

SUPPLEMENTARY MATERIAL

Hiscox, T. J., Papakonstantinou, T. & Rayner, G. M. (2022). Written reflection influences science students' perceptions of their own and their peers' teamwork and related employability skills. *International Journal of Innovation in Science and Mathematics Education*, 30(4), 15-28.

Appendix 1a. Qualtrics survey participant demographics (numbers are percentages)

Variable		Pre-Reflection cohort		Post-Reflection cohort	
		Active	Control	Active	Control
Gender	Female	38.1	48.8	53.9	50.0
	Male	57.1	48.8	38.5	50.0
	Other/Rather not say	4.8	2.4	7.6	0.0
Age range	17-21	92.9	86.1	76.9	94.7
	22-25	7.1	11.6	23.1	5.3
	>25	0.0	2.3	0.0	0.0
Year level	1st	2.4	7.0	0.0	7.9
	2nd	81.0	86.1	61.5	73.7
	3rd	9.5	0.0	15.4	15.8
	4th	4.8	6.9	7.7	2.6
	5th	2.3	0.0	15.4	0.0

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Appendix 1b. TeamQ survey participant demographics (numbers are percentages)

Variable		Self assessment (SA)		Peer assessment (PA)	
		Active	Control	Active	Control
Gender	Female	57.6	54.2	73.1	64.3
	Male	42.4	45.8	26.9	35.7
	Other/Rather not say	0.0	0.0	0.0	0.0
Age range	17-21	76.5	83.3	75.7	69.4
	22-25	21.5	16.7	21.6	28.6
	>25	2.0	0.0	2.7	2.0
Year level	1st	3.9	12.5	2.7	10.2
	2nd	78.4	70.8	78.4	61.2
	3rd	9.8	12.5	10.8	20.4
	4th	7.9	4.2	8.1	6.2
	5th	0.0	0.0	0.0	2.0

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Appendix 2. TeamQ teamwork assessment framework (Hastie et al. 2014): Survey questions were modified for each of the self and peer (team members) perceptions

Domain and definition	Question	Aspect	Code
Contribution			
Skills in bringing about a specific result or helping something to advance	How did you / your team members contribute to the team project?	Participate actively, accept a share of group work	Part-share
		Work skilfully and complete assigned tasks on time	WSC
		Give timely, constructive feedback to team members, in appropriate formats	TCF
Contribution facilitation			
Skills to ensure that processes of team interaction progress the project plan; that accurate, relevant information is exchanged, understood and used by all team members	How did you / your team members facilitate the contributions of others?	Encourage all perspectives to be considered and acknowledge contributions of others	Pers-con
		Constructively build on the contributions of others, integrate your own work and the work of others	CBI
Planning and management			
Skills that enable team members to work in synergy to produce a project plan of the best possible quality	How did you / your team members plan and manage the workload towards the assignment?	Take on an appropriate role in the group (e.g. leader, notetaker)	Role
		Clarify goals, plan the project	Goal-plan
		Report to the team on your progress	Rep

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Appendix 2 continued. TeamQ teamwork assessment framework (Hastie et al. 2014): Survey questions were modified for each of the self and peer (team members) perceptions

Domain and definition	Question	Aspect	Code
Fostering a team climate			
Emotional and social skills to foster a sense of trust and inclusiveness for each team member	How did you / your team members foster a team climate?	Ensure consistency between words, tone, facial expression and body language	Cons
		Express positivity and optimism about team members and project	Pos
Conflict management			
Personal and interpersonal skills to prevent, recognise, and address conflict to strengthen team cohesiveness and effectiveness	How did you / your team members manage potential conflict?	Display appropriate assertiveness: not dominating, submissive or passive aggressive	Assert
		Contribute appropriately to healthy debate	Debate
		Respond to and manage direct/indirect conflict constructively and effectively	Conf

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Appendix 3: Themes and subthemes used for thematic coding of focus group transcripts

Theme - Subtheme	Subtheme name	Proportion
Skills (SK) students had opportunity to develop (in the SCI2010 unit)		
SK-TW	Teamwork	21.7
SK-COMM	Communication, science communication	13.3
SK-IND	Independent learning, independence	3.6
SK-COMAWARE	Commercial awareness, industry awareness	3.6
SK-RW	Linking to real world, understanding application	2.4
SK-TIMEORG	Time management and/or organisation	2.4
SK-SW	Scientific writing	2.4
SK-INIT	Initiative	2.4
SK-RSINFO	Researching information	2.4
SK-LEAD	Leadership	2.4
SK-CT	Critical thinking	1.2
SK-LAB	Lab techniques and equipment	1.2
THEME: Perceived purpose (PU) of employability skills reflection task		
PU-RecEmpl	Recognition, awareness of skill development in preparation for employment	1.2
PU-Recog	Recognition offered by being awarded degree	1.2
THEME: Benefits (BEN) of employability skills reflections task		
BEN-Aware	Increased awareness, acknowledgement, thinking about skills developed	6.0
BEN-Other	Other benefits	1.2

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Theme - Subtheme	Subtheme name	Proportion
THEME: Negative (NEG) reactions to employability skills reflections task		
NEG-Artificial	Felt forced, artificial, pointless, 'tell them what they want to hear', make up something	4.8
NEG-NoDev	Skills aren't being significantly improved or developed, we already have them	3.6
NEG-Rel	Negative views on implementation. No relation to real-world scenario	2.4
THEME: Communication (COMM), support & feedback provided by teaching staff (or lack of)		
COMM-NoInfo	TAs, staff provided no information or guidance on writing skills reflections	1.2
THEME: Suggestions for improvement (IMPR) or other ways to enhance skill recognition / articulation		
IMPR-WIL	Improvements in work-integrated learning	4.8
IMPR-Other	Other suggestions	2.4
IMPR-OtherInit	Prefer other employability interventions (industry examples, guest lecturers etc)	1.2
IMPR-Mix	Mix group members to improve teamwork with diverse groups	1.2
THEME: Other themes not related to employability skills reflection task		
OTHER-Misc	Miscellaneous	9.6