You can take a student to water, but will it prosper?

Examining the relationship of students seeing Learning Development with student engagement, belonging and self-confidence

Alison Loddick – Learning Development Tutor – Mathematics and Statistics

The University of Northampton

Introduction

- A presentation by Coulson and Loddick in 2018 that found students who saw Learning Development gained two to three subgrades more than those that did not

- The presentation was criticised in that it was just more engaged students who saw us.

- This research test whether it is just engaged students who see us and whether that is the reason for this increase.

University of Northampton

Methodology

A survey to 20% of students was sent out in February to March 2020 asking questions to determine student engagement, belonging and self-confidence as well as usage of Learning Development.
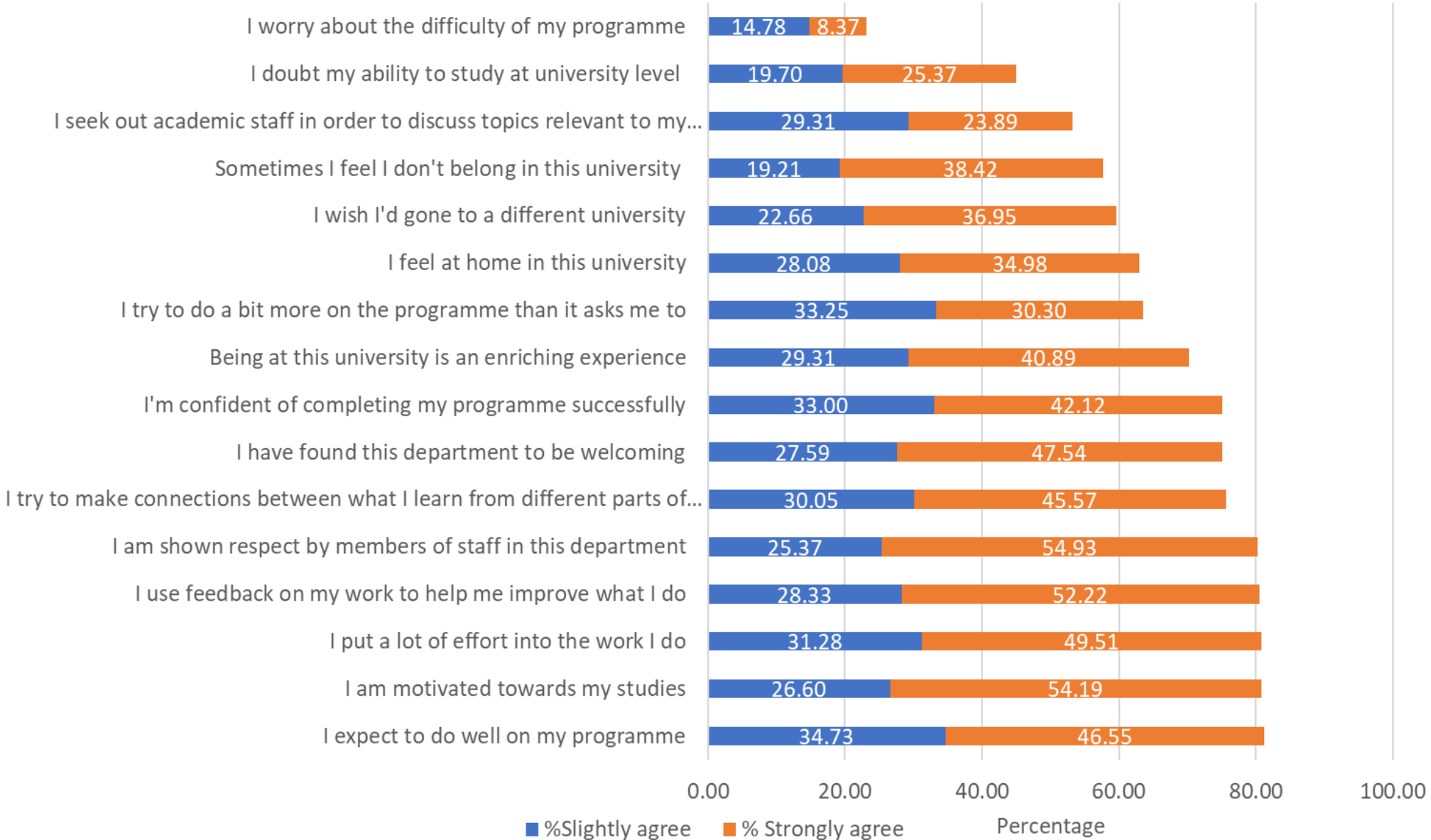
This was then matched with assessment data to measure student average attainment, before and after students first appointment with Learning Development

A mixed ANOVA was conducted to understand whether there was a difference in attainment controlling for each in turn of engagement, belonging and self confidence

The survey

- Respondent were asked 16 five-point Likert questions in relation to their levels of engagement, belonging and self-confidence at university from an existing study by Mantz Yorke (2016).

- There was an 18% response rate with 402 students answering the questions across all degree courses and levels from standalone units through to PhD.

Engagement, Self-confidence and belonging Statements - % Slightly and Strongly agree

Statement	%Slightly agree	% Strongly agree
I worry about the difficulty of my programme	14.78	8.37
I doubt my ability to study at university level	19.70	25.37
I seek out academic staff in order to discuss topics relevant to my...	29.31	23.89
Sometimes I feel I don't belong in this university	19.21	38.42
I wish I'd gone to a different university	22.66	36.95
I feel at home in this university	28.08	34.98
I try to do a bit more on the programme than it asks me to	33.25	30.30
Being at this university is an enriching experience	29.31	40.89
I'm confident of completing my programme successfully	33.00	42.12
I have found this department to be welcoming	27.59	47.54
I try to make connections between what I learn from different parts of...	30.05	45.57
I am shown respect by members of staff in this department	25.37	54.93
I use feedback on my work to help me improve what I do	28.33	52.22
I put a lot of effort into the work I do	31.28	49.51
I am motivated towards my studies	26.60	54.19
I expect to do well on my programme	34.73	46.55

Percentage

■ %Slightly agree   ■ % Strongly agree

More than 80% of students agree that they are motivated towards their studies and expect to do well.

However, nearly half the students wish they had gone to another university, 45% doubt their ability and 23% worry about the difficulties of their programme.

Mantz Yorke Factor analysis (2016) on the survey

The factor analysis split into 3 almost equal size factors of Engagement, Belonging and self-confidence

Statements	19.8% variance Engagement	17.6% variance Belonging	13.9% variance Self-confidence
I try to do a bit more on the programme than it asks me to	0.743	-0.03	0.141
I put a lot of effort into the work I do	0.737	0.144	0.015
I am motivated towards my studies	0.611	0.248	0.263
I seek out academic staff in order to discuss topics relevant to my programme	0.609	0.006	0.028
I use feedback on my work to help me improve what I do	0.59	0.23	-0.012
I try to make connections between what I learn from different parts of my programme	0.552	0.222	-0.005
I wish I'd gone to a different university (reversed)	-0.081	0.72	0.046
Being at this university is an enriching experience	0.275	0.7	0.082
I feel at home in this university	0.118	0.692	0.17
have found this department to be welcoming	0.334	0.646	-0.052
Sometimes I feel I don't belong in this university (reversed)	-0.009	0.603	0.405
I am shown respect by members of staff in this department	0.252	0.523	-0.05
I doubt my ability to study at university level (reversed)	0.046	0.069	0.812
I worry about the difficulty of my programme (reversed)	-0.086	-0.037	0.772
I'm confident of completing my programme successfully	0.372	0.231	0.625
I expect to do well on my programme	0.502	0.168	0.53

University of Northampton

Matching survey, attainment and LD usage we found an unexpected problem!

No. surveyed

No. aware of LD

No. saying had 1 to 1 supp

No. saying 1-to-1 support a
attainment data

No. with attainment before
LD support

Undergraduates only

402	
323	(79 not aware)
144	
73	
26	
24	

University of
Northampton

Those who are more engaged and self-confident are more likely to come to Learning Development

Factors	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Engagement	-2.83	82.00	**0.01**	-2.10	-3.58	-0.62
Belonging Factor	-2.62	85.65	**0.01**	-1.70	-2.98	-0.41
Self-confidence	-2.28	97.90	**0.03**	-0.79	-1.47	-0.10

Attend LD n=73, not attend LD (including not aware) n=258

What does this mean for the attainment impact?

University of Northampton

Undergraduate student's attainment was compared before and after there first LD Support (n=24) - There was a significant improvement after the tutorial

Average student assessment mark	Mean	Std. Deviation	Std. Error Mean
Before first LD appointment	14.80	4.26	0.87
After first LD appointment	16.48	3.57	0.73

Average student assessment mark	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Before vs after first LD appointment	2.497	23	0.02	1.68	0.29	3.07

n=24 undergraduate students

UON
University of Northampton

How is the attainment impacted accounting for engagement, self-confidence and belonging

- A Mixed methods ANOVA was conducted comparing attainment before and after support accounting for each of the factors in turn.

- This was to confirm whether those students whose attainment increased more was due to engagement etc.

- Due to sample size combinations of factors were not included

Engagement, self-confidence, belonging at university and worry about ability has little to no impact on the significance of improvement in attainment

Factor	Significant of difference in attainment before and after LD supoort	Effect size (partial eta sq)	Effect size	Significance of factor
Engagement	**0.02**	0.22	Medium	0.81
Belonging	**0.02**	0.22	Medium	0.74
Self-confidence	**0.01**	0.26	Large	0.5

n=24 undergraduate students

Conclusions

- Students who seek 1-to-1 support are more engaged, self-confident, and feel they belong at university

- Students who attend 1-to-1 support on average have significantly better results following support than prior (p=0.02)

- The levels of student engagement, self-confident, feeling they belong at university does not impact this improvement in attainment.

University of
Northampton

But this leads to lots of unanswered questions

- Should we accept given the service is voluntary, that mainly engaged students will seek help?

- How can academic support help and approach the less engaged students?

In conclusion

Learning Development make a difference accounting for engagement

References

Loddick, A. and Coulson, K. V. (2018) *Give us the money! Evaluating the effectiveness of Learning Development (and justifying our existence!).* Paper presented to: 15th Association for Learning Development in Higher Education (ALDinHE) Conference. University of Leicester, 25-27 March 2018.

Yorke, M (2016) *The development and initial use of a survey of student 'belongingness', engagement and self-confidence in UK higher education*, Assessment & Evaluation in Higher Education, 41:1, 154-166, DOI: 10.1080/02602938.2014.990415

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate data analysis*.

UO
N University of
Northampton