Enhancing Employability through a Multi-Disciplinary Approach to Graduate Attributes

Maxine Swingler, Jason Bohan, Gillian Hendry, Gordon Curry & Reddy Puligundla

School of Psychology, University of Glasgow.

School of Geography and Earth Sciences, University of Glasgow

Thank you

| Project Team	Staff and Students
Heather Woods	Stephen Shilton
Archie Roy	Gail McGuigan
Sarah Armour	Tatiana Kirsanova
Dickon Copsey	Abbey Lowe
Margaret Milner	Adela Ghetau
Karen Clancey	Shutong Lan
	Callum Smith
	Elizabeth Jack
	David Currie

Aims and Methods

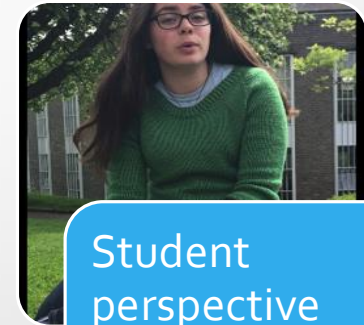Level 2 UG
- Psychology (N=107)
- Earth Science (N=66)

Activities
- GAs reflection activities (Swingler et al., 2016)
- Careers workshops
- Alumni events
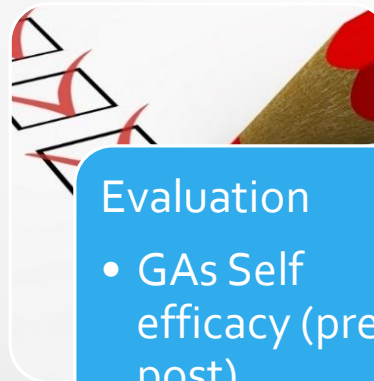
Evaluation
- GAs Self efficacy (pre + post)
- Self efficacy in H.E
- Self esteem
- Intentions to develop GAs

Student perspective
- Open responses
- Focus groups

http://www.cullinaneconsulting.ie/services/evaluation/

University of Glasgow
VIA VERITAS VITA

Subject Specialist

Independent and Critical Thinker

Resourceful and Responsible

Reflective Learner

Overall confidence as a member of the student community

Effective Communicator

Adaptable

Experienced Collaborator

Ethically and socially aware

Investigative

Academic

Defend their ideas in dialogue with peers and challenge disciplinary assumptions

Personal

Possess excellent interpersonal and social skills fostered within an internationalised community

Transferable

Demonstrate enthusiasm, leadership and the ability to positively influence others.

Example of Psychology GA Reflection Task

Independent and critical thinkers
- Essays, lab reports, group projects, tutorials, labs, exams, research, discussion
- No *personal* examples!

Confident
- Extra curricular activities, PT jobs, presentations,
  psychology committee, clubs and societies,
  group work

Graduate Attribute Task

Where have you had the opportunity to develop the Graduate Attributes (GAs) listed below? Please think about the Psychology course, your other courses as well as your experiences outside of University.

Graduate Attribute	Source
Subject Specialist	Course lectures
Investigator	Reports & research in psychology
Independent and Critical Thinkers	Essays (psychology and psychology)
Resourceful and Responsible	Time management (essays, exams)
Effective Communicators	Group presentations, discussions
Confident	Extra-curricular activities, part-time jobs, presentations
Adaptable	Changing lab/tutorial groups, mixture of different lectures/topics through the week
Experienced Collaborators	Teamwork in group projects
Ethically and Socially Aware	Lectures + labs
Reflective Learners	Coursework and exams

Measures

- Self Efficacy

- "*judgements of capabilities to organize and execute courses of action"* (Bandura, 2005)

- Applied to U of G GAs matrix:

  - On the basis of *your current beliefs* in your academic capabilities, personal qualities and transferable skills……….

  - *"I can identify, define and assess complex issues and ideas and formulate research question(s)"*

- Self efficacy in H.E (York & Knight, 2007)

  - *"The academic tasks I am set motivate me to put in quite a lot of effort"*

- Self esteem (Rosenberg, 1965)

  - *"I feel that I have a number of good qualities"*

Research Questions

1. *Are there differences between Psych & ES in self efficacy in GAs?*

2. *Do the reflection activities improve self efficacy in specific GAs?*

3. *What is the relationship between GAs self efficacy, H.E self efficacy, and self esteem?*

4. *How do students intend to develop their GAs?*

5. *What is the student perspective on GAs and the activities?*

RQ1: Are there differences between Psych and ES in GA self-efficacy?

GA self-efficacy scores were compared across groups using a Mann-Whitney U test

Psychology N = 107

Earth Science N = 66

Psychology
Effective Communicator
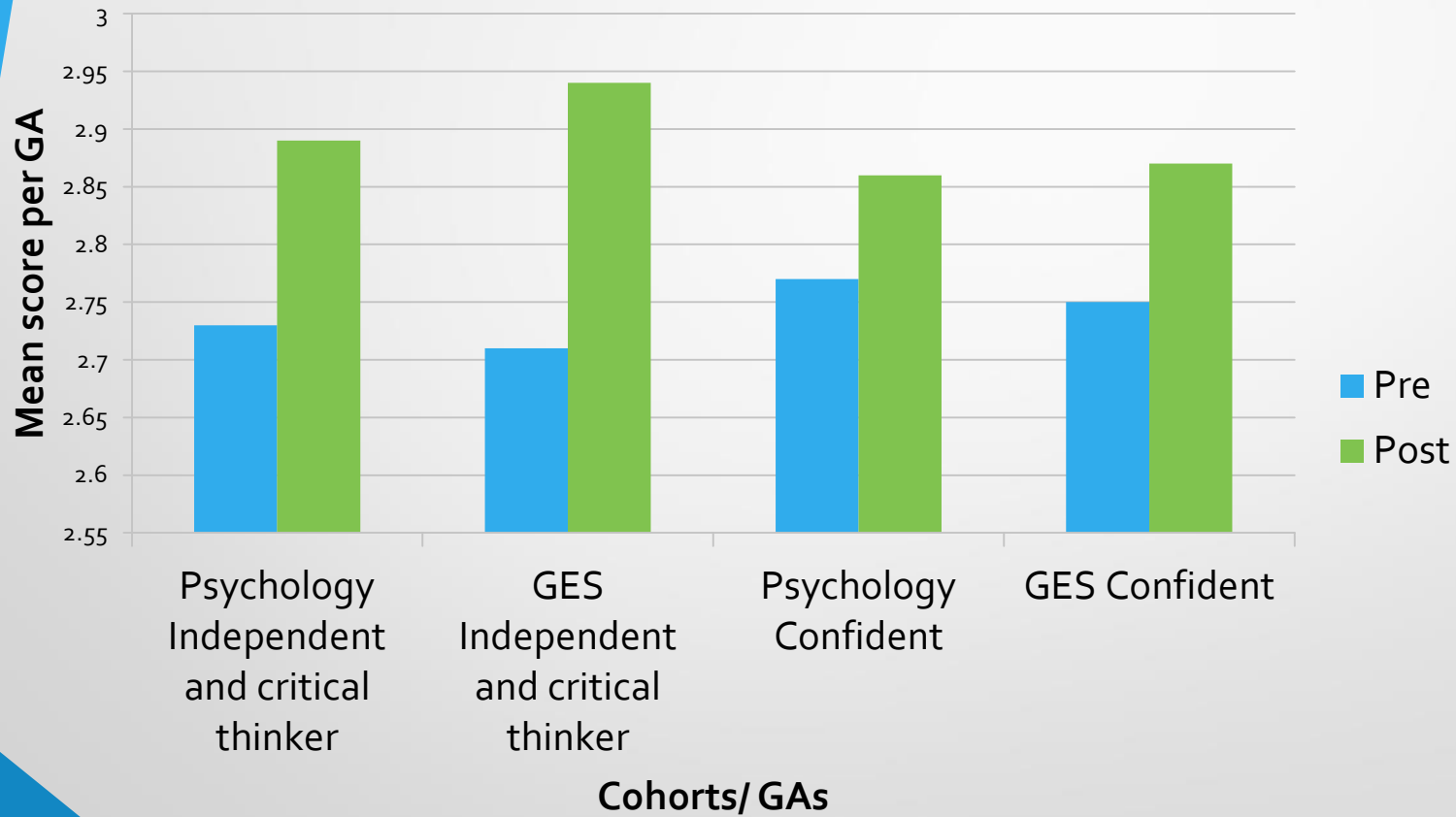*Ethically and socially aware*
(ps<.05)

Subject Specialist
Independent and Critical Thinker
Overall confidence as a
member of the student community
Experienced Collaborator

Earth Science
Investigative
Resourceful and Responsible
Adaptable
Reflective Learner
(ps<.05)

RQ2: Do the reflection activities improve specific GA's self-efficacy?

A Wilcoxon Signed Ranks Test was used to compare pre-post GA self-efficacy. All *ps* <0.02

RQ3: What is the relationship between GAs, H.E self-efficacy and self-esteem?

H.E self-efficacy		
	Psychology (N=107)	GES (N=66)
Resourceful and responsible	r = 0.4	r = 0.4
Confident	r = 0.27	r = 0.34
Adaptable	r = 0.37	r = 0.31

Self-Esteem		
Resourceful and responsible	r = 0.2	r = 0.4
Confident	r = 0.31	r = 0.32
Effective communicators	r = 0.34	r = 0.37

All *ps* < *0.05*

RQ4: What is the student perspective on GAs and the activities?

Qualitative data was collected through open responses at the end of year survey (N= 194), at alumni events (N=73), career workshops (N=16), and focus groups (N=9).
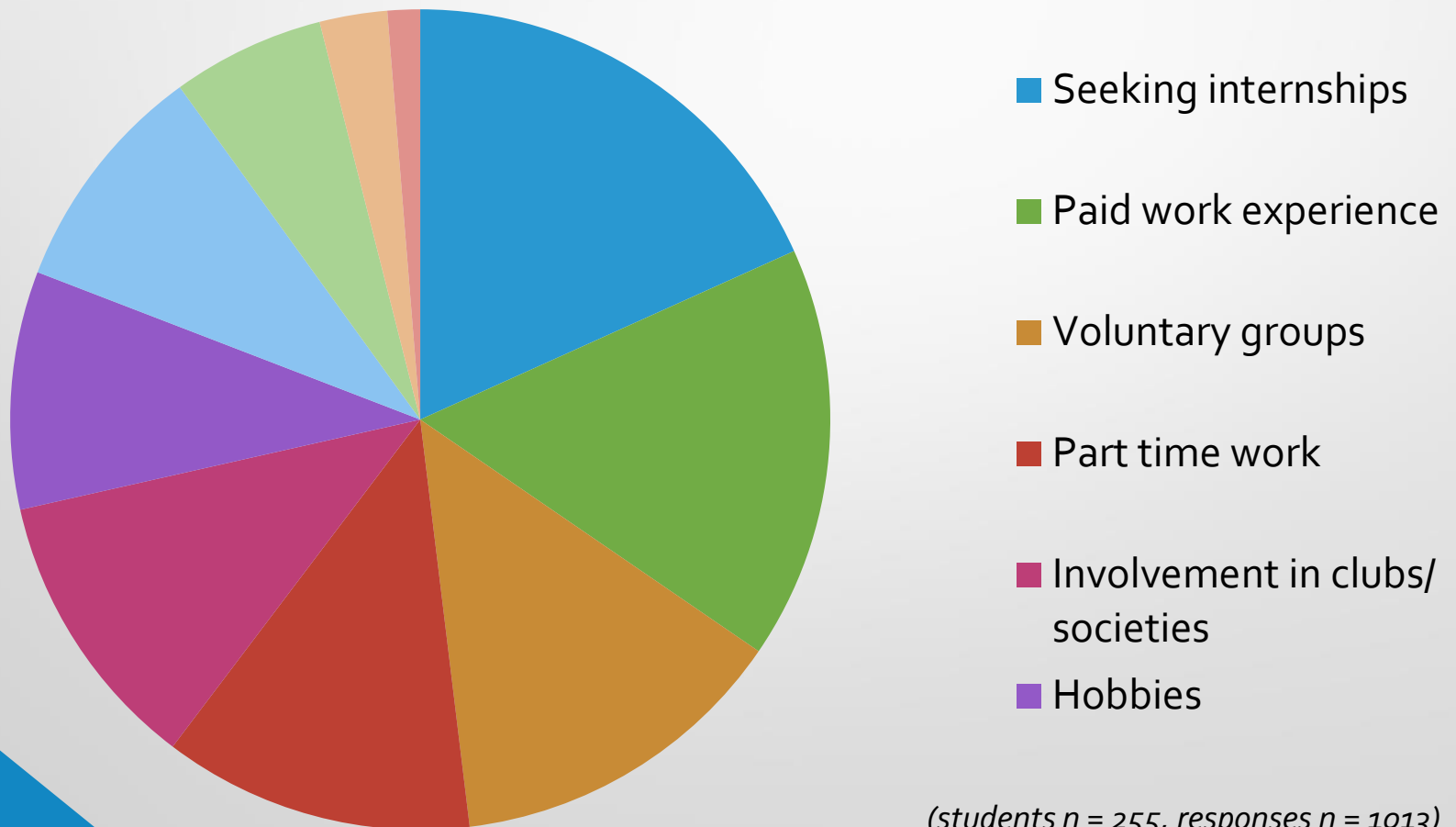
Students are aware of the importance of GA

*"they are certainly all gonna be good to have, um but some of them particularly: being a **subject specialist**, being **confident** and being able to **communicate** are gonna be three things that are definitely gonna allow you to progress in any kind of career"*

Students relate GA to wider context beyond university
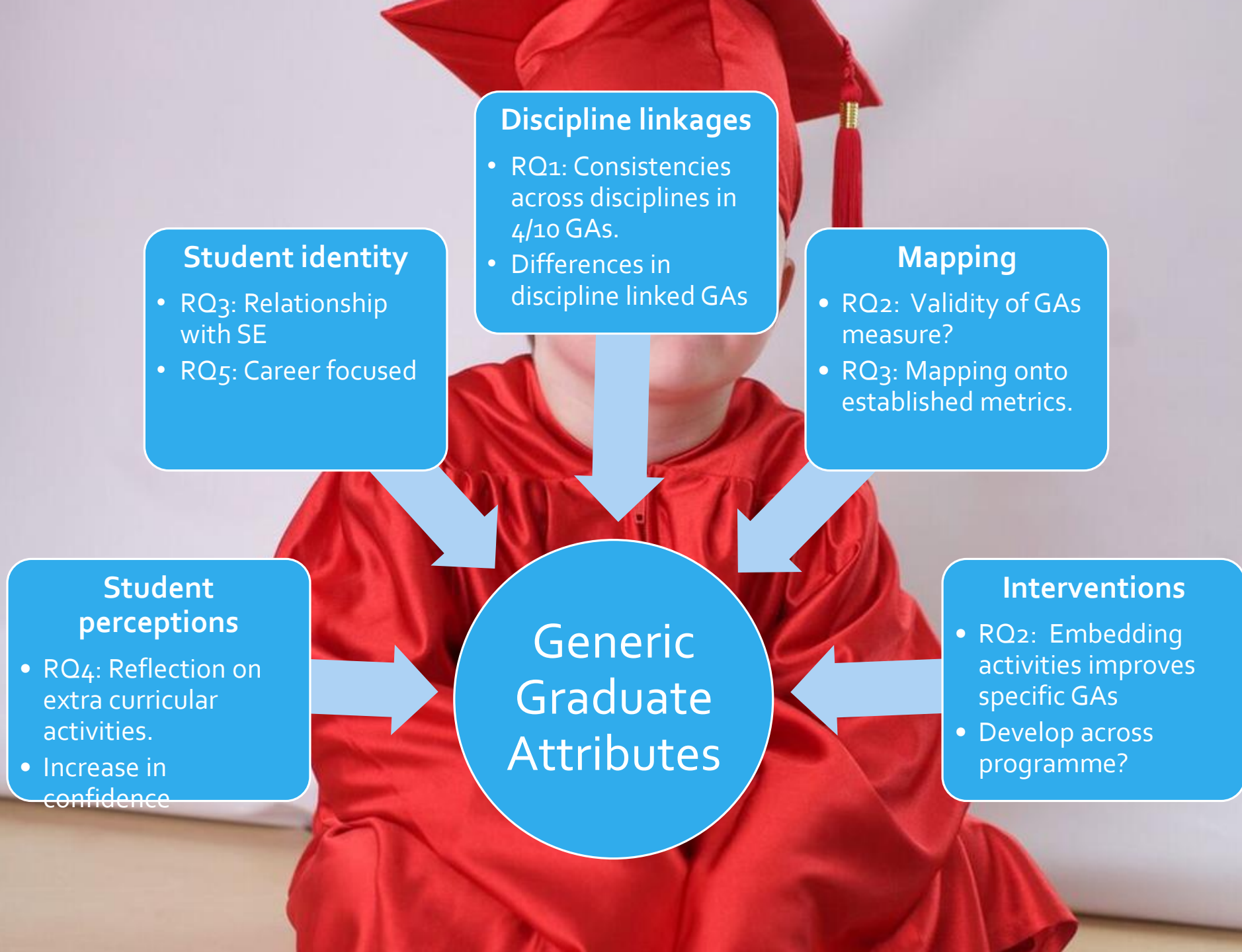
*""It's like **confidence**, I'd say I've got that like I'm a waitress… I'd say that I've got that from that as opposed to being a uni student"*

RQ5: How do students intend to develop their GAs?

- Seeking internships
- Paid work experience
- Voluntary groups
- Part time work
- Involvement in clubs/ societies
- Hobbies

(students n = 255, responses n = 1013)

Discipline linkages
- RQ1: Consistencies across disciplines in 4/10 GAs.
- Differences in discipline linked GAs

Student identity
- RQ3: Relationship with SE
- RQ5: Career focused

Mapping
- RQ2: Validity of GAs measure?
- RQ3: Mapping onto established metrics.

Student perceptions
- RQ4: Reflection on extra curricular activities.
- Increase in confidence

Generic Graduate Attributes

Interventions
- RQ2: Embedding activities improves specific GAs
- Develop across programme?

References

Barr, M. (2017). Video games can develop graduate skills in higher education students: A randomised trial. Computers & Education 113, 86-97. https://doi.org/10.1016/j.compedu.2017.05.016

Barrie, S.C (2007). A conceptual framework for the teaching and learning of graduate attributes. Studies in Higher Education, 32, 439-458.

Cheng, M., Pringle Barnes, G., Edwards, C., & Manousos, V. (2015). Transition skills and strategies: self-efficacy. In QAA (Ed.), *QAA Enhancement Themes: Transition*. Glasgow: Quality Assurance Agency Scotland.

Nicol, D. (2010). The foundation for graduate attributes: developing self regulation through self and peer assessment. QAA enhancement themes www.enhancementthemes.ac.uk.

O'Leary, S. (2016). Graduates experience of and attitudes towards, the inclusion of employability related support in undergraduate degree programme. Journal of Education and Work, 30 http://www.tandfonline.com/doi/full/10.1080/13639080.2015.1122181

Potgieter, I. (2012). The relationship between the self-esteem and employability attributes of postgraduate business management students. *SA Journal of Human Resource Management, 10*(2). doi: 10.4102/sajhrm.v10i2.419

Swingler, M.V., Armour, S., Bohan, J., Cleland -Woods, H., Curry, Kueme, L., Roy, A.W.N. (2016). Where am I now and where do I want to be? Developing awareness of graduate attributes in pre-honours students. New Directions in the Teaching of Physical Sciences, 11.

https://journals.le.ac.uk/ojs1/index.php/new-directions/article/view/580

Yorke, M. & Knight, P. (2007). Evidence-informed pedagogy and the enhancement of student employability. Teaching in higher Education, 12, 157-170.

Independent and critical thinker		Sig. cohorts
Academic	I can identify, define and assess complex issues and ideas and formulate research question(s).	Psychology GES
Personal	I feel I can critically evaluate new (subject specific) information.	GES
Transferable	When faced with problems related to assessments and projects, I can think creatively, imaginatively and innovatively.	Psychology

Confident		Sig. cohorts
Academic	I feel I can confidently explain and challenge (subject specific) concepts and theories.	Psychology GES
Personal	I feel I can confidently communicate my (subject specific) knowledge to anyone.	
Transferable	I feel I am confident in taking a leadership role when working on group projects.	Psychology GES

Internal Reliability: GAs self efficacy Cronbach's alpha

Overall pre: $\alpha = .9$

Overall post: $\alpha = .91$

Graduate attribute	Cronbach's alpha pre-q	Cronbach's alpha post-q
1) Subject specialist	$\alpha = .62$	$\alpha = .69$
2) Investigative	$\alpha = .61$	$\alpha = .71$
3) Independent and critical thinker	$\alpha = .6$	$\alpha = .7$
4) Resourceful and responsible	$\alpha = .7$	$\alpha = .76$
5) Effective communicator	$\alpha = .74$	$\alpha = .76$
6) Confident	$\alpha = .65$	$\alpha = .63$
7) Adaptable	$\alpha = .54$	$\alpha = .61$
8) Experienced collaborators	$\alpha = .83$	$\alpha = .85$
9) Ethically and socially aware	$\alpha = .74$	$\alpha = .77$
10) Reflective learners	$\alpha = .66$	$\alpha = .69$