Reporting & Monitoring of SLPs (analytics & dashboard reporting)

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structure

- Glen
  - Analytics
    - What to measure
    - How to measure
    - Why to measure
  - The use of dashboards for these analytics
- Annamarie
  - Data Quality Management
  - Reporting
  - Academic Programme Tracking System

introduction

- The purpose of this section is to provide source for discussion on reporting and monitoring of LNQs.

- This is not a case study but rather an investigation into the possibilities of reporting in this area.

- Data from UJ are used for the purpose of providing a platform for the investigation and is only a sample data set.

- The assumption used is that the components included in the reports are supported by available data.
  - As we will see this is the main limitation with effective reporting in this area

procedure

- *Extracted a sample data set from one of the faculties at UJ, details of these programmes are irrelevant and grouped for this study*
  - *Diploma type - whole CEP programme*
  - *Short learning programme*
  - *Short course*

- *Using available data additional measures were calculated and included in the dataset:*

Applicant Admission Rate	Exam Admission Rate	Income per student
Applicant Registration Rate	Subject Cancellation Rate	Income per passed student
Registration/Headcount Ratio (Registrations per Student)	Subject Fail Rate	Income per credit
Applicant/Application Ratio (Applications per Applicant)	Subject Pass Rate	Income per subject
Subject Load	Subject Repeater Rate	Income per passed subject
Credit Load	Subject Distinction Rate	Academic Ranking
	Exam Absence Rate	Financial Ranking
		Quality Ranking

procedure

- *Dashboards representing:*
  - *Applications, Admissions and Registrations*
  - *Registration Profiles*
  - *Subject Analytics*
  - *Finance and Analytic Ratios*
  - *Ranking Analytics*

presentation

- *Applications, Admissions and Registrations*
  - Note that some measures are very different from normal reporting
    - Headcount vs Registrations

  - Comparative analytics
    - Short courses
    - Short learning programmes
    - CEP Diploma type whole programmes

  - Note phasing in and out

  - Attempt to describe all aspects of the applications, admissions and registration process
    - Dependent on the quality of the data

Analytics for Learning that does Not Lead to a Qualification (LNQ)

Overall Application & Registration Statistics by Year

Academic Year > Programme Type > Qualification_Code_Name	Applications	Applicants	Applications per Applicant	Admissions	Admission Rate	Registrations	Headcount	Registrations per Student
⌄ 2014	193	169	1.14	169	87.6%	125	119	1.05
⌄ 2015	1 680	953	1.76	1 003	59.7%	847	742	1.14
⌄ 2016	3 866	2 125	1.82	1 606	41.5%	1 473	1 410	1.04
⌄ 2017	5 745	2 970	1.93	3 579	62.3%	2 248	2 194	1.02

The data below represent all years unless a year is selected as a filter ...

Year Filter	Applications per Applicant	Admission Rate (%)	Registrations per Student	Subject Load	Subject Cancellation Rate
	1.93	**62.3%**	**1.02**	**5.03**	**2.2%**
2014					
2015					
2016					
2017					

Short Courses

Applications, Admissions, Registrations & Headcount

Short Programmes

Applications, Admissions, Registrations & Headcount

Diplomas

Applications, Admissions, Registrations & Headcount

presentation

- *Registration Profiling*
  - Note that some measures are very different from normal reporting
    - Entrance Category

  - Comparative analytics
    - CEPs to Other Non-degree purposes (NDP)
    - Current and trend analysis

  - Profiles will depend markedly on the institution reporting needs
    - Dependent on the quality of the data

Analytics for Learning that does Not Lead to a Qualification (LNQ)
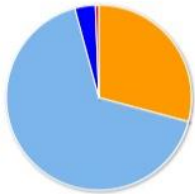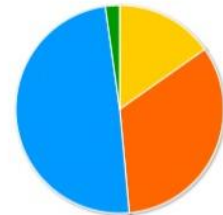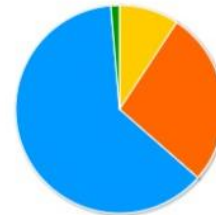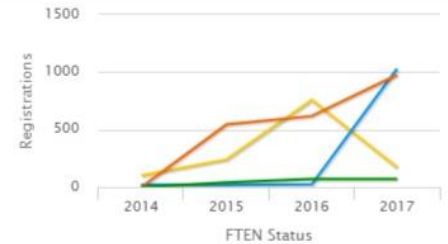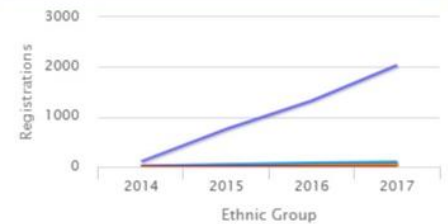
presentation

- *Subject Analytics*
  - Attempt to describe all aspects of the subject data, additional calculated fields done
    - Average Marks, Exam Absence and Attrition
    - Subject load, Credit Load, Success Rates, etc

  - Detailed and 'Point in Time' analytics
    - Report in quantum (number) and in ratios (%s)
    - Current and trend analysis

  - Results will depend markedly on the institutions available data
    - Dependent on completion and quality of the data

Analytics for Learning that does Not Lead to a Qualification (LNQ)

Subject Analytics over all Years

	Normal Enrolments	Cancellations	Subject Cancellation Rate	Subject Load per Student	Passed Subjects per Student	Subject Pass Rate	Subject Repeat Rate	Subject Fail Rate	Subject Distinction Rate
⌄ 2014	453	26	5.7%	3.62	2.76	76.2%	4.4%	18.1%	21.0%
⌄ 2015	4 409	231	5.2%	5.21	3.55	68.2%	11.6%	25.1%	13.0%
⌄ 2016	7 995	378	4.7%	5.43	3.87	71.3%	16.6%	23.6%	13.1%
⌄ 2017	11 301	248	2.2%	5.03	0.57	11.2%	2.9%	1.9%	1.5%

The data below represent all years unless a year is selected as a filter ...

Year Filter
2014
2015
2016
2017

Ave Cancellation Rate	Ave Subject Load	Ave Pass Rate	Ave Failure Rate	Ave Repeat Rate
4.7%	5.43	71.3%	23.6%	16.6%

Ave Exam Attrition Rate	Ave Exam Absence Rate	Ave Distinction Rate	Ave Exam Mark	Ave Final Mark
0.0%	0.0%	13.1%	27.99	29.11

Subject Enrolments & Cancellations
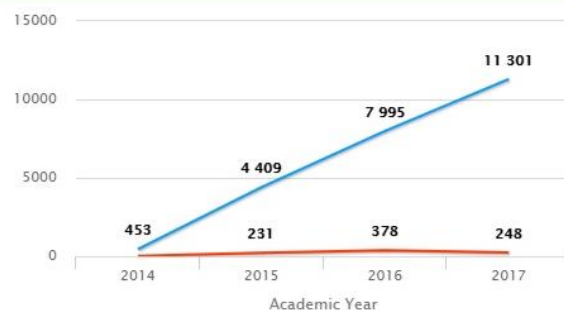
Not Admitted & Absent from the Exam
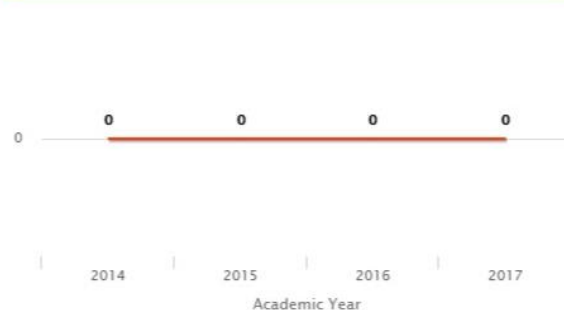
Re-Exams and Subjects Failed

presentation

- *Finance and ratios*
  - Attempt to describe the financial component in relation to other important contributions (academic, enrolment, risk, attrition, etc)
    - Registration and Subject enrolment patterns
    - Income per student and per subject
    - Measures in relation to drivers of success

  - Comparative analytics as visualisations
    - Context of the relative contributions
    - Scatter plot options to further contextualise the data

  - Results to be used in further ranking analytics
    - Dependent on the identification of relevant measures

Analytics for Learning that does Not Lead to a Qualification (LNQ)

The data below represent all years unless a year is selected as a filter ...

Year Filter
2014
2015
2016
2017

5.15	**R 16 850**	**42.7%**	**9.1%**
Student Subject Load	Income per Registration	Subject Pass Rate	Subject Repeat Rate

0.00	**R 3 273**	**2.20**	**7.8%**
Student Credit Load	Income per Subject	Subjects Passed per Student	Subject Distinction Rate

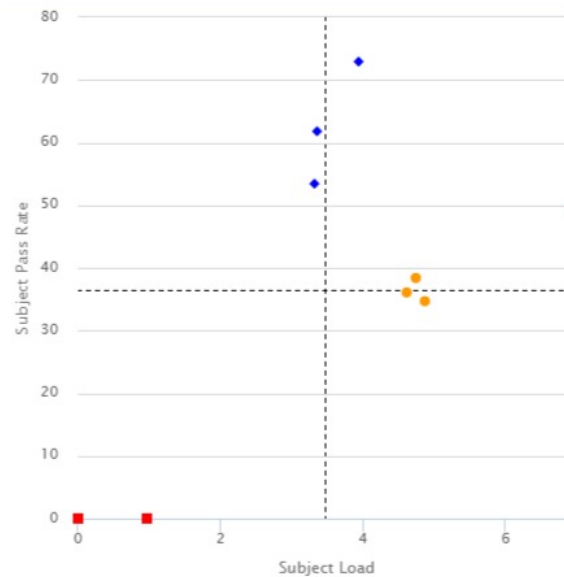| Qual Type Filter |
|---|
| Diploma |
| Other |
| Short Course |
| Short Programme |

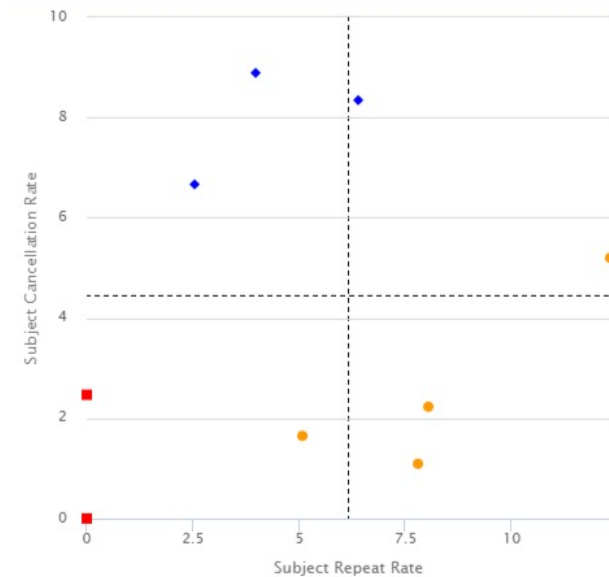## Income per Registration : Passed Subject by Qual Type
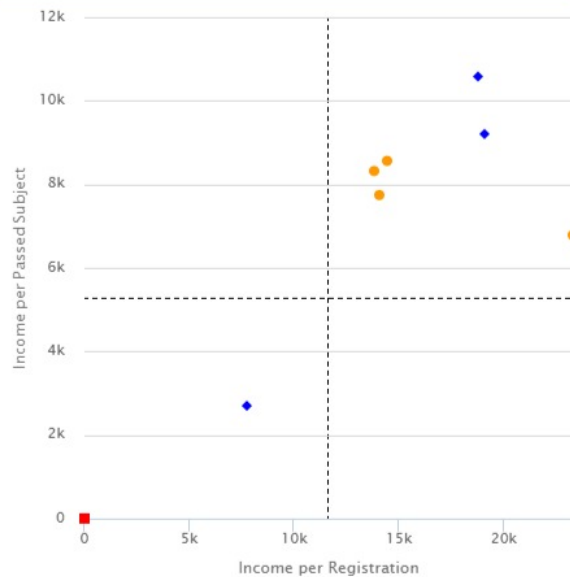
Legend: ● Diploma ◆ Short Course ■ Short Programme

Pass Rate : Subject Load by Qual Type

Legend: ● Diploma ◆ Short Course ■ Short Programme

Cancellation Rate : Repeat Rate by Qual Type

Legend: ● Diploma ◆ Short Course ■ Short Programme

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presentation

- *Ranking Analytics*
  - Attempt to describe important contributions to the institution

    - Academic Ranking

    - Finance Ranking

    - Quality Ranking

  - Visualise these contributions in quadrant analytics
    - Address the issue of defining the financial aspect in relation to others

Analytics for Learning that does Not Lead to a Qualification (LNQ)

The data below represent all years unless a year is selected as a filter ...

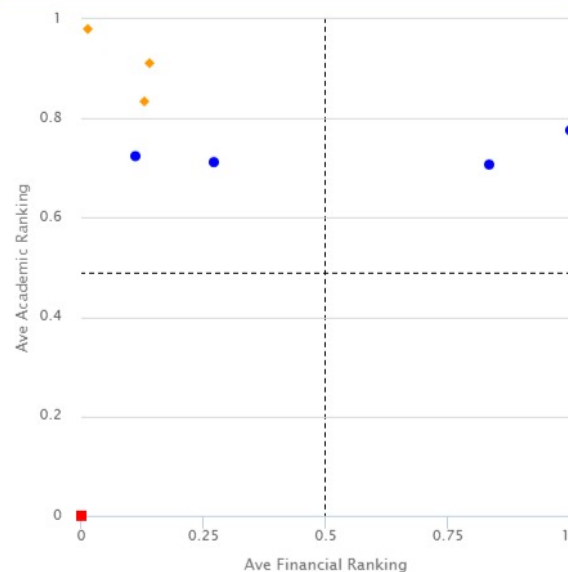| Year Filter	Ave Academic Rank	Ave Financial Rank	Ave Quality Rank	Ave Combined Rank	Type Filter
	0.744	**0.704**	**0.718**	**0.724**	
2014					Diploma
2015					Other
2016					Short Course
2017					Short Programme

Academic Ranking : Financial Ranking

Quality Ranking : Academic Ranking
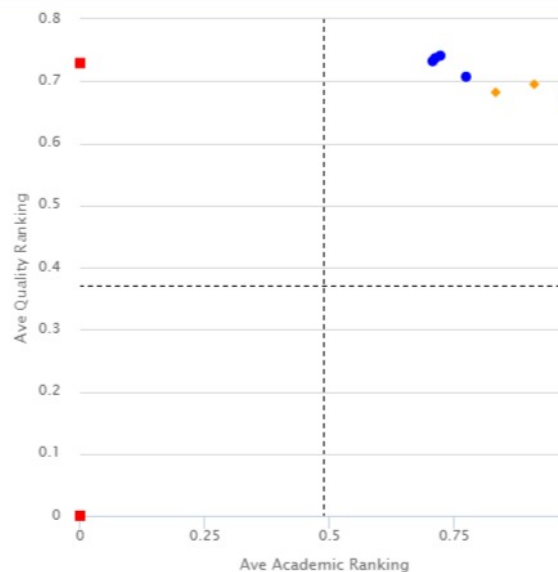
Quality Ranking : Financial Ranking
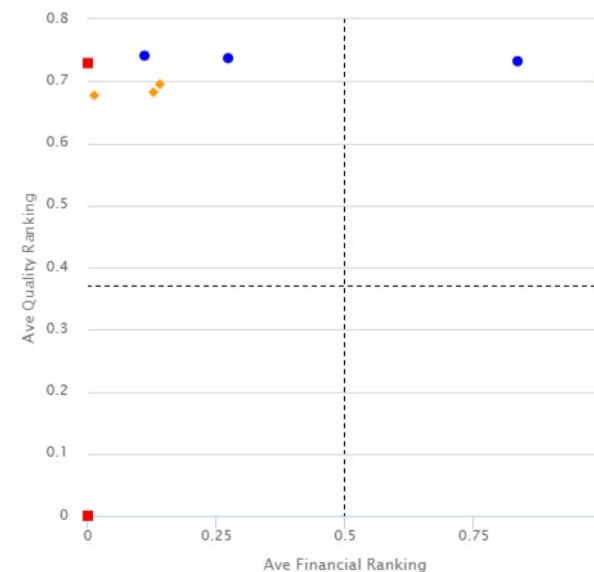
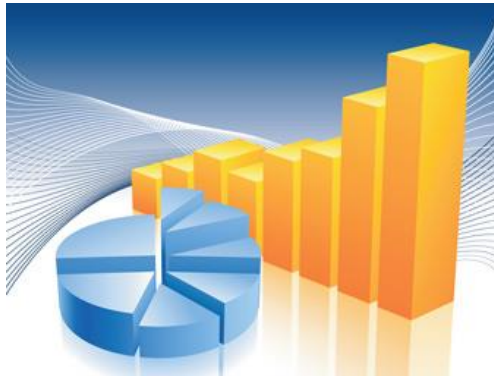● Diploma   ◆ Short Course   ■ Short Programme

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observations

- *Various Rankings*

  - Information overload?

  - How valuable are the contextual rankings?

  - How plausible is the measure of Quality?

  - How else do we consider Financial and Quality aspects?

  - How do we consider the Strategic Value of these programmes?

observations

- Programmes Not for Formal Qualifications can be reported and monitored much the same as mainstream programmes if the data elements exist and a process is in place to populate the data accurately.

- We may want to take the analytics a step further to consider the relative contributions in a number of important areas

- These will depend on the analytic direction of the institution

- The aim is to address the issue of evaluating the financial contribution in relation to other aspects – mainly quality tuition

Thank you …

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