



IMPROVEMENT APPROACH

**MAXIMISE THE CHANCES OF
SUCCESS WHEN LEADING CHANGE**

Liz Shevlin
Leading Improvement Team
Scottish Government

Stef Black
Senior Development Consultant
sparqs



lit@gov.scot

#scotimprove



The 3-Step Improvement Framework for Scotland's Public Services

Whole system approach

Leaders must create the conditions

Aim big, start small

The 3-Step Improvement Framework

1 Aim

Is there an agreed aim that is understood by everyone in the system?

2 Correct changes

Are we using our full knowledge to identify the right changes and priorities those that are likely to have the biggest impact on our aim?

3 Clear change method

Does everyone know and understand the method(s) we will use to improve?

4 Measurement

Can we measure and report progress on our improvement aim?

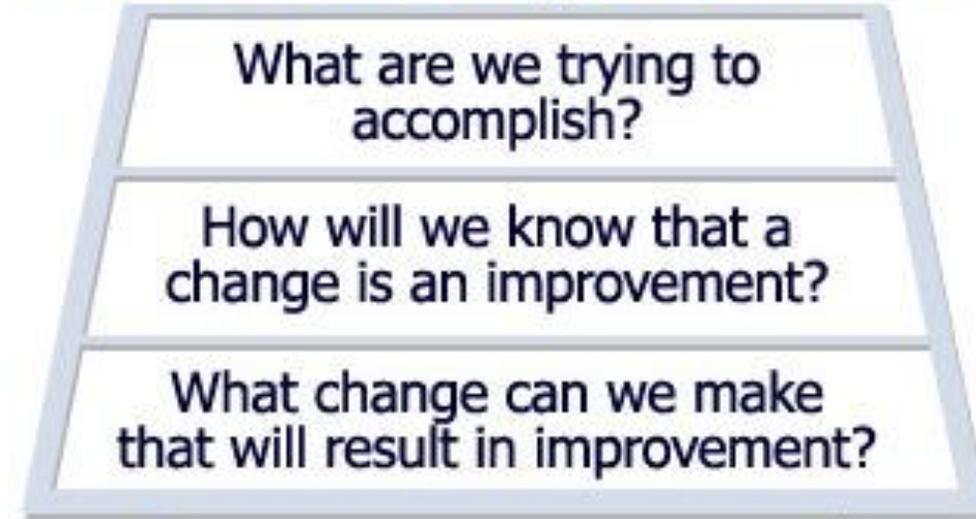
5 Capacity and capability

Are people and other resources deployed in the best way to enable improvement?

6 Spread plan

Have we set out our plans for innovating, testing, implementing and sharing new learning to spread the improvement everywhere it is needed?

Model for Improvement



Test and adapt
in each context

The College Improvement Project is contributing to this:

The Project launched in 2017 with the aim of **improving retention and raising attainment in FE in colleges** through the application of a quality improvement approach to developing evidence based practice.

A key aspect of the approach is to embed a culture of continuous improvement which **compliments and supports the new college quality arrangements and refreshed professional standards** and so joins up this project with the wider quality improvement effort overseen by Education Scotland and the Scottish Funding Council.



Language and terminology

Attainment – attainment is measurable progress which students make as they advance through and beyond education, and the development of the range of skills, knowledge and attributes needed to succeed in learning, life and work. In this context, attainment is obtaining the qualification they were aiming for successfully.

Retention – improving the number of students who stay at college; retaining those who start a course to continue onto the next year and eventually to successful completion.

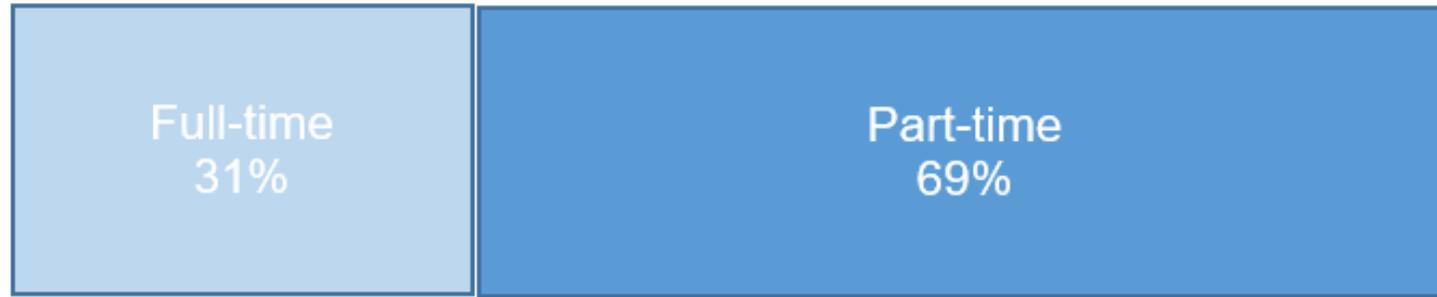
Language and terminology

- **Successful completion:** successfully completed their course, or if more than one year course and this was not in the final year they will have progressed to the next year of study and achieved at least 70 per cent of the units studied in the current year.
- **Partial Success:** Completed the course, but did not achieve the qualification they were aiming for. This could mean that the student has passed all units except one, or did not pass any units at all.
- **Withdrawal:** indicates that a student withdrew from their course before completion.
- **Early Withdrawal:** students withdrawing before the funding qualifying date (before 25% of the course is completed, meaning colleges are not funded for these students)
- **Further Withdrawal:** students withdrawing after the early withdrawal point and before the end of the course.
- **Large college:** delivering above 25,000 credits.
- **Small college:** delivering below 25,000 credits.

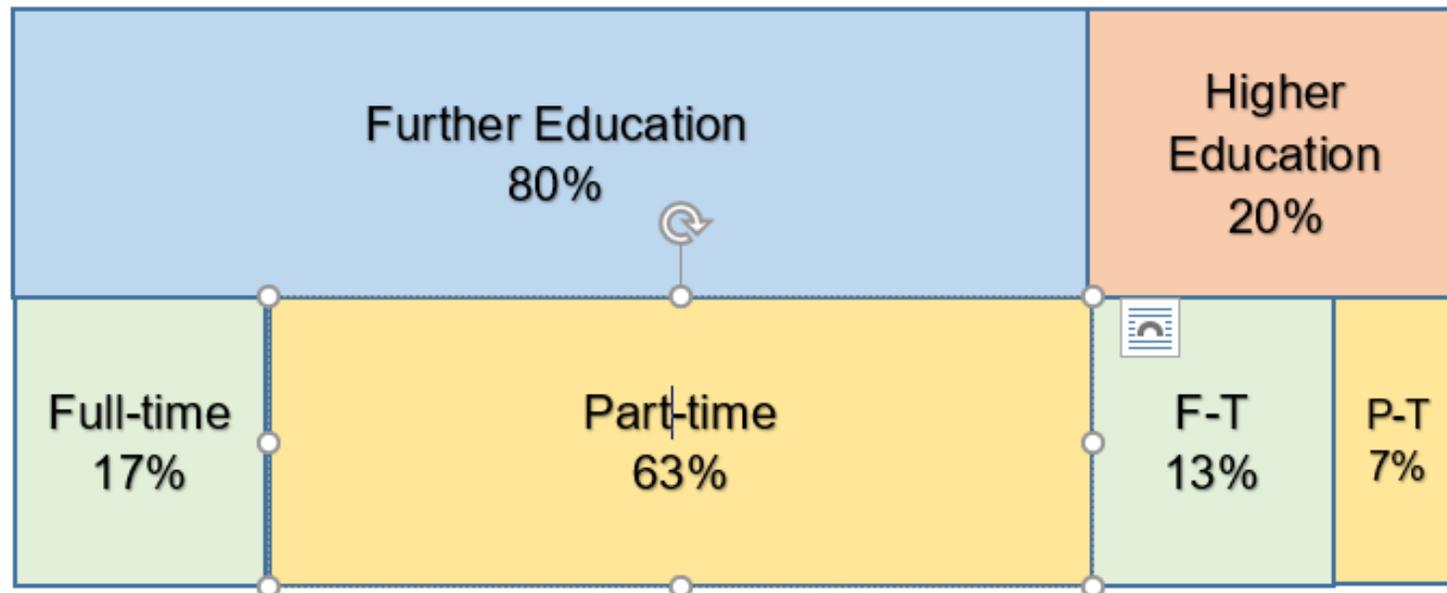


Around 236,000
students are studying
in Scotland's colleges

Mode of study



Level of Study



SFC publication College Performance Indicators - 2018/19 Data

Headline figures for FT FE students

- 65.2% of enrolled FE students completed their course, 0.9% lower than 2017-18
- Of the 26 colleges delivering FT FE courses, nine improved their success rates and 17 saw a decrease compared to 2017/18
- For large colleges, success rates ranged from 56.0% to 71.7%
- For small colleges, success rates ranged from 62.7% up to 75.0%
- The SFC target for FT FE success rates by 2019/20 is 73.2%; only 1 small college exceeded this target in 2018/19. The sector as a whole is 8.0PP below the target

**FT FE****FT HE****Successful Completion**65.2% (0.9%
lower than
2017/18)69.8% (1.5%
lower than
2017/18)**Partial Success**

10.1%

11.7%

WithdrawalEarly
Withdrawal

8.7%

5.2%

Further
Withdrawal

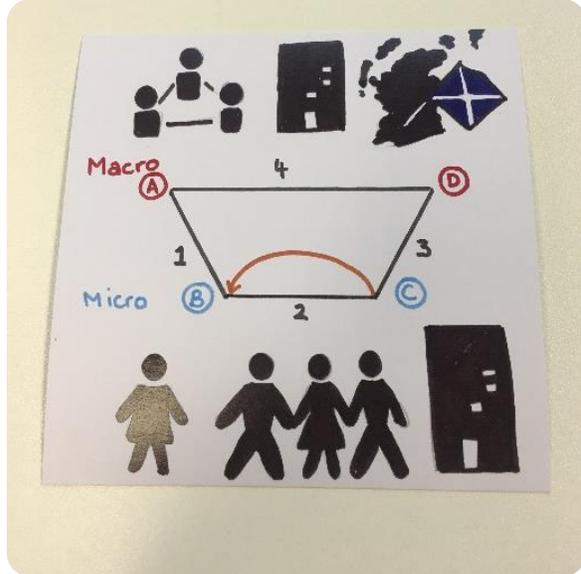
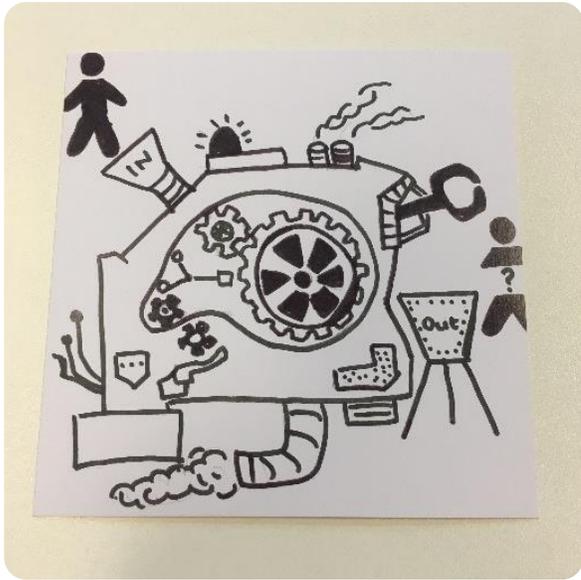
16%

13.3%



The Challenge

We want to reduce withdrawal and increase successful completion rates in Scotland's colleges whilst continuing to widen access and provide opportunities for all.



Sector Purpose

Alignment

System Change

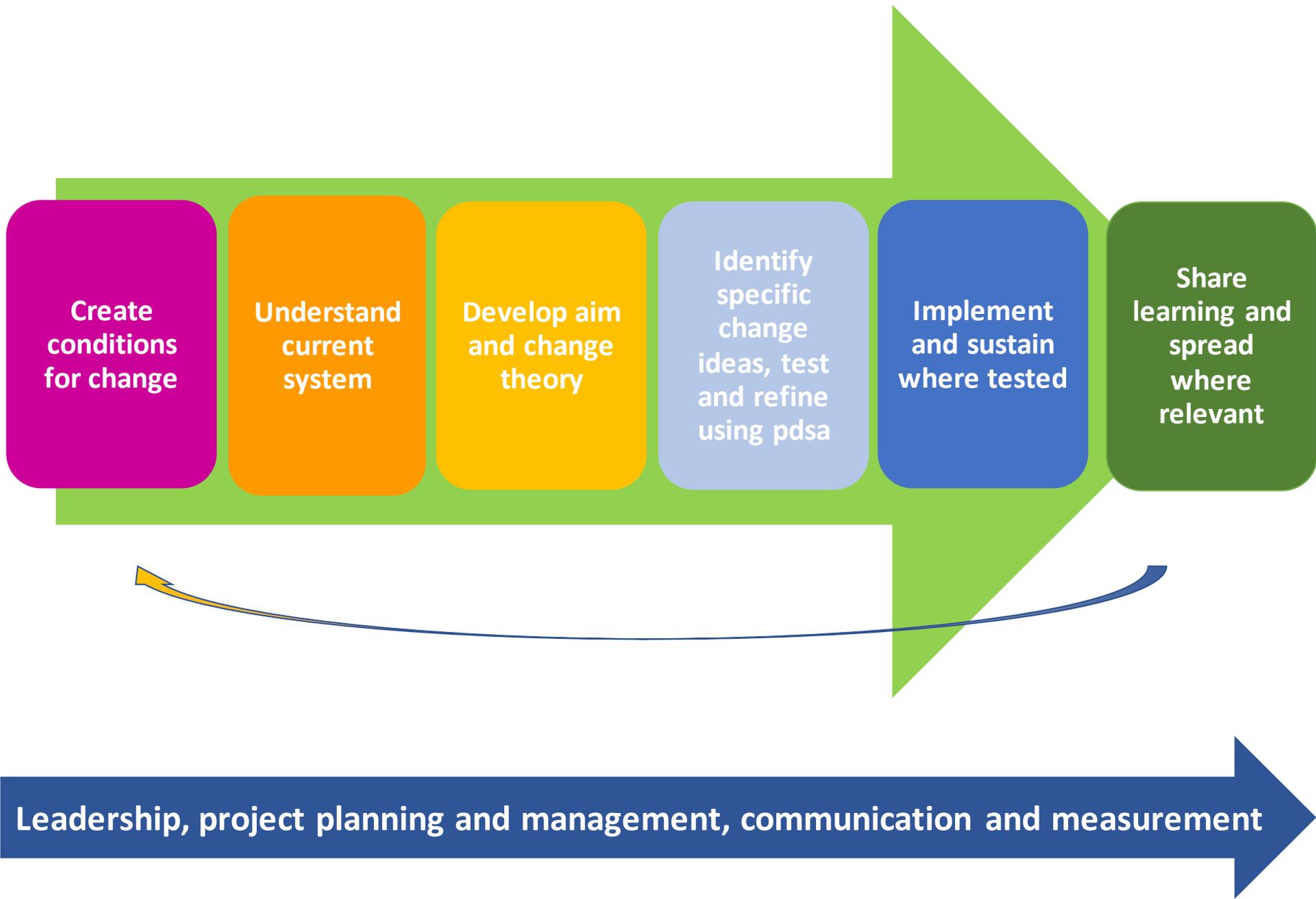
Behaviour Change

Improvement is relative



At each stage: There are key ingredients you need to know and different tools that will help you

The Improvement Journey





Quality Assurance



Quality Planning



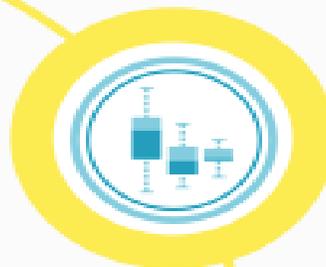
Quality Improvement



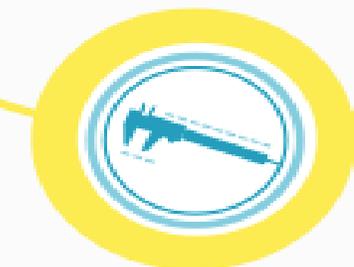
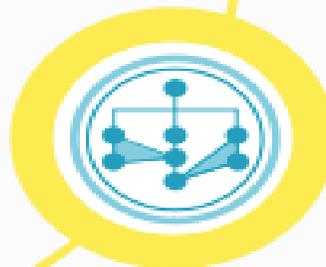
**Be problem-focused
and user-centered**



**Attend to
variability**



**See
the system**



**Embrace
measurement**

**Organize as
networks**



**Learn through
disciplined
inquiry**



**6
CORE PRINCIPLES OF
IMPROVEMENT**

Tests of change

1. What are we trying to accomplish?

- Set clear and focused goals
- Be bold in its aspirations
- Have clear, measurable targets

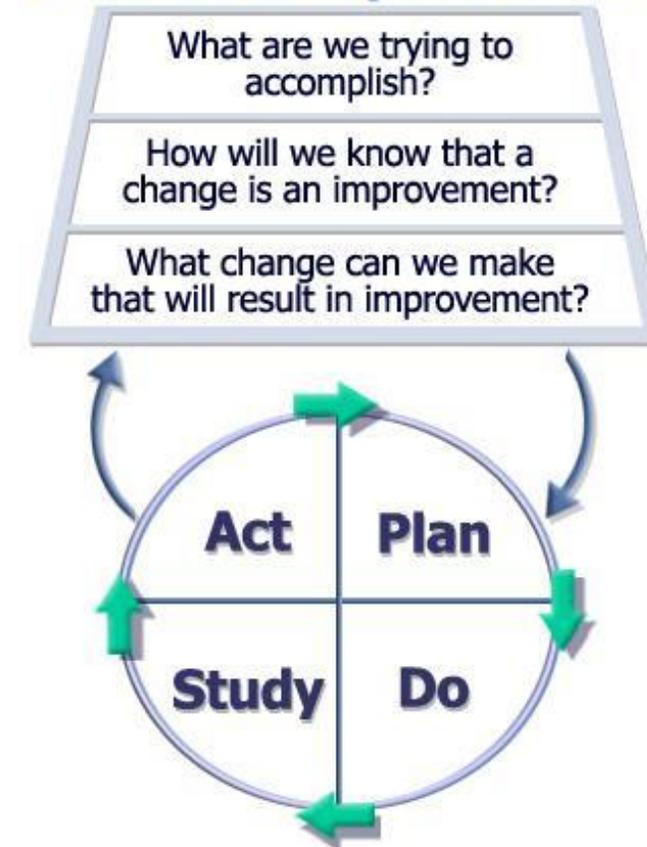
2. How will we know if the change is an improvement?

- Measure outcomes
- Note changes that affect the measures & demonstrate sustainable improvement
- Collect data to demonstrate whether change = improvement

3. What changes can we make that will result in improvement?

- Think big
- Start small
- Scale fast

Model for Improvement



[The Improvement Guide: A Practical Approach to Enhancing Organizational Performance](#)

by Gerald J. Langley, Ronald D. Moen, et al. | 29 Apr 2009

Measures: Focussing on what we need to know



Is the young person getting the right outcome?

Outcome Measures

Are we making things better?

Are we on track to achieve our Aim?

Is the system working as planned?

Process Measures

Are we doing the right things at the right time, every time?

Is the process reliable?

What about the bigger picture?

Balancing Measures

Looking at the system from different dimensions.

Does improving one thing cause problems elsewhere?

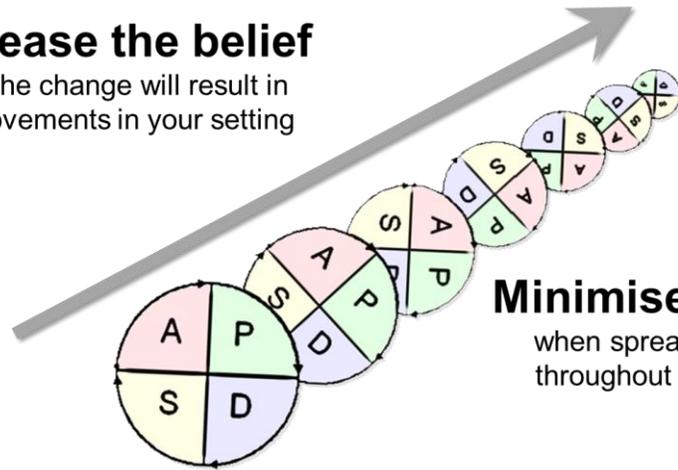
Why test changes?

Increase the belief
that the change will result in
improvements in your setting

To learn how to
**adapt the
change to
conditions** in
your setting

Minimise resistance
when spreading the change
throughout the organisation

Evaluate the costs and “side-effects” of changes



Plan, Do, Study, Act (PDSA) cycle

Step 1: Plan

- Plan the test or observation, including a plan for collecting data.
- State the objective of the test.
- Make predictions about what will happen and why.
- Develop a plan to test the change.

Step 2: Do

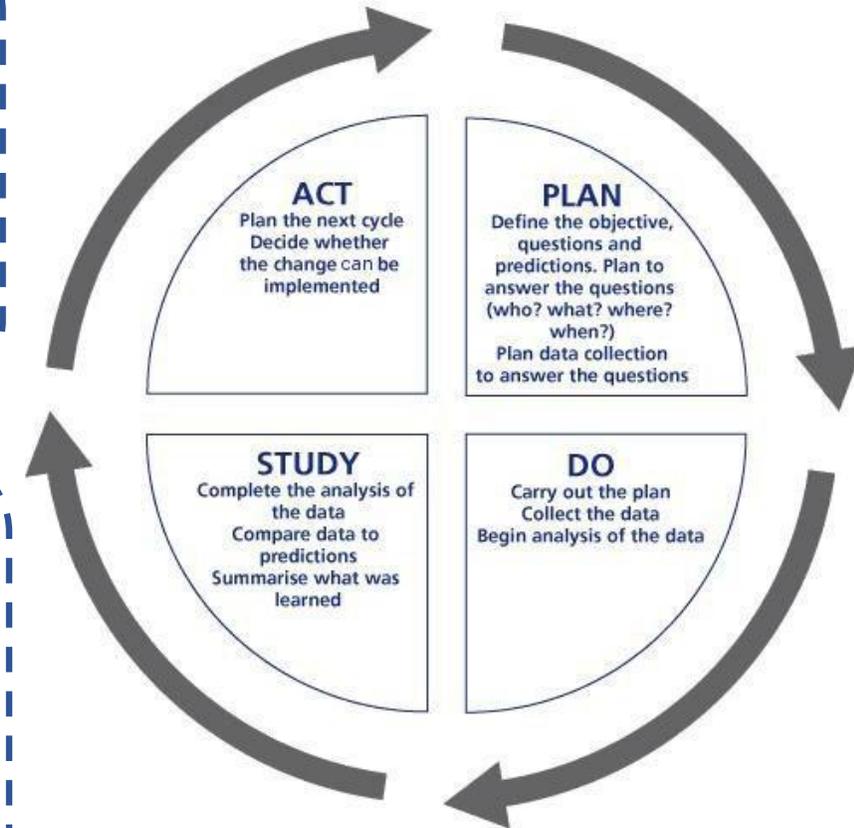
- Try out the test on a small scale.
- Carry out the test.
- Document problems and unexpected observations.
- Begin analysis of the data.

Step 3: Study

- Set aside time to analyse the data & study the results.
- Complete the analysis of the data.
- Compare the data to predictions.
- Summarize and reflect on what was learned.

Step 4: Act

- Refine the change, based on what was learned from the test.
- Determine what modifications should be made.
- Prepare a plan for the next test.



Link to a short video about the project. Created by media students from West College Scotland.

<https://www.dropbox.com/s/5d31jzbsIng8zd4/CDN%20and%20Parliment%20Training%20Reel.mp4?dl=0>

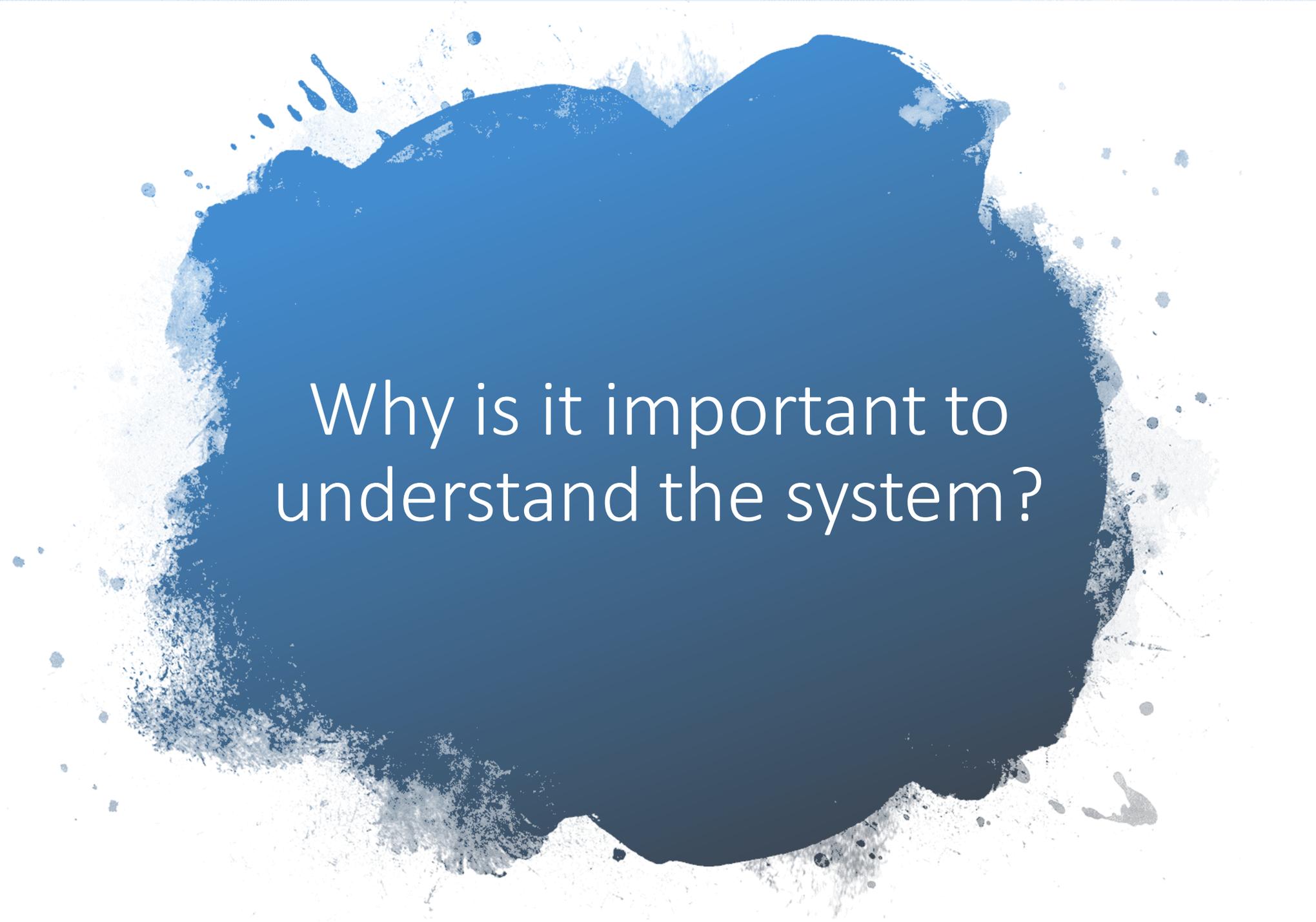




<https://www.cdn.ac.uk/college-innovation-hub/>

Retention & Attainment @ Dundee & Angus College

A national project involving 5 Scottish colleges coming together to tackle issues around retention and attainment; this case study describes Dundee & Angus College's project working with a Level 5 Social Sciences cohort.

A dark blue, irregularly shaped graphic with a splatter effect, containing white text. The graphic is centered on a white background and has a rough, hand-painted appearance with some lighter blue and white splatters around its edges.

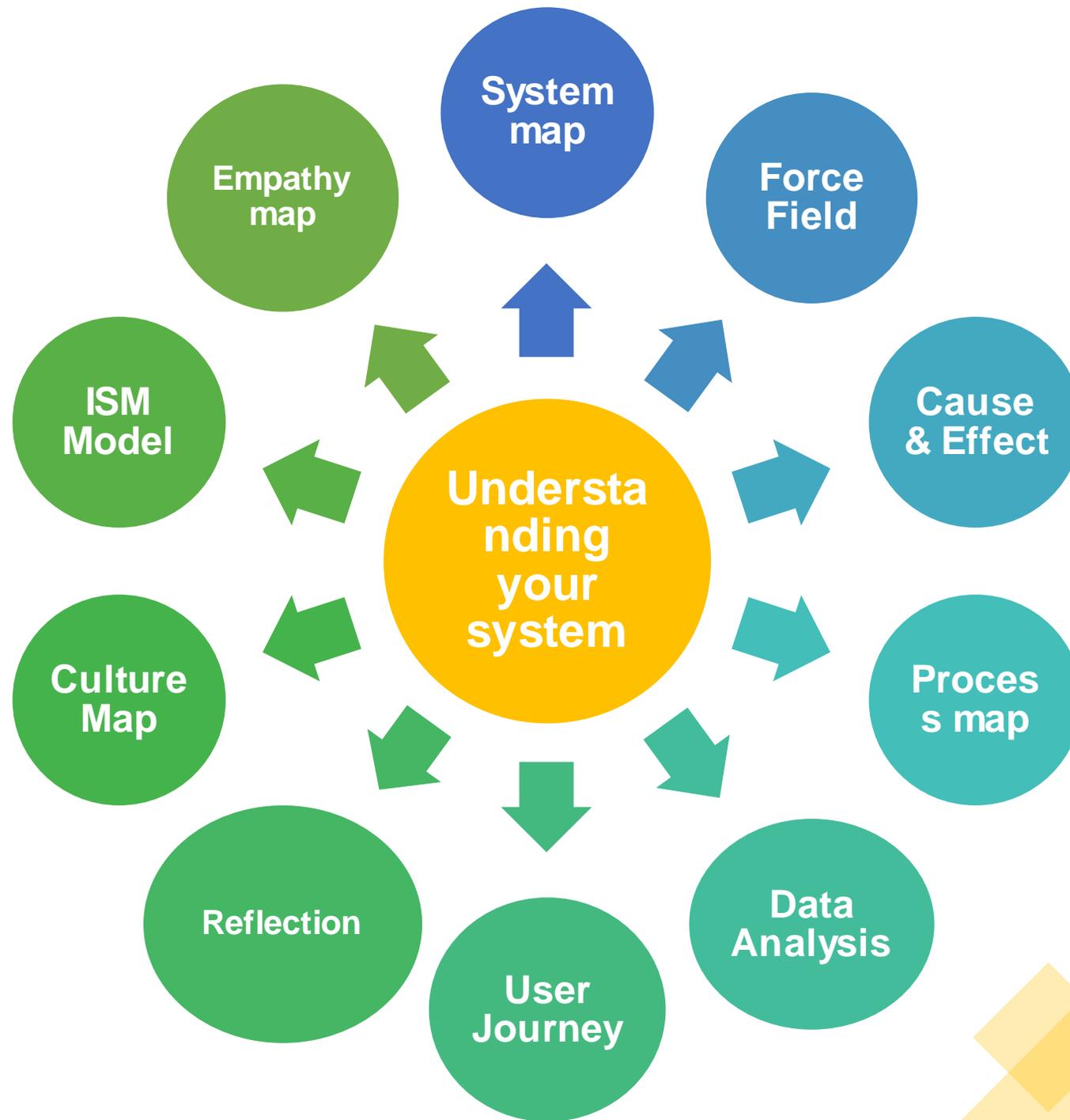
Why is it important to
understand the system?



DANGER
BE YOUNG
IS IN

"I Love Lucy"





System Mapping

Who are the key stakeholders?



What is the vision for the students' association?



what does the S.A. offer to that person/organisation and what does the person/organisation offer to the service?

Breakdown by colleges <u>FT FE</u>	Successful Completion 2018/19	+/- compared to 2017/18	Partial Success	Withdrawal
Ayrshire	66.2%	-0.7%	8.6%	25.2%
Borders	68.2%	-0.5%	8.3%	23.4
City of Glasgow	65.9%	-2%	11.2%	22.9
Dumfries & Galloway	58.6%	-1%	13.4%	27.9%
Dundee & Angus*	70.2%	-5.2%	10%	19.8%
Edinburgh* (4,180 students)	56%	-4.7%	12.4%	31.6%
Fife	57.9%	-1.2%	16.4%	25.7%
Forth Valley	69.1%	-2.3%	7%	23.8%
Glasgow Clyde	68%	+1.9%	9.5%	22.5%
Glasgow Kelvin	63.8%	+2.6%	8%	28.2%
New College Lanarkshire*	63%	+1.6%	6.9%	30%
Newbattle (72 students)	75%	+22.9%	11.1%	13.9%
NESCOL	64.8%	-1.8%	11.1%	24.2%
South Lanarkshire	71.7%	+1%	4.9%	23.4%
SRUC	70.1%	+1.8%	11.1%	18.8%
West College Scotland*	67.9%	-1.3%	10.5%	21.5%
West Lothian College	67.7%	+2.2%	7.8%	24.4%

UHI Colleges					
Argyll	62.7%	-13.3%	11.2%	26%	
Inverness*	69.9%	-0.7%	7.3%	22.8%	
Lews Castle	68.1%	+7.3%	14.5%	17.4%	
Moray	67.9%	-1.1%	10.7%	21.4%	
Orkney	71.6%	-3.4%	11%	17.4%	
Perth	67.4%	-2.6%	9.7%	22.9%	
Shetland	71.1%	-6.7%	10.8%	18.1%	
North Highland	69.2%	-2.6%	9.7%	21.1%	
West Highland	71.8%	+2%	12.6%	15.5%	

Course PI Tool 2018-19 (slicers)

PI Enrolments **198,186**

Male	98,521	49.7%
Female	98,945	49.9%
Other	256	0.1%
Prefer not to say	464	0.2%

SIMD decile 1	30,038	15.2%
SIMD decile 2	26,323	13.3%
SIMD decile 3	22,010	11.1%
SIMD decile 4	20,729	10.5%
SIMD decile 5	20,091	10.1%
SIMD decile 6	18,531	9.4%
SIMD decile 7	17,722	8.9%
SIMD decile 8	16,227	8.2%
SIMD decile 9	14,301	7.2%
SIMD decile 10	10,672	5.4%
No SIMD	1,542	0.8%

		%
Completed successful	147,770	74.6%
Completed partial success	21,733	11.0%
Further withdrawal	19,060	9.6%
Early withdrawal	9,623	4.9%

Aged Under 16	11,310	5.7%
Aged 16 to 19	67,319	34.0%
Aged 20 to 24	36,169	18.3%
Aged 25 to 39	49,379	24.9%
Aged 40 and over	34,009	17.2%

RESET FILTERS

JUMP TO EXCEL-STYLE

COURSE TITLE (All)

SCQF DATABASE TITLE (All)

SQA GROUP AWARD (All)

PROGID (All)

AWARDING BODY (All)

SUBJECTS (All)

SUPERCLASS (All)

DEPARTMENT CODE (All)

COLLEGE

- Argyll College
- Ayrshire College
- Borders College
- City of Glasgow College
- Dumfries and Galloway College
- Dundee and Angus College
- Edinburgh College
- Fife College
- Forth Valley College
- Glasgow Clyde College
- Glasgow Kelvin College
- Inverness College
- Lewis castle College
- Moray College
- New College Lanarkshire
- Newbattle Abbey College
- North East Scotland College
- North Highland College
- Orkney College
- Perth College
- Shetland College
- South Lanarkshire College
- SRUC
- West College Scotland
- West Highland College
- West Lothian College

GROUP

- 1. Under 10hrs
- 2. 10 up to 40hrs
- 3. 40 up to 80hrs
- 4. 80 up to 160 hrs
- 5. 160 up to 320 hrs
- 6. 320 hrs but less than FT
- 7. Full Time

MODE OF STUDY

- Assessment of Work Based...
- Block release
- Distance Learning
- Evenings & Weekends only
- Flexible learning
- Full-time
- Other Part-time Day Course
- Part-time (Day Release)
- Part-time, but previously ...
- Short full-time

LEVEL

- FE
- HE

SCQF LEVEL

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

DEPARTMENT

- 125
- 131
- 133
- 135
- 141

QUALIFICATION AIM

- 1st degree (honours)
- 1st Degree (ordinary)
- Advanced Higher (Group Award)
- Advanced qualification not specifi...
- Foundation Level Apprenticeship
- Graduate Level Apprenticeship
- Higher (Group Award)
- HN units only but not leading to ce...
- HNC or Equivalent
- HND or Equivalent
- National Certificate Award (accre...
- National Qualification Award (colle...
- Non-Advanced units only but not I...
- Non-Advncved qualification not s...
- Professional Body Qualification
- Scottish Vocational Qualification o...
- SQA National Award
- SQA National Progression Award
- SQA Professional Development Aw...

DOM PROG GROUP

- Agriculture & Horticulture
- Art & Design
- Business & Management
- Computing
- Construction
- Engineering
- Food Technology & Caterin
- Health
- Minerals & Materials
- No program group recorded
- Office & Secretarial
- Personal Development
- Printing
- Science & Maths
- Social Studies
- Social Work
- Special Programmes
- Sport & Recreation
- Transport

LENGTH

- 0
- 1
- 2
- 3
- 4

YEAR

- 0
- 1
- 2
- 3
- 4

DURATION

- 0
- 1
- 2
- 3
- 4

Instructions:
 The search boxes above allow you to use specific codes to jump directly to the desired information, e.g. type in a PROGID to filter tables to only that PROGID. However, they are not hierarchical filters so filtering one will not limit the drop-down options for the next.

 So FIRST select what you want to see using one of the above filters then, SECOND, refine your selection using the slicers on the right to display the relevant figures.



All recognised courses across all colleges that make up the published PIs are available in the Course Tool.

Student Satisfaction and Engagement Survey 2018-19

College	Sum of Satisfied	Sum of Total	Sum of Satisfied Percent
Argyll	3,460	3,706	93.4%
Ayrshire	17,915	19,939	89.8%
Borders	6,333	7,296	86.8%
City of Glasgow	38,190	50,641	75.4%
Dumfries and Galloway	6,251	6,880	90.9%
Dundee and Angus	26,399	28,885	91.4%
Edinburgh	33,107	39,590	83.6%
Fife	26,690	29,671	90.0%
Forth Valley	15,653	17,897	87.5%
Glasgow Clyde	39,058	43,062	90.7%
Glasgow Kelvin	8,155	9,459	86.2%
Inverness	9,558	10,610	90.1%
Lewis Castle	1,781	1,817	98.0%
Moray	5,434	6,064	89.6%
New College Lanarkshire	37,385	44,149	84.7%
Newbattle Abbey	492	584	84.2%
North East Scotland	31,309	35,665	87.8%
North Highland	1,892	2,097	90.2%
Orkney	1,493	1,624	91.9%
Perth	5,915	6,283	94.1%
Sabhal Mòr Ostaig	390	417	93.5%
Scotland's Rural College	2,062	2,476	83.3%
Shetland	493	588	83.8%
South Lanarkshire	12,679	15,167	83.6%
West College Scotland	33,628	36,938	91.0%
West Highland	2,954	3,211	92.0%
West Lothian	10,700	11,860	90.2%
Grand Total	379,376	436,576	86.9%

- College
- Argyll
 - Ayrshire
 - Borders
 - City of Glasgow
 - Dumfries and Galloway
 - Dundee and Angus
 - Edinburgh
 - Fife
 - Forth Valley
 - Glasgow Clyde
 - Glasgow Kelvin
 - Inverness
 - Lewis Castle
 - Moray
 - New College Lanarkshire
 - Newbattle Abbey
 - North East Scotland
 - North Highland
 - Orkney
 - Perth
 - Sabhal Mòr Ostaig
 - Scotland's Rural College
 - Shetland
 - South Lanarkshire
 - West College Scotland
 - West Highland
 - West Lothian

Please note that although we did not publish any HE data for UHI partner colleges or SRUC we have, where received, included this data in the SSES tool.

- question
01. Overall, I am satisfied with my college experience.
 02. Staff regularly discuss my progress with me.
 03. Staff encourage students to take responsibility for their learning.
 04. I am able to influence learning on my course.
 05. I receive useful feedback which informs my future learning.
 06. The way I'm taught helps me learn.
 07. My time at college has helped me develop knowledge and skills for the workplace.
 08. I believe student suggestions are taken seriously.
 09. I believe all students at the college are treated equally and fairly by staff.
 10. The college Students' Association influences change for the better.

level

FE HE

mode

Distance/flexible

Full-Time

Part-time

RESET FILTERS



On Student Satisfaction SFC only receives summary level data but colleges will have this at Department and at course level.

Sector Leavers / Remainers Confirmed / Unconfirmed

CONTINUERS ONLY SECTOR LEAVERS ONLY

Filter confirmed only Filter unconfirmed only

College

- ARGYLL COLLEGE (UHI)
- AYRSHIRE COLLEGE
- BORDERS COLLEGE
- CITY OF GLASGOW COLLEGE
- DUMFRIES AND GALLOWAY COLLEGE
- DUNDEE AND ANGUS COLLEGE
- EDINBURGH COLLEGE
- FIFE COLLEGE
- FORTH VALLEY COLLEGE
- GLASGOW CLYDE COLLEGE
- GLASGOW KELVIN COLLEGE
- INVERNESS COLLEGE (UHI)
- LEWS CASTLE COLLEGE (UHI)
- MORAY COLLEGE (UHI)
- NEW COLLEGE LANARKSHIRE
- NEWBATTLE ABBEY COLLEGE
- NORTH EAST SCOTLAND COLLEGE
- NORTH HIGHLAND COLLEGE (UHI)
- ORKNEY COLLEGE (UHI)
- PERTH COLLEGE (UHI)
- SCOTLAND'S RURAL COLLEGE (SRUC)
- SHETLAND COLLEGE (UHI)
- SOUTH LANARKSHIRE COLLEGE
- WEST COLLEGE SCOTLAND
- WEST HIGHLAND COLLEGE (UHI)
- WEST LOTHIAN COLLEGE

Level

SCQF 1-6 SCQF 7+

SCQF Level

1 2 3 4 5

6 7 8 9 10

SIMD Decile

1 2 3 4 5 6

7 8 9 10 ...

Urban Rural Classification

1 2 3

4 5 6

7 8 (blank)

Gender

Female Male Other

Age

16-24 25+

Primary Classification

- WORKING PART-TIME
- WORKING FULL-TIME
- UNEMPLOYED AND LOOKING FO...
- UNCONFIRMED
- TEMPORARILY SICK OR UNABLE T...
- TAKING TIME OUT IN ORDER TO T...
- STUDYING PART-TIME
- STUDYING FULL-TIME
- STARTING JOB BY 31ST MARCH
- PERMANENTLY UNABLE TO WOR...
- NOT EMPLOYED BUT NOT LOOKIN...

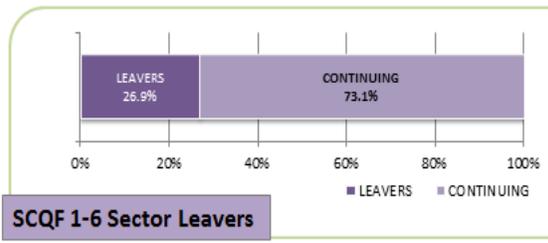
Region (if multi-college)

- GLASGOW
- HIGHLANDS AND ISLANDS
- LANARKSHIRE

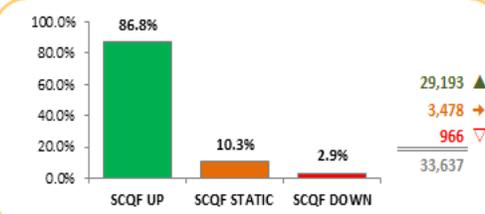
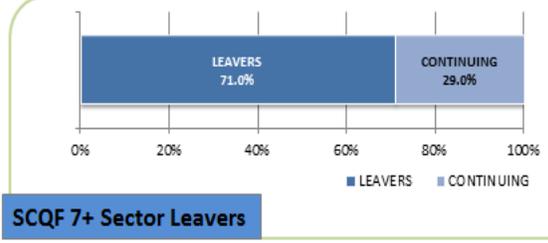
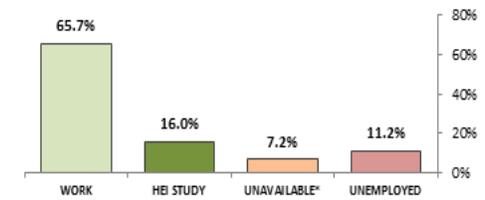
TOTAL SELECTED POPULATION: 50,810

Primary Classification

FT	PT	FT	PT	31st	Sick or Looking out After Home	Taking time out in order to travel	Permanently unable to work/retired	Not employed but not looking for work/study	Unemployed	Unconfirmed
STUDY		WORK			UNAVAILABLE FOR WORK					
33,118	770	7,392	2,104	23	461	141	30	176	1,305	5,290
65.2%	1.5%	14.5%	4.1%	0.0%	0.9%	0.3%	0.1%	0.3%	2.6%	10.4%
66.7%		85.4%			1.6%					
66.7%		18.7%			2.6%					
POSITIVE		UNAVAILABLE FOR WORK			UNEMPLOYED UNCONFIRMED					



4,319	WORK	37.9%
6,415	HEI STUDY	56.3%
241	UNAVAILABLE*	2.1%
422	UNEMPLOYED	3.7%
11,397	SECTOR LEAVERS	71.0%
4,656	CONTINUING IN COLLEGE	29.0%



Subject Group

- ART AND DESIGN ARTS AND CRAFTS
- BUSINESS, MANAGEMENT AND AD...
- CARE
- COMPUTING AND ICT
- CONSTRUCTION
- EDUCATION AND TRAINING
- ENGINEERING
- HAIRDRESSING, BEAUTY AND COMP...
- HOSPITALITY AND TOURISM
- LAND-BASED INDUSTRIES
- LANGUAGES AND ESOL
- MEDIA
- NAUTICAL STUDIES
- PERFORMING ARTS
- SCIENCE
- SOCIAL SUBJECTS
- SPECIAL PROGRAMMES
- SPORT AND LEISURE

Superclass (All)

ProgID (All)

Note: to search by PROGID, first reset filters.

RESET FILTERS

College Leaver Destination Tool (only collected for full-time successful students)



Purpose of this session: understanding data collection tools

- How do you begin to identify areas for improvement?
- What do you need to know in order to know that what you are doing is leading to improvement?
- How to understand what you need to measure, and how do you begin to gather that data?

Methods to choose participants for qualitative research

Snowballing: referrals from previous participants or 'gatekeepers'

Purposive sampling: choosing participants based on criteria (e.g. age, gender, course studied)

Oppositional sampling: criteria is 'disagreement' or difference

Triangulating data: using more than one method to collect data on the same topic, and bringing all this data together to analyse

Useful for validation, providing different perspectives on the same issue

What will you do with this qualitative data?

- Wordle: prioritising written/qualitative data
- ‘Check sheet’: tallying events/scores/outcomes against factor of your choice (time/location/group)

Motor Assembly Check Sheet

Name of Data Recorder: Lester B. Rapp

Location: Rochester, New York

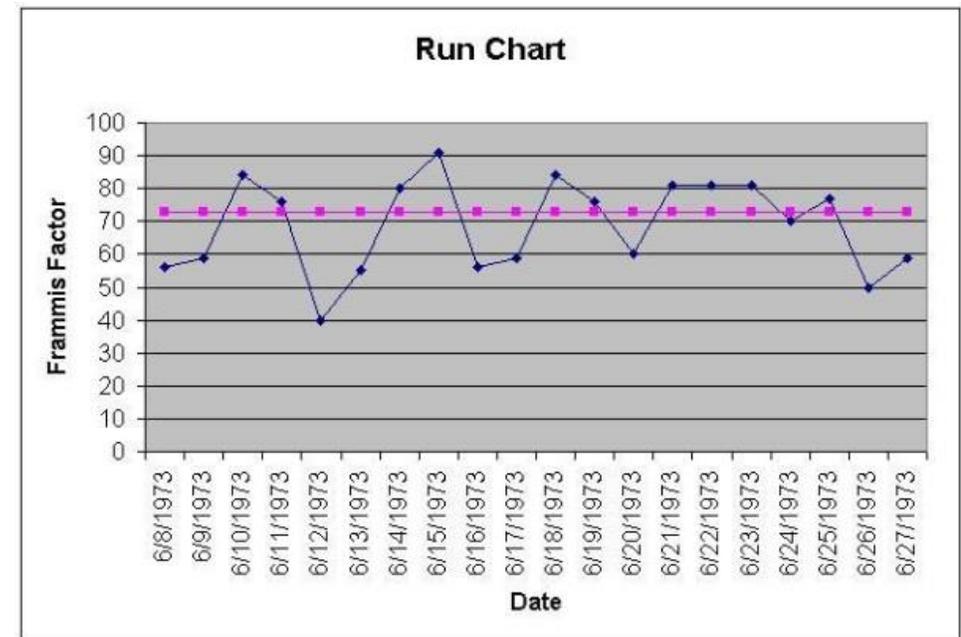
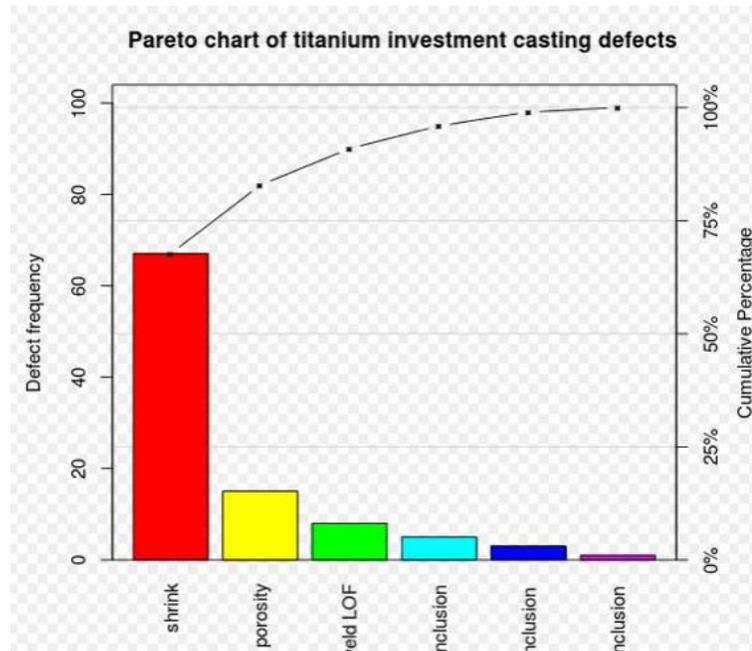
Data Collection Dates: 1/17 - 1/23

Defect Types/ Event Occurrence	Dates							TOTAL
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
Supplied parts rusted								20
Misaligned weld								5
Improper test procedure								0
Wrong part issued								3
Film on parts								0
Voids in casting								6
Incorrect dimensions								2
Adhesive failure								0
Masking insufficient								1
Spray failure								5
TOTAL		10	13	10	5	4		



What will you do with this qualitative data?

- Run chart: one data set in a time sequence
- Pareto Chart: two data sets compared
 - Left axis: frequency of event/score
 - Right axis: cumulative total of all events/scores



Different
qualitative
data
gathering
techniques

Focus group

Semi-structure interviews

Participant observation / enquiry

Workshop

Any questions?



- Elizabeth.Shevlin@gov.scot
- Stef.Black@sparqs.ac.uk