

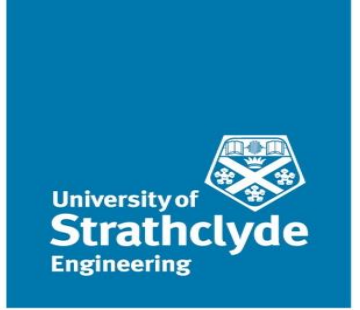
Vacation Jobs for Undergraduate engineers: More cocktail making, pouring nothing but Pepsi and Tangos is incredibly tedious

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Tennant, S., Murray, M., Gilmour, B., & Brown, L. (2018)
Industrial work placement in Higher Education: a study
of civil engineering student engagement. *Industry &
Higher Education*, 32(2):108-118.



Caveat No 1! What are Universities for?



- Not Exclusively
 - a graduate pipeline for employers ('compliant knowledge workers' McEwen & Trede, 2014)
 - an exam factory for rote learning
 - a research community for career academics

Places of useful learning for

Enlightenment Joy Knowledge Creation
Self-actualization Curiosity Reading for a Degree!

Caveat No 2! Employability- read all about it, dog bites man.

- Plethora of employability initiatives abound
- Unless we have some clear and defensible idea about *how* they work, and what are the elements that play the key part in their effectiveness (and what are not), **the field will remain strewn with abandoned initiatives and pilot projects that did not outlast the individual and institutional enthusiasm and resource-investment provided at their outset.**
- We remain optimistic that we can do better.

Holmes, L (2017) Graduate Employability: Future Directions and Debate. In, Michael Tomlinson & Leonard Holmes (Edits) *Employability in Context Theory, Research and Debate*. London: Palgrave Macmillan, pp 359-370.

What “Should” Students do during Summer “Time”?



What “DO” Students do during Summer “Time”?



Disciplinary
Placement



Work-for-pay



Volunteer

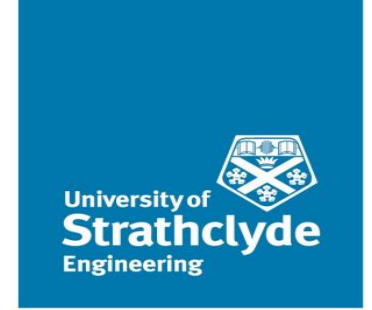


Carer



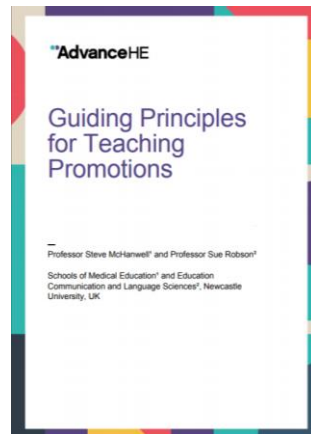
Chilling Out

“Who” is (and who is Not) Interested in what Students do during the Summer Vacation?



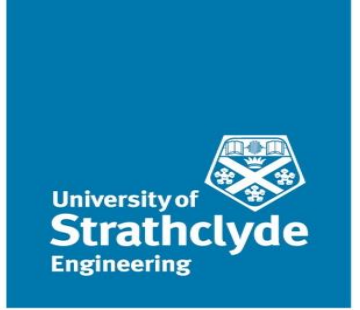
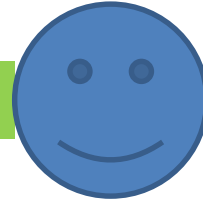
Bell, D.R. (1963). Long Holiday or 'Long Vacation'? *Higher Education Quarterly*, 18(1), 17-39.

- One cannot help but get the impression that the long vacation is a period during which the academic staff put the students out to grass for three months or so in order to get on with the cultivation of their own gardens (p.36).







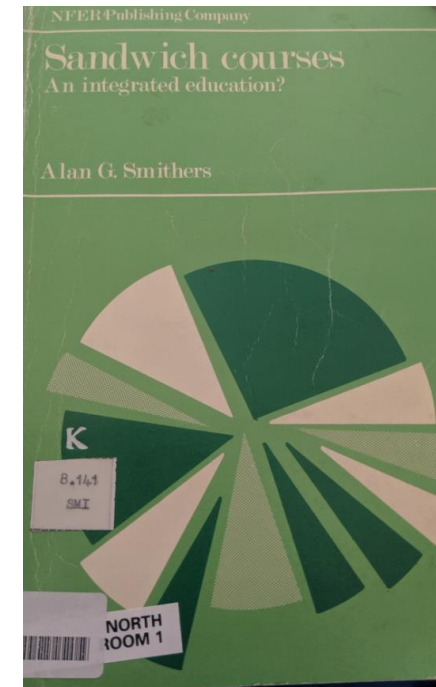
- For myself I cannot help but think that there is an element of fraud involved in the present arrangements.
- A student undertakes a three year course for a degree but it really turns out that he is taught for only about two of these years, while no one seems to care very much what he does with the other year.
- Apart from anything else, it seems to me not too strong to describe this as a culpable waste of resources and largely public resources at that (p. 39 endnote).

This is NOT a League Table!



Data Collected September 2015

HEI	Programme of Study: Civil Engineering	Total Number of Respondents (N=489)
	Five year undergraduate civil engineering programme (MEng.) Industrial work placement extra-curricular .	104
	Five year undergraduate civil engineering programme (MEng.) Industrial work placement extra-curricular .	217
	Four year undergraduate civil engineering (BSc Hons) programme. Industrial work placement co-curricular. Industrial work placement 60 credit optional module in trimester 1 of level 3.	55
	Four year undergraduate civil engineering (BEng Hons) programme. Industrial work placement co-curricular. Industrial Work Placement Learning (WPL) module available for a BEng (Hons) Sandwich Award.	113



HESA

Undergraduate sandwich student enrolments 2017-18 (H2) Civil Engineering (N=3690)

The Sample: Student Activity Summer 2015

Year	Section A: Civil Engineering Placement	Section B: Non-civil engineering / voluntary	Section C: Not working	Total Sample	Total Enrolled	Sample as % of total enrolled
2nd	15	101	35	151	179	84%
3rd	38	66	29	133	168	79%
4th	76	61	13	150	188	80%
5th	45	8	2	55	74	74%
Totals	174	236	79	489	609	80%
% of sample	36%	48%	16%			

Students Self-reported Improvements in Transferable Skills

	(1) Technical Knowledge	(2) Communication Skills	(3) Team work	(4) Commercial Awareness	(5) Risk Management	(6) Problem Solving	(7) Creative Thinking
Yr.2	4.13	4.47	4.33	4.27	4.20	4.27	3.80
Yr.3	3.79	3.95	3.92	3.68	4.08	3.66	3.24
Yr.4	4.00	4.39	4.25	4.00	3.75	4.08	3.84
Yr.5	4.22	4.36	4.22	4.18	3.98	4.20	3.96
Ave:	4.02	4.27	4.18	4.00	3.92	4.03	3.74
Rank:	(4 th .)	(1 st .)	(2 nd .)	(5 th .)	(6 th .)	(3 rd .)	(7 th .)

Murray, M., Tennant, S Gilmour, B and Brown, L. (????) A Study of Undergraduate Civil Engineers Work-for-Pay Employment Experience *(Submitted to Higher Education Pedagogies)*



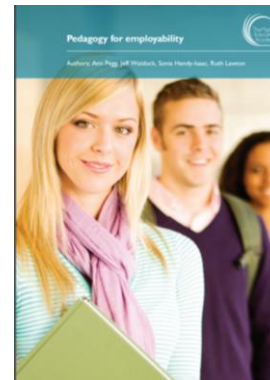
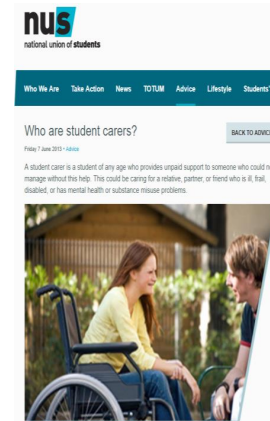
Graduate Level Apprenticeships

Framework document for
Framework: Civil Engineering
at SCQF level 10

August 2017



- Hey! What about us?



Where is Our
Pedagogy for
Employability?

Murray, M., Tennant, S Gilmour, B and Brown, L. (????) A Study of Undergraduate Civil Engineers Work-for-Pay Employment Experience
(Submitted to Higher Education Pedagogies)



Non-disciplinary Jobs Summer 2015 (n=236)

+							
Retail	%	Food & Drink	%	Managerial	%	Other	%
General Shop	16	Waiter / bar work	15	Manager	4	Trade	4
Supermarket	11	Restaurant	4	Receptionist	3	Warehouse	4
Clothes Shop	4	Kitchen Porter	4	Office worker	2	Miscellaneous	3
Department Store	1	Barista / café	3	Call centre	2	Volunteer / Charity	3
Shoe shop	1	Fast Food	2	Tax Collector	1	Sports coach	3
						Security	2
						Lifeguard	2
						Labourer	2
						Childcare/carer	2
						Driver	2
Total	33%	Total	28%	Total	12%	Total	27%

Perceived use of Transferable Skills /Knowledge at work

Transferable skills & Knowledge	Very (Low)	Low	A little	High	Very (High)
Technological knowledge	79	62	51	24	5
Communication skills	3	9	41	80	88
Teamwork	6	14	31	77	83
Commercial awareness	27	39	70	48	37
Risk management	34	53	63	44	27
Problem solving	26	59	63	42	31
Creative thinking	32	68	53	41	27

Note: Sample size (n=221) rather than (n=236) due to incomplete questionnaires

Responses to Likert Questionnaire

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
New knowledge / skills that are useful in my university studies.	37	49	70	49	16
New knowledge / skills that will be useful when I graduate.	28	37	70	71	15
I used knowledge /skills from my university studies.	83	62	52	16	8
I have recorded my job experience in a reflective report.	96	57	33	29	6
I would like to receive formal credits that contribute to my degree qualification.	75	38	51	41	16
University academics are interested in my summer work experience.	78	53	43	37	10

Note: Sample size (n=221) rather than (n=236) due to incomplete questionnaires □

Some Interesting Verbatim

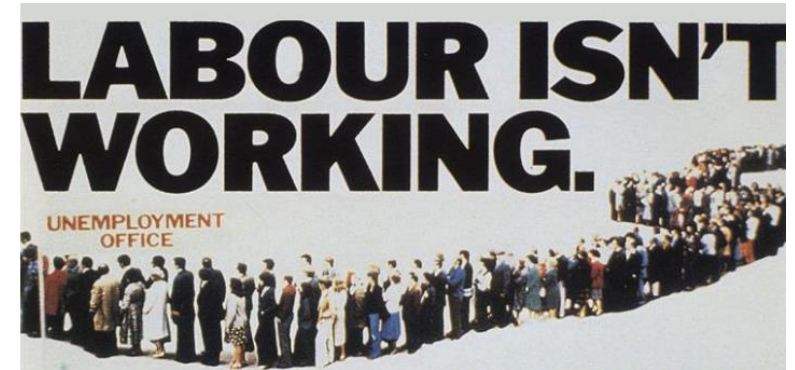
- *“A civil related placement would have been beneficial when returning to university as it feels like I have not used my ‘civil brain’ in quite some time”.*
- *“My placement was a long, hard working and tiring job with no enjoyment or educational benefit”.*
- *“I was DJ’ing all the summer in Cyprus. It was great. Unforgettable memories, special moments”.*
- *“Working in a bar has hugely improved my confidence and helped my organisational and teamwork skills”.*

Students stymied in ‘work-for-pay’ employment and denied an opportunity to engage in experiential learning within a civil engineering community of practice.

(72% / $n=171$) of students in work-for-pay indicated that they did not have any barriers to accepting a civil engineering placement had this been available.

81% ($n=64$) of students not in employment would have accepted a civil engineering placement if available.

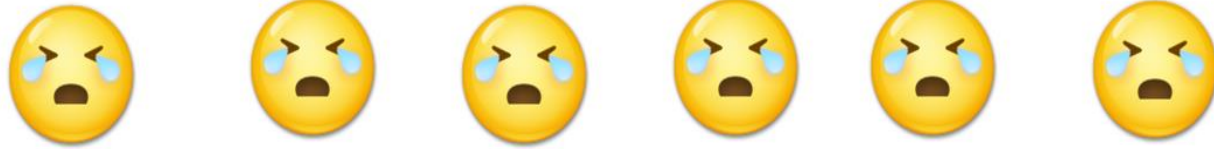
This would denote an **undersupply of circa 235 civil engineering student placements** between the 4 Universities Summer 2015!!



UB40		UNEMPLOYMENT BENEFIT ATTENDANCE CARD			
Surname (block capitals)		Initials	NI Number		CODOT No.
M					
					Post Office
<p>1 IMPORTANT NOTICE ABOUT CLAIMING BENEFIT</p> <p>You should make your claims for unemployment benefit at the Benefit Office each week on the days and at the times shown in the box on the right. Produce this card on each occasion.</p> <p>If you fail to claim in any week on the day specified you risk losing benefit and you could be disqualified for all the days between your last claim and the day you next claim.</p> <p>If you do miss claiming benefit on the day specified go to the Benefit Office on the very next day you can (but not on Saturday or Sunday). Do not wait until the specified day in the following week.</p> <p>This notice ceases to apply when you start work or claim another benefit. If you again become unemployed you should claim benefit on the first day of unemployment.</p>					
				MON	
				TUES	
				WEDS	
				THU	
				FRI	
					Signing box
Surname		Initials	NI Number		chkd by & date

Boud, D., & Solomon, N .(2006). Work-based learning, Graduate Attributes and Lifelong Learning, In, Paul Hager & Susan Holland (Edits) *Graduate Attributes, Learning and Employability*. Dordrecht: Springer. pp 207-220.

- Work-based learning challenges many everyday assumptions about courses and about teaching, learning and assessment. It raises questions about the nature and content of courses and about what we can take for granted in a university education.
- Questions it requires us to consider include: What is it legitimate to study for a qualification? What can be regarded as a course of study? **Who decides what should be included in a program and how it should be assessed?**



- Our proposals have been carefully constructed to build upon existing developments and, in practice, largely involve accelerating existing trends. We have identified a clear destination **point of academic year 2010/11, by which time the HEAR should be in place most likely alongside the existing honours degree classification system.**

Murray, M., Tennant, S., Forster, A., Craig, N., Copping, A., & Pilcher, N. (2017) Talk the talk and walk the walk: Are career academics gatekeepers to my tacit knowledge? *Journal of Perspectives in Applied Academic Practice - Special issue on Student Transitions*, 5(2):112-114.



- Gatekeeper to students:
 - Agency
 - Metacognition
 - Professional identity transformation
 - Lifelong learning
 - Cultural & social capital
 - Self-esteem; self-confidence; self-efficacy

Other Employability Initiatives: Industrial Mentoring of 3rd Year Students 2010-2019



- 728 student mentees
- 58 employers
- 166 graduate mentors
- Circa 5800 hrs. of student CPD.



Murray, M., Ross, A., Blaney, N., & Adamson, L. (2015) Mentoring Undergraduate Civil Engineering Students. *Proceedings of the ICE-Management, Procurement & Law*, 168(4): 189–198.

Other Employability Initiatives: Co-Curricular Evening Workshops 2012-2019



- The Civil Engineering 4 Real (CE4R) workshops
- Voluntary attendance, ($n=434$) learning across all five years of the UG course.
- 80 workshops
- 132 engineers
- 54 employers.
- 1917 student attendances has resulted in 3834 hrs. of student CPD.

Murray, M., Hendry, G., & McQuade, R. (2019) Civil Engineering 4 Real (CE4R): Co-curricular Learning for Undergraduates. *European Journal of Engineering Education*. (Published Online @ <https://doi.org/10.1080/03043797.2019.1585762>)

Students 'want universities to find jobs for them'

Institutions urged to outline more clearly what undergraduates can expect of them

May 27, 2019



By John Ross
Twitter: @JohnRoss49



So!

- What are Universities for?
- What place for Employability?
- What place for Work Based Learning?
- What place for Employers in the curriculum?
- Universities, no place for Rhetoric and Platitudes?