course: the initial and final competences, learning contents, teaching and evaluations methods, calculation of the examination mark, course material,...

UGI: Ghent University Integrated Policy Information System. It collects a lot of information at different levels: core data on number of students, success rates, time to graduation, number of teachers participating in teacher training; program evaluations: results per program/faculty,....

Learning Analytics Dashboard: information collected by activities on the Learning Management System (Minerva): e.g. participation by students on course forum, time spent watching a video,...

Master dissertation enquiry (by students): survey on the quality of all aspects of the master dissertation

Per focus group the summary of the findings is registered below.

Teaching staff

The members of the teaching staff are all acquainted with Learning Analytics. At Ghent University, two of them are teaching statistics, one computer/information science, two didactics and the two remaining teachers are a member of a Flemish working group on Learning Analytics.

The debate is predominantly about LA. An important issue is the **scope** of LA. On the one hand, LA can be used **university wide** and collect general data on a global level. In that case it's difficult to find indicators which are broad enough for a heterogeneous group of students. The prediction of student drop out would be an interesting goal, but it's very hard to find indicators applicable to all students. On the other hand, it can also be used **at the individual level**: it can help the **individual teacher** to improve his/her teaching and it can help the **individual student** to optimize his/her learning. LA provides a good link between the online activities and face to face lessons. Concerning students, LA makes clear where the problems are, which exercises they do or not, how much time they spend at it, which video's they're watching, what extra information they're looking up,.. For the student the individual benefit lies in self positioning and reflection. It helps to adjust and optimize the learning process, which is his/her responsibility.

Some teachers prefer a very concrete and individual use, which at short notice can be practically useful for the individual teacher. The currently used Learning Management System (called Minerva) has limited follow up functionalities, and the student database (OASIS) could also procure interesting data, but isn't fit for it at the

moment. As part of an educational innovation project one of the participants is currently testing a platform that automatically produces feedback on solutions students produce in programming exercises. Students' activities on the platform and forum are fully monitored. Last year the project started and this year the first analyses are made, trying to predict success rate in the course from the activities logged on the platform. This information could in the future be the input for intervention in the individual student learning process.

Especially for the use at the individual level **privacy issues** emerge. The need for an **ethical code** for LA is real and inevitable.

LA thus can be used **at different levels**, namely the HEI, the teacher, the student. At the moment it's predominantly used at institutional level, providing a bird's eye view and trying to improve processes on an aggregate level. The respondents find that at Ghent University a lot of data/indicators are collected, but that quite some people aren't aware of it or don't know what to do with it.

Different types of data are collected: survey data, numbers, activities on the LMS (e.g. how many students are watching a video, for how many times). They see that Ghent University uses a lot of **surveys** and are worried about an over-demand of especially the students. An over-demand can entail unwanted contamination/distortion of the responses. Ideally working with samples, specifically targeted questioning aimed at response optimization would be preferred.

Course evaluations by students typically consist of Likert type questions and open questions. There's a discussion on the preference. Some people think that the quantitative data have limited informative value and prefer open opinions, which often give a concrete indication to work with. Other people think open answers are too anecdotic. The meaning of one student is put against an average of the whole group of students. They agree that the reporting facilities on the course evaluations are too limited.

The teaching staff makes a distinction between easily measurable data and data that is harder to access.

As a result of the ranking exercise active learning, learning effect, didactical approach, structure of the program, core data and workload are regarded as most important. All these are features of the 'learning situation'. Lesser priority was given

to quality of course material, internationalization, societal engagement and entrepreneurship.

HEI leadership part 1, presidents of Study Program Committee

Some comment on the questionnaire: it contains a lot of items that look useful, but that give you a lot of information on the students involved. The central question is **'what will you do with the data ?'** Ethics must have a prominent role.

The discussion is also about the **level of the information**: global, for the total institution or for the individual.

Monitoring for the sake of monitoring is useless. We can't collect all possible data just in case. It's important to take a critical position toward data. Monitoring should be **linked to a vision/mission**, which gives priority to some themes and is a guiding principle in selecting the right data. Data can serve different goals, some are fit for policy decisions, some for taking concrete decisions at the workplace.

Is the vision on the use of data developed at the central level and put through top down, or can people at faculty level decide on their own priorities ? The respondents think that the more data people have, the more they can determine their own policy. At the moment still, Study Program Committees (SPC's) have too many administrative tasks and lack time for real policy thinking. The central level should guide the SPC's in determining the policies.

A real danger with numbers is the **interpretation**. This can even lead to self-fulfilling prophecies. Numbers alone aren't enough. **Qualitative information** can be at least as important: not everything can be put into numbers. Examples are the annual report of the ombudsperson, information from psychologists- student counsellors. Another example: feedback sessions in the master thesis process allow a teacher to identify specific problems for several students and consequently use this information in tips for future students. Learning path counsellors guide students in choosing the right track /courses. They meet with a lot of students and register quite some qualitative issues on students and their progression. They are called the canaries in the coalmine being the first to register problems with students.

Ranking of instruments

For this group the course evaluation is the most informative instrument. It provides all possible information and is a good 'handle' for actions. Program evaluations are useful, surveys of alumni and employers are important. Alumni who didn't graduate recently, are preferred.

UGI is an instrument that procures data and is positioned half way.

Less important are: program portfolio, learning analytics dashboard, competence matrix and teachers evaluation.

HEI leadership part 2, faculty directors of education

Universities have to think about their pedagogical project. Do we want to procure diploma's or do we want to educate students toward a certain level ? Consequently, **the monitoring of educational quality is closely related to the question: what's the final 'product' of education ?**

Numbers/figures can be used from an explorative or a policy point of view. The **validity and reliability of the data are very important**. It has been witnessed in the past that policy measures are put forward by or checked by figures which aren't fully appropriate.

Democratisation and massification have had a huge impact on our higher education. In Flanders there's no legal restriction to the inflow in higher education: nearly all students (who ended secondary education successfully) can enrol in nearly all programs. Consequently not all freshmen have got the necessary competences to start at a university and the number of incoming students/freshmen has doubled over the last 20 years. This means that a lot of programs have so many students, that teaching becomes factory work for the teachers. It's no longer possible to give attention to students in small classes,...

Another downside is the flexibilisation. Students aren't motivated to succeed for all courses anymore. If they fail for a course, they take it the next year and compose their own programs (GIT: personalized learning path), which are completely different from the 'model' learning path. The fact that more than half of the students are following a personalized learning path, has got a huge effect on the teaching process, the organization of the exams,... It has created a serious challenge for pedagogical principles: constructed alignment is turning into a theoretical term, which

is hard to realize due to students' divergent curricula. **Only at the end of the studies**, by means of the master thesis, it's possible to properly assess the level of the students. All these tendencies mentioned above, are influencing the nature of the data collected.

Ranking of indicators leads to 3 clusters. The first contains the **pedagogical elements**: quality of course material, structure of program, learning effect and master dissertation enquiry. The master dissertation enquiry is considered important through the reasoning above. Internationalisation, workload and active learning are put underneath. Lowest priority (no hard need) for core data, societal engagement and entrepreneurship.

QM staff, central level

In the ranking of the indicators, QM staff judges the **pedagogical/ didactic elements** like structure of the program, didactical approach, course material quality as paramount. These are (ever)lasting elements. Core data, indicators on workload, active learning and learning effect are considered less global. Internationalisation, entrepreneurship and societal engagement are topics, which are put forward through policy choices and can change over time.

In the ranking of the instruments **program evaluation by students** is regarded as the most valuable instrument used at Ghent University. This instrument is seen as a broad 'mirror' which can lead to more refinement through more specific instruments. The related **course evaluation by students** is also important; this instrument focuses on one course. The **course sheet** (an overview gathering all important information on a course) is of considerable importance. It is a sort of contract between student and teaching staff, containing the expected learning competences, the initial and final competences, learning contents, teaching and evaluations methods, calculation of the examination mark,... This indeed plays an important role in the learning process. A teacher can't use examination methods that aren't mentioned on the course sheet.

UGI, Ghent University Integrated Policy Information System, is seen as a source providing a lot of data. The program portfolio is seen as the place where all the information on a program, should be gathered. Instruments as teacher surveys, alumni surveys and surveys on the master thesis are nice to have in addition to program and course evaluations.

QM staff, faculty level

This group mentions that it's difficult to interpret the questions. Some of them are vague and the questionnaire is too extended. They add that the choice 'useful' is an opinion, but doesn't automatically mean they can use it in their current faculty context.

In general, the consideration is made that **quantitative data always have to be complemented by qualitative data**. Numbers are subject to interpretation and consequently they don't convey a one and only truth. They find it interesting and useful that data are collected university wide and that they are available as a kind of information bank, in case of need. UGI (Ghent University Integrated Policy Information System) is providing a lot of information. At this moment the overload of information makes it difficult to search it and to know what to do with the data. They think that QM and other faculty staff are the most active users of UGI. They also mention the **lack of policy on ethical questions** (privacy of data,...). In this domain, a lot of things have to be cleared.

Concerning the importance of indicators at UGent, they make a hierarchy. On top is structure of the program, didactical approach and learning effect. Underneath is quality of course material and workload. Active learning, internationalisation, entrepreneurship and societal engagement are at the bottom. Again the concrete learning experience is seen as paramount.

When asked to rank instruments used at Ghent University, course sheet and competence matrix are put on top. Quality checks are realized by surveys by students (program, course and master dissertation enquiry), by alumni and by teachers. They **point to the fact that all stakeholders have to be consulted and that students aren't and can't be the only source of information**. UGent also uses some instruments as the program (and faculty) portfolio, which assemble all the available information.

Students

Students play an important role in our quality assessment. They are represented in all the councils governing the institution, including the Educational Council, the Study Program Committees and the Educational Quality Control Commission.

Most of the monitored data concern themselves: they pertain to their study activities and quite often students themselves are the source of the information by regularly filling in a number of questionnaires. According to their view **monitoring data have a twofold role**. They can trigger the actual implementation of changes (on program level) and at the same time they can provide a broader, university wide view on some topics. This way a problem isn't confined to the program/course, but solutions could also be found elsewhere. The discussion on the **use and utility of specific data** leads to **mixed conclusions**. Students fill in course evaluations every semester and they find that the impact on the teaching practice is somewhat variable. In their opinion, there's more impact on the contents of the course than on the way of teaching. A change hereof often needs more incentives from other instruments as an internal evaluation of the program by peer teachers. They have some doubts on their own privacy in the case of evaluating courses taught to few students.

The actual study time measurement is outdated: it demands daily registration by students of all their activities and the effort doesn't weigh up against the limited result. Progression rates, activity tracking in the LMS could be useful, but they don't see the concrete effects of it.

As to the ranking of the indicators, issues concerning the students are more important than broad themes (such as whether teachers followed teacher training or not).

For them also the **pedagogical/didactical core is essential**, namely structure of the program, learning effect, quality of course material, workload, active learning and didactical approach. Less important/central issues are core data, societal engagement, internationalisation and entrepreneurship.

When asked to rank the instruments, the **course sheet** is again put on top, along with the program and course evaluation. For them the course sheet represents the legal deal and contains all that students are entitled to. Information from a Learning Analytics dashboard is also quite highly rated. An alumni survey is considered quite useful as well, especially for a general evaluation/assessment of the program, by people who can look from some distance. The competence matrix is a supporting instrument, that can be used for the tuning and convergence of teaching and evaluation methods in relation to the learning outcomes (= competences).

Conclusion

Some interesting findings concerning monitoring in general and LA in particular, came up during the debates.

Monitoring for the sake of monitoring is useless. It should be linked to a vision/mission, setting priorities and guiding the choice of data. Therefore, the central question is **'what will you do with the data ?'** It's important to take a critical position toward all data. Collecting data has to meet a need/question. Data can serve **different goals**, some are fit for policy decisions, some for taking concrete decisions at the workplace, some for an explorative purpose.

The **validity and reliability of the used data** are very important. Numbers are subject to **interpretation** and consequently they don't convey a one and only truth. **Quantitative data always have to be complemented by qualitative data.** The qualitative information can be at least as important: not everything can be put into numbers.

Information is gathered through different instruments but surveys play an important role. Program and course evaluations are filled in by students, but they can't be the unique source of information. It's important that all active stakeholders (teachers, alumni, employers) are consulted.

The data from Learning Analytics can be used **at different levels**: a global, institutional level or an individual level (for teacher or student).

All forms of data management need clear statements on the **privacy issue**. At the moment an ethical policy is still in the pipeline.

Conclusions and recommendations

Conclusions

This report is describing the Ghent University case study as a contribution to intellectual output O3 in the SQELT project. Focus group meetings with a sample of stakeholders – HEI leadership, teaching staff, QM staff and students were organized. Their assessments of the lists of core data, performance indicators and evaluation instruments, their opinions on Learning Analytics and the debates on learning analytics and monitoring instruments provide some interesting findings. These, of course, have to be linked to the frame of reference of the stakeholders. Ghent University's educational quality assurance, its instruments and their own experience are predominantly present in their assessment.

The discussions on Learning Analytics and monitoring proved more informative than the explorative analysis of the answers to the closed questions. This is partly due to the uncommon, less wide spread or novel character of the items in the questionnaire. In general both are remarkably concordant. The stakeholders think the monitoring of the data/indicators in the Learning and Teaching process should **primarily be focused on the core elements of the learning and teaching process.**

When the respondents were asked to rank performance indicators, used at our own university they generally put the core elements of the learning and teaching process first. For them the structure of the program, the didactical approach, the course material quality, the learning effect,... are indispensable indicators of the learning and teaching process. This is mirrored in their answers to the closed questions. In the core data section for instance, pedagogical quality of the teaching process is viewed as more useful than their research quality, student interactions with the LMS are seen as very useful. Performance indicators seen as useful are teaching staff subject competence, teaching staff feedback to students, teaching staff encouraging students' autonomous thinking, student workload, activity learning offers, training in study skills,...

Quite some basic data on the learning and teaching process were mentioned in the more elaborate version filled in by the active SQELT participants. They also emphasized the importance of e.g. information on student success and the quality of incoming students, teaching resources, grades and examination marks, number of

degrees in the core data section and teaching quality, student workload, course quality, satisfaction with study experience in the performance indicators section.

A lot of items, more distant from the core learning and teaching process, are considered useless: e.g. library features, student contacts outside the study environment, research activities by the teaching staff, quality offer of campus activities, student interactions with administrative staff, student experience in discussions with diverse others,...

The assessment of the collection of the indicators shows considerable 'don't know' answers. This, obviously can be linked to the uncommon, less wide spread or novel character of the items presented. In the educational quality process Ghent University already uses a lot of indicators. A substantial number is listed in the elaborate version of the questionnaire.

A huge majority of the respondents thinks **Learning Analytics is put into practice at Ghent University**. It means that data about learners and their context are measured, collected, analysed and reported and are used to understand and optimize the learning environment. Ghent University indeed has a longstanding tradition of course evaluations by students, and follow up procedures, which are aimed at improving the course/teaching quality of the individual teacher. The last 10 years the program evaluations by students have had a similar function at program level, where the follow up is the Study Program Committee's task.

The **functions attributed to LA** are in accordance with the UGent context. A huge majority agrees on **LA supporting the quality improvement of courses, the improvement of course design and the verification of student workload**. A smaller majority finds that LA is supporting concrete pedagogical decisions, the prediction of student learning effectiveness and the prediction of student learning progress.

The collection of a lot of data is considered a strength of LA. Opportunities are seen in the improvement of the teaching and learning process, the improvement of individual learning paths and the promotions of good practices. The most cited weaknesses and threats are incorporated in the recommendations below.

The discussions with the different stakeholder groups regarding their views on data and monitoring were informative and produced some cautions, which will be cited under the recommendations heading.

Recommendations

The findings in this report also contain some important recommendations for data monitoring and Learning Analytics at UGent and in general:

- It's important to have a vision on the need for and choice of data/indicators. Monitoring for the sake of monitoring is useless. In order to avoid an overload of data a considered choice of necessary/wanted essential information is vital.
- Quantitative data are subject to interpretation. Always provide data in a context or framework in order to avoid divergent interpretations. Qualitative data are a valuable and essential complement.
- Don't limit the use of surveys to students. Other stakeholders, such as teachers, alumni and employers, can provide valuable information on the learning and teaching process.
- Data, and particularly LA data, can be used on different levels. Data for use on institutional level are, by nature, different (more aggregate) from data for individual use by a teacher or student (e.g. information on the learning process of the individual student). This has implications on the processing and accessing.
- Privacy is a key element in the use of personal data by third parties. Data access should be closely monitored and determined. Therefore an ethical code on the use is paramount. Levels of access linked to different roles should be elaborated and made clear to the users.

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