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Degrees of Success: The Transition from VET to HE

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The Project

Degrees of Success aims to investigate the ways in which people with Vocational Qualifications (VQs) make the transition to Higher Education (HE)

1) Landscapes of Transition:

- How many people with VQs go on to HE? Changes over time?
- At what HEIs and in which programmes do people with a vocational background study?
- What are the factors associated with the probability of transition?
- How successful are students with a vocational background?

2) Learning Experience:

- What is the experience of students with a vocational background when they make the transition to HE?
- To what extent are these students prepared for studies in HE?
- What mechanisms are in place to remedy any lack of preparation?
- What are the main factors that shape the HE experience of these students?

Background

- Widening Participation
 - VET pathways as opportunity (?)
- Descriptive and explanatory questions
 - Which factors influence VET-students access to and success in HE?
- Method- and data pluralism
 - Interviews
 - Questionnaire
 - Administrative datasets

Background

Three goals of the widening participation agenda

- Increased access: Number of students in HE overall shall go up
- Widened access: Number of students in HE from under-represented groups shall go up
- Fair access: Number of students from under-represented groups shall go up in all different forms of HE

Descriptive analysis

Qualifications held by applicants (%)

	1995	2003	2004
General academic	70.7	75.3	75.7
Vocational	17.8	25.8	24.9
Foundation/Access	7.8	8.6	8.9
Other	5.1	13.5	14.1
No qualification	6.0	3.5	3.2
TOTAL	107.3	126.7	126.8

(more than 100%, as applicants can hold multiple qualifications)

Descriptive analysis

Qualification pathways (in %)

	1995	2003	2004
Academic	63.4	50.8	51.3
Vocational	13.6	10.1	9.5
FaA	6.2	3.9	4.2
Other	3.5	5.9	6.0
Ac + Voc	4.2	14.1	13.7
Ac + FaA	1.5	3.2	3.1
Other combination	1.6	8.5	8.9
No qualification	6.0	3.5	3.2
Total	100	100	100

Preliminary results

GENDER

Qualifications	Women	Men
Only A-levels	53.4%	46.6%
Only vocational	49.3%	50.7%
Only Foundation- /Access-courses	69.4%	30.6%
Only "Other"	55.5%	44.5%
A-levels and vocational	55.6%	44.4%
A-levels and other non-vocational	67.6%	32.4%
Any other combination	66.6%	33.4%
<i>Total</i>	55.7%	44.3%

Preliminary results (add.)

AGE (in years)

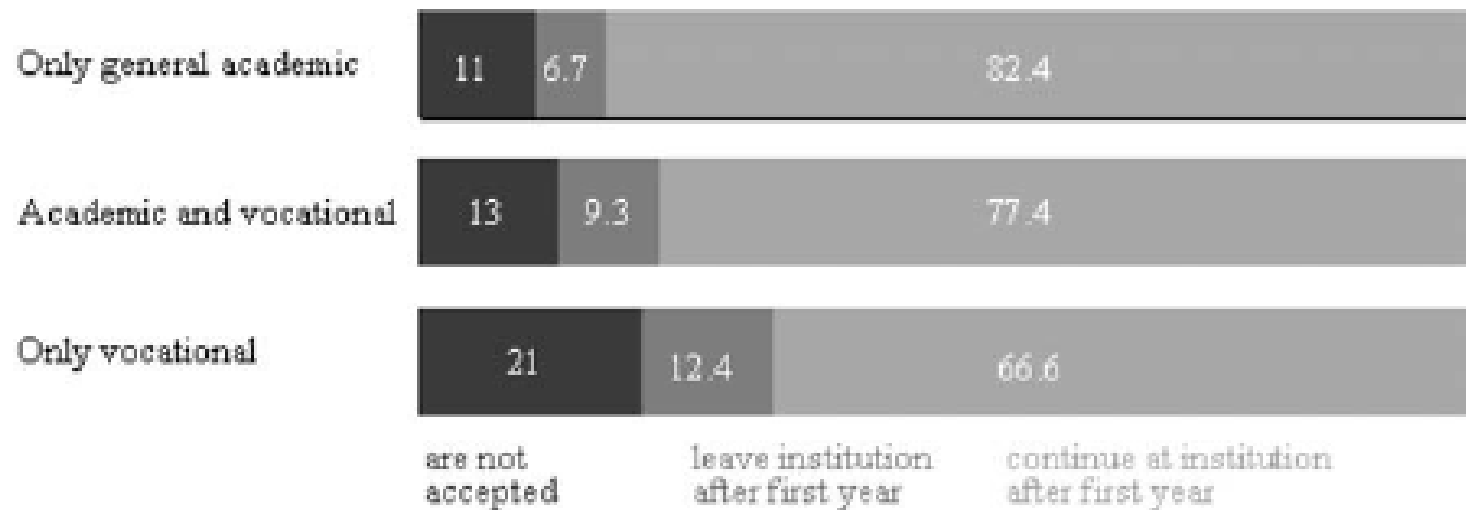
Qualifications	MEAN
Only A-levels	18.7
Only vocational	20.3
Only Foundation- /Access-courses	29.8
Only "Other"	28.9
A-levels and vocational	19.3
A-levels and other non-vocational	22.1
Any other combination	22.7
<i>Total</i>	20.6

Preliminary results (add.)

SOCIO-ECONOMIC STATUS (1 = high, 7 = low)

Qualifications	MEAN
Only A-levels	3.1
Only vocational	3.9
Only Foundation- /Access-courses	4.1
Only "Other"	3.6
A-levels and vocational	3.6
A-levels and other non-vocational	2.8
Any other combination	3.4
<i>Total</i>	3.3

Gaining a place, keeping a place



Background

Fair access:

- Distribution over institutions
 - ⇒ Diversified system of HEI with different reputation
- Distribution over subjects
 - ⇒ Subjects have different rates of return

Question:

“Do different educational pathways primarily lead into specific sectors (subjects, institutions) of the HE system?”

Introduction to data

Administrative data

- LSC: ILR (16-19)
- UCAS: Applicants data
- HESA: Student records

Years:

- 1995 UCAS and HESA (unmatched)
- 2002/3 UCAS matched with 03/04 HESA
- 2003/4 UCAS matched with 04/05 HESA

Introduction to data

Subsample for the following analyses:

HESA data 2003/04

- full-time
- first-year
- under 21 (non-mature)
- in English institutions
- matched with UCAS data

224,985 students



Introduction to data

Distribution of educational pathways:

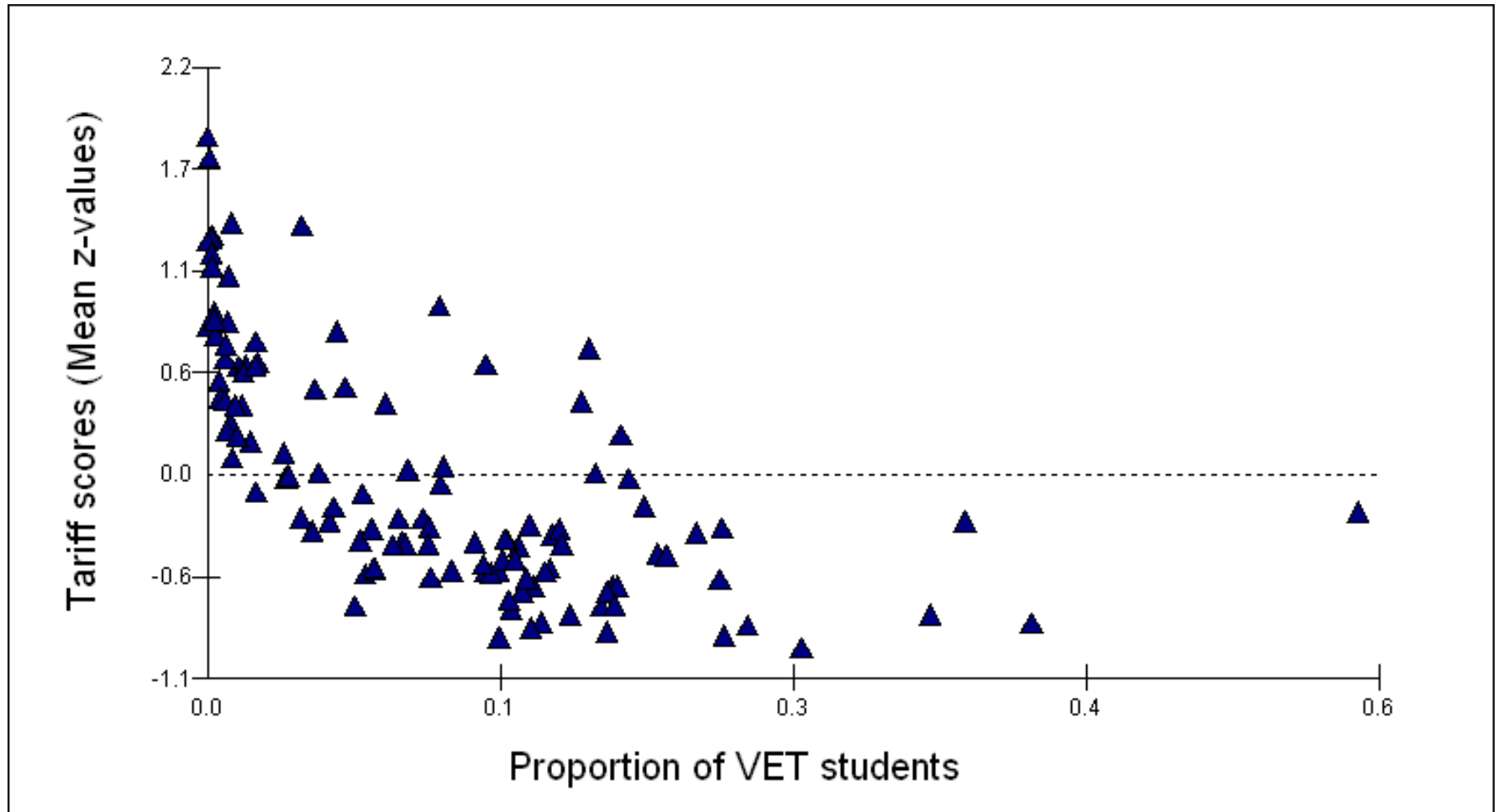
	Frequency	Percent
Academic (level 3)	163,170	72.5
Academic and vocational (level 3)	25,255	11.2
Vocational (level 3)	19,580	8.7
Foundation and Access	6,035	2.7
Not level 3/not known	10,940	4.9

Distribution across institutions

Different prestige of institutions measured

- by selectivity of student intake (mean tariff-point score)
 - ⇒ Higher mean tariff-points signal more competitive admissions requirements
- by historic grouping (Pre-1992, Post-1992, Other HEI)
 - ⇒ Pre-1992 universities are often seen as the more prestigious institutions
- by RAE (research) and QAA (teaching) results
 - ⇒ High RAE results have an impact on earnings of graduates
 - ⇒ High QAA results should indicate better support for students

Distribution across institutions



Distribution across institutions

Results

- For all measures (tariff-points, historic grouping, RAE, QAA) students from VET background are studying at less prestigious institutions
- In most cases VET students are the most disadvantaged of all non-traditional educational pathways (beside those with no information/below level 3)

Differentiation and hierarchy among UK Universities

Table 2. Differentiation of HEI types by economic resources

	Russell Group	other Old	New	All
Research Income (£s) Per undergraduate	3610	1233	232	1008
Endowment income (£s) Per undergraduate	605	192	66	180
Academic services (£s) Per undergraduate	810	494	383	476
Ratio of students to staff	10.2	13.3	19.9	16.5

Distribution across subjects

“Ranking” of subjects

- by different rates of returns
 - ⇒ “wage premia” in the future
- by type of subject
 - ⇒ more or less applied

Distribution across subjects

Different rates of returns (wage premia)

- No clear ranking available
- Broadly three groups:
 - ⇒ High rates of returns: Medicine, Law, Business and Administration, Mathematics
 - ⇒ Medium rates of returns: most Sciences, Engineering, Architecture, Social Sciences and Subjects Allied to Medicine
 - ⇒ Low rates of returns: Arts and Design, most Humanities and Languages, Agriculture, Education

Distribution across subjects

	Academic & vocational	Vocational	Foundation & Access
Medicine & dentistry	0.44	0.04	0.09
Historical & philosophical studies	0.46	0.17	0.26
Mathematical sciences	0.69	0.20	0.12
Law	0.83	0.33	0.27
.....			
Subjects allied to medicine	1.09	0.80	0.36
Architecture, building & planning	0.89	1.11	0.45
Engineering & technology	0.87	1.45	0.91
Education	1.64	1.46	0.24
Business & administrative studies	2.03	1.76	0.86
.....			
Creative arts & design	1.01	2.40	7.90
Agriculture & related subjects	1.05	3.69	0.77
Computer science	2.30	3.83	

Distribution across subjects

Results

- Students with VET background are more likely to study “applied” subjects; exception: Medicine, Law
- There is no clear sign of them being under-represented in subjects that gain higher rates of returns
- Analyses on a less aggregated subject-level would be useful

Distribution across institutions and subjects

Over-/under-representation within pre-92 institutions	Academic	Vocational	Foundation & Access
Medicine & dentistry	1.0	1.0	1.0
Historical & philosophical studies	1.0	0.4	0.1
Mathematical sciences	1.0	0.4	0.2
Law	1.1	0.2	0.1
.....			
Subjects allied to medicine	1.1	0.5	0.8
Architecture, building & planning	1.2	0.2	0.1
Engineering & technology	1.2	0.4	0.2
Education	1.2	0.7	0.5
Business & administrative studies	1.3	0.3	0.2
.....			
Creative arts & design	1.5	0.6	0.2
Agriculture & related subjects	1.4	0.5	
Computer science	1.5	0.4	

Conclusion

- Students from a VET background are more likely to study applied subjects
- Their choices are not necessarily unfavourable in terms of gained wage premia
- However, they are more likely to go to less prestigious HEIs
- This holds true, even when one controls for distribution of subjects across types of institutions

Introduction to the multilevel data

Data:

- HESA 2003/04
 - First-year, full-time, studying for first degree, under 21 (non-mature), English, matched with UCAS
 - 204,567 cases

Dependent variable:

- “Drop out after one year?”
 - ⇒ Categorical variable (yes/no)
 - ⇒ Logistic regression needed

Success in HE (I)

Educational Pathway (N)	Stay on	Drop out
Academic (150786)	92.9%	7.1%
Academic and Vocational (23235)	92.1%	7.9%
Vocational (15851)	86.4%	13.6%
Foundation and Access courses (5716)	91.6%	8.4%
Other (8979)	87.4%	12.6%
TOTAL (204567)	92.1 %	7.9 %

	Model 1	Model 2	Model 3
FIXED EFFECTS			
Intercept	-2.60	-2.71	-2.59
Tariff		-0.43	-0.43
VET		0.03	0.10
AcaVet		0.02	0.04
SEC			-0.16
Black			-0.59
Asian			-0.46
Other			-0.06
Disabled			-0.19
Clearing			0.39
Gender			-0.02
RANDOM EFFECTS			
Intercept	0.35	0.22	0.25



	Model 5	Model 6
FIXED EFFECTS		
Intercept	-3.65	-3.56
Tariff	-0.42	-0.42
VET	-0.02	-0.03
AcaVet	0.05	0.05
SEC	-0.16	-0.15
Black	-0.57	-0.57
Asian	-0.43	-0.42
Disabled	-0.20	-0.19
Clearing	0.38	0.39
LEVEL 2 VARIABLES		
Post 92		-0.20
Other HEI		-0.10
RAE score		-0.17
RANDOM EFFECTS		
Intercept	0.24	0.26
VET qualification	0.17	0.18
Cov (HEI, VET)	0.17	0.19



Conclusions

- A multilevel approach to the analysis of success has some important advantages
- Institutions seem to be more influential than subjects
- Coming through a VET-background does not increase the risk of drop-out per se, but
 - Students with a VET-background are more vulnerable and have an additionally increased risk of dropping out in HEIs with higher drop out rates overall
 - It seems as if VET students perform better in institutions with a high proportion of VET students
- A high RAE score has a small positive effect
- A high QAA score does not have any effect

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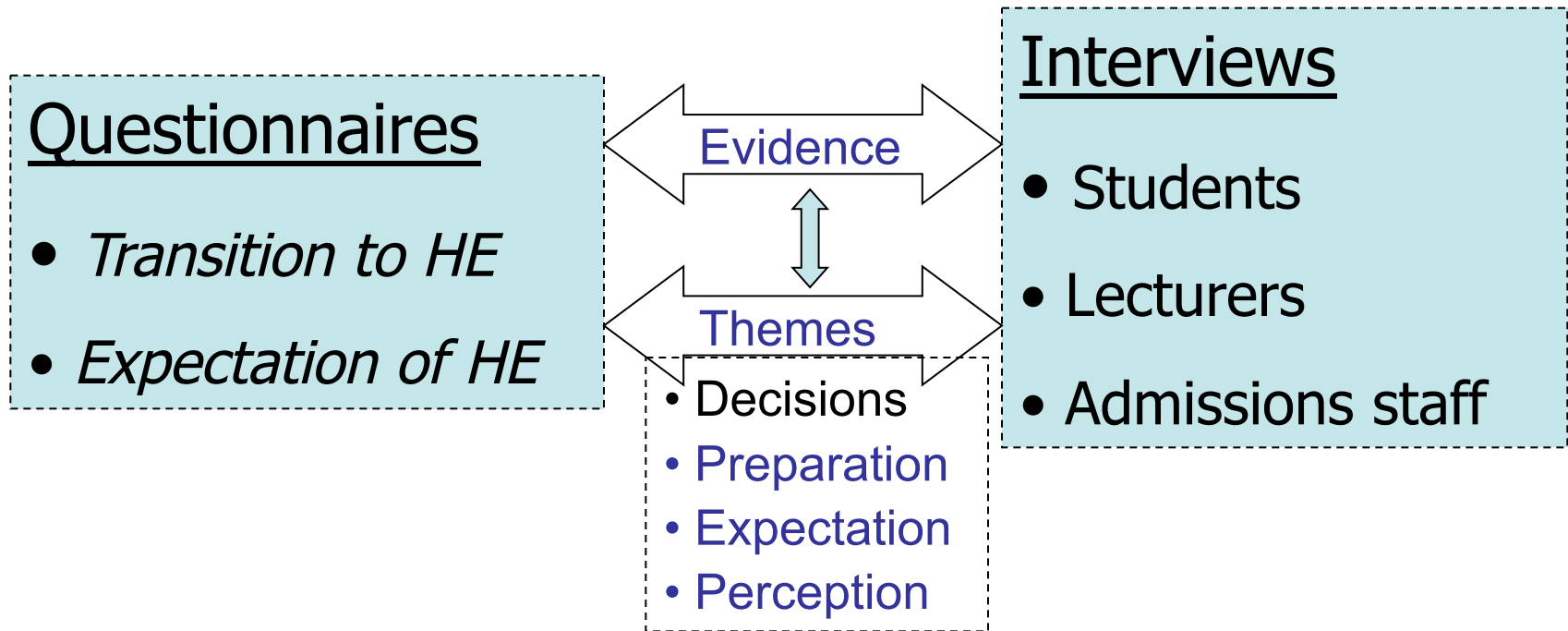
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2) Learning Experience:

- What is the experience of students with a vocational background when they make the transition to HE?
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Learning Experience

Data sources:



Sample: Subjects

- Business
- Computing
- Nursing

→ Considerations: offered by our 5 HEIs, gender distribution, sizable proportion of students coming from VET, ...

Theme 1: Preparation

Data sources:

- Transition to HE questionnaire
- Student interviews
- Lecturer interviews

Transition to HE questionnaire

Responses across institutions and subjects:

	HEI 1	HEI 2	HEI 3	HEI 4	HEI 5	Total
Business	91	73	132	15	31	359
Computing	108	73	156	12	37	369
Nursing	155	59	-	34	129	377
Total	354	205	288	61	197	1105

Key: HEI 1: Post-92 English University; HEI 2: Pre-92 English University;
HEI 3: Post-92 Scottish University; HEI 4: English FE College;
HEI 5: Scottish FE College.

Preparation for studying

Item 12a: Preparation	1	2	3	4	5	Total
<i>Please indicate, on a scale of 1 to 5, how prepared you feel for your current course (1=unprepared, 5=well-prepared)</i>	1.8%	5.3%	37.3%	42.9%	12.7%	100

Item 12a: Preparation	Acad- emic	Vocat- ional	FaA	Ac+ Voc	Over- all
<i>Please indicate, on a scale of 1 to 5, how prepared you feel for your current course (1=unprepared,5=well-prepared)</i>	3.50 (.80)	3.64 (.86)	3.42 (1.08)	3.68 (.81)	3.59 (.84)

→ No significant differences according to pathways

Preparation for studying

(Item 12b: *What makes you feel prepared?*)

Pathway	Category	% within pathway
Academic	Academic preparatory work	25.77
	Prior qualification	24.23
	Advice and guidance	19.07
	Motivation and family support	11.86
	Prior work experience	10.82
	Time and activity organization	8.25
	Total	
Vocational	Academic preparatory work	10.17
	Prior qualification	16.95
	Advice and guidance	22.03
	Motivation and family support	11.87
	Prior work experience	15.25
	Time and activity organization	23.73
Total		100%

Preparation for studying

(Item 12c: *What makes you feel **unprepared**?*)

Pathway	Category	% within pathway
Vocational	Lack of academic skills and confidence	32.2
	Lack of personal organisation and motivation	20.34
	Lack of information and guidance	13.56

Theme 1: Findings

Preparation for studying in HE:

- Sources of preparation differ according to qualification pathways
- Information and guidance seems to be particularly important for students with VET background
- Organisation and time management as key elements of positive self-perception

Theme 2: Expectations of institutions and courses

Data sources:

- Transition to HE questionnaire
- Expectations of HE questionnaire
- Student interviews

Expectations

Items 15b and 18b: Expectations of ...	Acad- emic	Vocat- ional	FaA	Ac+ Voc	Over- all
Course: <i>Please indicate, on a scale of 1 to 5, how far expectations have been met to date (1=not met, 5=completely met)</i>	3.33 (.96)	3.31 (1.04)	3.15 (.86)	3.37 (.98)	3.35 (.99)
HEI: <i>Please indicate, on a scale of 1 to 5, how far expectations have been met to date (1=not met, 5=completely met)</i>	3.63 (.85)	3.59 (.96)	3.32 (1.07)	3.76 (.91)	3.66 (.91)

→ No significant differences according to pathways

Expectations

(Item 18a: *Please tell us what expectations you have of your University/ College*)

Pathway	Category	% within pathway
Academic	Provide a qualification	24.61
	Provide a learning environment	31.94
	Provide support and guidance	18.32
	Provide facilities or resources	12.04
	Provide a social environment	9.95
	No expectations	3.14
	Total	
Vocational	Provide a qualification	13.64
	Provide a learning environment	29.55
	Provide support and guidance	27.27
	Provide facilities or resources	4.55
	Provide a social environment	4.55
	No expectations	20.45
	Total	

Theme 2: Findings

Expectations of courses and institutions:

- Assessment of what HEIs offer positive across student groups
- Expectations of students to a certain extent dependent on previous learning experience
- Information and guidance expected particularly by students with VET background

Theme 3: Perception of VET students

Data sources:

- Lecturer interviews
- Admissions staff interviews

Interviews with lecturers

- Coding of lecturers' responses according to first set of questions (on awareness)
- 3 'groups' of lecturers:
 - (1) Awareness & acknowledgment of VET students
 - (2) Implicit awareness & explicit non-response
 - (3) 'Clean slate' strategy

Interviews with lecturers

(1) Awareness & acknowledgment of VET students

- Awareness: admissions + interaction
 - Skills: detailed list of skills and attitudes, positive impact on fellow students, 'secondary virtues', active 'information seekers'
 - Problems: academic work/language, lack of self-reflection and –confidence, other commitments
 - Responses: rather vague notion of responsiveness to voc. experience, illustration of theory with practical examples
- Vocational experience as a positive factor

Interviews with lecturers

(2) Implicit awareness & explicit non-response

- Awareness: by-product of interaction in class
 - Skills: vague notions of practical skills and attitudes (motivation), autonomous work
 - Problems: other commitments, instrumental attitude ('learning geared towards meeting the expectations rather than understanding')
 - Responses: very limited
- Vocational experience not a requirement

Interviews with lecturers

(3) 'Clean slate' strategy

- Awareness: rejection of notion of differences
Skills: positive attitudes (motivation, focus, stamina), more self-critical, 'learning for life instead of exams'
- Problems: other commitments ('we don't really take other commitments into account...')
- Responses: -
→ Vocational experience a potential obstacle on the way to academic success

Theme 3: Findings

Perception of VET students:

- Deficit model vs. enriching element
- Distribution of types: discipline culture

	Group A	Group B	Group C	<i>total</i>
Nursing	10	1	0	11
Business	5	0	2	7
Computing	1	2	4	7
<i>total</i>	16	3	6	25

- Declarative vs. procedural knowledge
- Awareness dependent on organisation structures
- Lack of transparency of VET pathways

Conclusions

- VET students significantly different in terms of perception of preparedness and expectations
- Institutional and lecturer responses to situation and needs of VET varies greatly
- Variations a possible explanation for differences in drop-out and retention of VET students across the sector

Sample: Institutions

HEI 1: medium-sized, Post-92 University; South East England; students with varied qualification background; achievable entry standards; local catchment area

HEI 2 : large, Pre-92, campus University; East of England; high entry standards; students from across the UK

HEI 3 : large, Post-92, city-based University, Scotland; predominantly local catchment area; well-stated widening participation agenda; high entry requirements

HEI 4 : small FE College, North West England; local catchment area; students with very few prior qualifications; provides opportunities to progress into HE at the college, in partnership with local universities

HEI 5 : large FE College, Scotland; local catchment are; students with very few prior qualifications; provides opportunities to progress into HE within or outwith the institution