Power BI Roadshow

Student Records

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Introduction

- Introductions
- How we have got to where we are
- Report migration
- Ways of working

- Session overview

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Power BI desktop vs Power BI service

- **Power BI Desktop** – downloadable from Software Centre or Microsoft Store on Windows 10
- Connect directly to wide range of data sources such as Excel and Access to build own reports
- **Power BI service** – web based
- Used to access reports and datasets that have been shared with you and to build dashboards

There are two parts to Power BI, Power BI desktop and Power BI service. IT Services, largely for the purpose of training have promoted installing Power BI desktop. From here you can connect to a wide range of data sources directly such as Excel, Access, websites, any databases you have access to, to build your own reports. You can export reports from the desktop to PDF/csv. That report creates a local file, which you can access in Power BI desktop and manually refresh if your data source changes. Alternatively, you can publish your report to the Power BI service, which is browser based, schedule it to refresh, and view your report online instead.

However, your connection to Campus Solutions data is via the reports and datasets we share in the Power BI service and therefore this is the focus of the rest of this presentation.

If you want to use the desktop version to produce reports from your own data sources there are many resources online to show you how to import data, transform it and build your own reports. IT Services promoted a online course called Dashboard in Day and you can find a link to this on the Power BI page of the Staff Training and Development website. Power BI Desktop was also the focus of a session similar to this organised by IT Services and delivered by Craig Rayner in Alumni which you can view a podcast of, also on the Staff Training and Development website.

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Power BI service vs Discoverer Plus

Functionality

- Export to Excel – up to 150,000 records
- Reports are shared in a type of content called 'Apps'
- With a free licence you can't copy and edit a standard report
- You can create your own reports from scratch
- But with a free licence you can't share them

There are some differences in functionality between the Power BI service and Discoverer Plus that we think it is important for you to be aware of.

Firstly, you can export lists of data to Excel, as you could in Discoverer, but there is a 150,000 row limit. However, we believe this should be a sufficient limit for almost all of our users.

In Power BI reports are shared in a type of content called 'Apps' – in Discoverer the closest equivalent is a workbook.

With a free licence, which all university staff have by default, and all you'll likely require, you cannot copy and edit the standard reports that we share with you as you could in Discoverer, however, you can create your own report from scratch if necessary.

Also with a free licence, you cannot share your own reports, whether that be ones you have created in Power BI desktop or the Power BI service, with another colleague. You would require a pro-licence, assigned by IT Services, to be able to share reports with others and even then, only people with a pro-licence could view it, unless IT made the workspace in the Power BI service you were sharing it from part of the university's "premium capacity". For many of you, these are details that you don't need to be aware of, but it underlines the point that sharing is not as easy as it was in Discoverer.

The ability to copy a standard report and save it as your own resulted in the existence of thousands of duplicate or near duplicate versions of our reports. From experience, many were copied in order to add conditions to limit a standard reports to just a few programmes, a school, course units etc. In Power BI, filtering is much better and the reports are far more responsive. You can filter on many more fields and Power BI remembers your filters the next time you come to use the report, so the need to have your own reports for this purpose has greatly reduced.

Furthermore, the unsuccessful attempt to migrate the existing Discoverer reports to Power BI has shown that you can't rely on your own reports indefinitely. As well, when SLP delivers a new student records system in two year's time, every report will need to be rewritten once again.

Added to this, the fact you can no longer share easily means the only reports available to everyone are these standard reports and so our advice is, where at all possible, use the standard reports with filters, rather than write your own.

If the standard reports don't quite meet your requirements, lets us know and we will do our best to accommodate your requirements into the standard reporting.

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Power BI service vs Discoverer Plus

Data

- Some Campus Solutions data now only available for current students – active or leave of absence status
  - CAS
  - Checklists
  - Contact Details
  - External Study
  - Service Indicators
  - Advisors
  - Student Attributes
  - Student Groups
  - Visa Permit/Passports

There is some difference between the data from Campus Solutions that is available in Discoverer compared to what we are providing in Power BI. Due to information governance considerations and limitations with the amount of data we can load from the data warehouse into Power BI without it being unable to successfully refresh each night, some datasets are only available for current students, that is active and leave of absence status in CS. The data available on all students, regardless of status is similar to that which you would find on a transcript: demographic details, core student record, enrolments , course unit grades, exam board notes and progression, degree award and HEAR. The data on the screen is now only available for current students in most circumstances.

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Power BI service vs Discoverer Plus

Reports

- Fewer standard reports in Power BI but covering the same data
- Some discontinued due to lack of use
- Mapping document on website
- Parallel running of all reports until at least the new year with exception of the data quality and PGR submission/completion rate reports
- Feedback to datateam@manchester.ac.uk

We had a lot of reports written over the course of the last decade that had essentially the same fields but with different parameters due to poor filtering functionality in Discoverer and the speed of Discoverer meant large datasets had to be split up to make smaller reports - UG and PG versions for example.

With Power BI we have been able to combine a lot of reports together so there are many fewer reports than we had in Discoverer. Some reports were discontinued altogether due to a lack of use. Power BI apps have good navigation and so you should find it much easier to locate what you want.

On our website (https://www.staffnet.manchester.ac.uk/student-records/reporting/) is a document which maps the existing standard Discoverer reports with the new Power BI apps and reports, alongside instructions on how you may need to filter the report to get the same result.

Although you can do much more in Power BI, and we do intend to use this functionality to develop the suite of standard reports, for this first release we have tried to deliver the same access to operational CS data that we provided in Discoverer.

With the exception of the data quality report and the PGR submission and completion rate reports, all our standard reports still exist in Discoverer and will continue to do so until at least the new year (that is our current expectation) so you can continue to use Discoverer and your own reports if you prefer. But of course, we do encourage you to start using Power BI sooner rather than later.

If you require a report which no longer exists and/or for which none of the new Power BI reports meet your requirements e.g. it doesn't contain a field that is essential, please contact us and we will try to accommodate it into the standard reports.

Student records apps

App name	Contents
Student Records	Student records from Campus Solutions 9.0 including: student and term records, attendance, CAS, checklists, contact details, enrolments, exam board notes, external study, customer accounts and more.
Student Records - Academic Programs and Plans	Reports on Academic Program Table and Academic Plan Table data from Campus Solutions.
Student Records - Course Units, Classes and CUIP	Reports on Course Catalog, Maintain Schedule of Classes and Course Unit Information Publishing data from Campus Solutions.
Student Records - Data Quality	Campus Solutions data quality reports and management information.
Student Records - PGR Reporting and eProg	PGR specific reports including data from eProg and the Training Catalogue.
Student Records - PGR Submission and Completion Rates	PGR submission and completion rate reports.
Student Records - Registrations against Target	Precursor to the official 1st December student numbers released by the Directorate of Planning. Contains completed registrations against target for the cycle December 2018 to December 2019. Available throughout September to November.

This is the list of the apps that we are currently providing which replace the 30 or so standard Discoverer workbooks. The list is on our website and will be updated if when we produce further apps.

Student Records – data from the core student record and replaces much of the old SDM_STU_UGRD/PGRD_REPORTS that were greatly used and copied.

Student Records – Academic Programs and Plans – data from the Academic Program and Academic Plan tables in Campus Solutions.

Student Records – Course Units, Classes and CUIP – data from Course Catalog, Maintain Schedule of Classes and Course Unit Information Publishing.

Student Records – Data Quality – these are now only available in Power BI.

Student Records - PGR Reporting and eProg – PGR specific reports including data from eProg and the Training Catalogue.

Student Records - PGR Submission and Completion Rates - PGR submission and completion rates – those who work in PGR might also know these as the PGR Cube. These reports are now only available in Power BI.

Student Records - Registrations against Target - Some of you may have seen or received in previous years a PDF from us which totalled completed registrations against targets as a precursor to the 1st December census. These are now in Power BI and you have access to this from now until the end of November.

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Signing-up to Power BI

- Sign-up at any time with your university email address and network password
- Duo authenticated

As a member of staff at the university you can sign-in at the Power BI website at any time using your university email address and network password. It is also Duo authenticated.

Applying for access to our apps

- Those with access to student records data in Discoverer were automatically given access to our apps in Power BI
- Apply for access via email to datateam@manchester.ac.uk with your line manager’s details
- IT Services will soon provide a solution in the IT Support Portal – link will be on our website

Those of you with access to admissions data in Discoverer will automatically given access to our apps in Power BI.

If you have colleagues who do not have access to these apps but need to do so, soon there will be a form in the IT Support Portal, but until such time, ask them to email datateam@manchester.ac.uk with their line manager’s details.

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Training and support

- Student Records website: https://www.staffnet.manchester.ac.uk/student-records/reporting/
- Drop-in sessions

Date	Time	Venue
Monday 28 October	14:00 – 15:00	Williamson Building 3.59

- Email datateam@manchester.ac.uk for support

On our website we have a five minute long, video based training course which explains how to access our apps, open a report, filter, drill and export them, as well as how you can access the underlying datasets to create your own reports. Much of the content of this training course will be covered in the demonstration to follow, so don't worry if you don't follow everything we show you today as you can refer back to the training videos.

Our first Power BI drop-in session will be on Monday 28 October from 2-3pm in Room 3.59 in the Williamson Building. These can be used in a number of ways e.g. for those just getting started with Power BI on the standard web version and those who might be setting up complex queries on the desktop version. The room is a computer cluster so we should be able to access the web version but if you have a more detailed query you may need to bring along the relevant files on a pen drive as we will have some limited access to work through the desktop version. We can also use the drop-ins to start a conversation and then follow up afterwards. It would be helpful to have an idea of colleagues that are planning to attend so please let us know via datateam@manchester.ac.uk. We are planning to run further drop-in sessions and will advertise these in due course.

You can also email us at datateam@manchester.ac.uk for support.

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Power BI service demonstration

- https://app.powerbi.com

On our website is a link to the Power BI service, we recommend you add it to your favourites.

Apps:

- As explained earlier an app is a collection of one or more related reports and our reports and data are shared with you via those
- Head over to the toolbar on the left and select 'Apps'
- Click 'Get apps'
- All the apps that have been shared with you will appear on this page
- Select the app you require, and click 'Get it now'
- The app will appear as a tile on your apps page
- In your list of apps, click on the tile relating to the app you wish to view
- If the app contains more than one report you can navigate the reports in the app using the navigation pane on the left-hand side of the page
- Each report may contain one or more visuals. A visual could be a table, matrix, graph or map, for example. In many of our reports there is only one visual, a table.
- Click the 'Apps' button in the top left-hand corner of the screen to go back to your list of apps.

I'll now take you through a few of the important features of the report view in Power BI

Sorting

- You can only sort on one field, not multiple fields like Excel. Three dots or click arrow in field title – A-Z or Z-A

Filtering

- Initially, the 'filter' bar may be minimised on the right-hand side of the page. Click it to expand it and this will reveal the list of filters
- There are three types of filter, visual filter, page filter and report filter.
- If there is more than one visual on the report, each visual may have its own filters. You can see if a visual has its own filters by clicking anywhere on the visual - the filter pane will change as a consequence
- Visual filters apply only to that single visual
- Page filters apply to all visuals on a page
- Report filters apply to every visual on every page of the report
- We have exclusively used page filters and stuck to one visual per page for simplicity.
- If a filter has been applied to the report, the field is shaded grey.
- You can change and clear existing filters, but you can't add new filters.
- Basic filtering is the default filter type and is similar to filtering in Excel
- Power BI will remember the filters you have set the next time you open the report. This will be useful for ensuring a report you are going to regularly use always opens on the relevant school/department/programmes you are responsible for and should eliminate the need of many of the copies of the standard reports that currently exist.
- If there is a filter applied that you would like to remove and set back to (All), clear it by selecting the eraser icon next to the field name.
- In order to remove all the filters you have applied and reset them to the default selection, select 'Reset to default' from the top menu bar.
- In the training videos we have created there are also instructions on the other types of filters: advanced filtering and relative date filtering.

Drilling

- When you hover over a visual, the visual header appears above the right-hand corner of the visual.
- If the visual is a matrix showing aggregated data, it shows these four icons.
    - Drill up
      Drill down
      Show next level
      Expand to next level
- The 'drill down' button changes what happens when you click a value in the table. With this button unchecked, the table is highlighted, but with it checked it expands this one field to the next level in the hierarchy.
- We can then use the 'drill up' button to return the table to its original position.
- The 'show next level' button will expand the table to show the entirety of the next level without the details of the previous level. In the example below, this would list all the schools without their faculty.
- The 'expand to next level' button expands the entire table to the next level, here it shows department.
- If a matrix visual also allows you to drill on the columns, you will have an additional 'drill on' icon. The 'drill up', 'drill down', 'show next level' and 'expand to next level' buttons all behave in the same way but you choose whether to drill on the columns of the rows.

Exporting

- In order to export to Excel, firstly you must hover over the visual and select the three dots in the top right-hand corner to open the extended menu – not the Analyze in Excel button.
- By clicking 'Export Data', a pop-up will open, giving you the option to export summarised or underlying data, and either in Excel format (.xlsx) (150,000 row limit) or .csv (30,000 row limit).
- Summarised Data: Select this option if you want to export the data as it appears in the visual. If the visual has an aggregate, you'll export the aggregated data.
- Underlying Data: Select this option if you want to see the data that forms the visual. If the visual has an aggregate, selecting 'Underlying data' removes the aggregate and exports the raw data.
- If it's just a table like this one, it only gives you the option to export the summarised data. The summarised data is the underlying data.
- The file exports to your downloads folder.
- In order to export to PDF or PowerPoint, click 'File' then the relevant button.
- This method exports an image of the report as it appears on the screen.
- The process does not export the individual page you are currently viewing, it exports every page within the report.

Create your own report

- You can access the datasets we have used to produce the standard reports in order to create your own.
- Any report you save will be stored in your personal 'My Workspace'.
- On the homepage, select 'Get Data' in the bottom left-hand corner.
- Click 'Published datasets'.
- Select the dataset you want to use in order to produce your own report – they have the same name as the app.

That concludes my part of this presentation. I'm going to hand back over to Ian for a few concluding remarks and then we have the rest of the time available for questions.

Conclusion

- Ways of Working
- Future plans for doing more with Power BI
- Discoverer switch off

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Q&A