

Support and skills development: Key factors shaping the quality of work placement experience

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P. Arsenis and M. Flores

University of Surrey and National College of Ireland

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Motivation

- University students are increasingly under pressure; rising cost of education and a competitive graduate labour market.
- HE institutions are under pressure too to better prepare students for the labour market → work placements.
- Also, work placements often serve as a recruitment tool.
- Growing research on the benefits of placement programmes, particularly for graduate employability.
- But we know little about the mechanisms linking work placements to positive outcomes.

↪ we are interested in the **quality of work placements**.

Henceforth WP = work placement.

Related literature

- Literature focuses on the benefits of WP.
 - WP is associated with better academic performance [Jones et al. (2015); Crawford and Wang (2016)].
 - WP increases the chances of finding employment commensurate with qualifications and aligned with career aspirations [Brooks and Youngson (2016); Jackson and Rowe (2022); Arsenis and Flores (2024a)].
- But we know little on how those benefits emerge.
 - Evidence of a 'foot-in-the-door' effect of graduates who remained with their placement employer [Di Meglio et al. (2022); Arsenis and Flores (2024b)].
 - Mediating role of internships on the quality of graduate jobs [Simpfenderfer et al. (2024)].

Objective and research questions

- Our **objective** is to better understand the factors that matter for the quality of work placement experiences.
- Key **research questions**:
 - **RQ1**: What factors drive the quality of students' work placement experiences?
 - **RQ2**: Does the work placement quality differ by gender, nationality, or subject area?
 - **RQ3**: What are the mechanisms that underpin the quality of work placement experiences?
- We answer these questions by:
 - Collecting survey data from students who completed a work placement in 2020-24 at the University of Surrey, UK.
 - Performing structural equation modelling.

Data: Overview

- *Anonymous* surveys of undergraduate students at the U. of Surrey who completed a WP in the last five years, 2020-2024.
Degree with (optional) WP: 1st year; 2nd year; WP; final year.
- Average response rate 29%.
- All of University's subject areas are included:
 - STEM: 340 (34%)
 - Social sciences: 309 (31%)
 - Medical sciences: 289 (29%)
 - Arts and Humanities: 58 (6%)
- Sample of 996 respondents.

Data: Questionnaire

- To capture the quality of the WP experience:
 - Work placement satisfaction
[*'I experienced job satisfaction'*]
 - Contribution to professional development
[*'I am satisfied with the contribution of my work placement to my professional development'*]
 - Contribution to degree programme
[*'I am satisfied with the overall contribution of my work placement to my degree programme'*]

Responses to these questions follow a Likert scale, taking values 1-5, 5=strongly agree.

- Many other questions included in the surveys:
 - **Placement characteristics:** salary, duration, employer support and location.
 - **Acquired skills:** problem solving, communication, time management, judgement, resilience, attitude, initiative, flexibility, IT, networking.
 - **Challenges while on placement:** e.g. adapting to a new culture, accommodation, being away from home, mental health, etc.
 - **University support:** e.g. support from faculty/department, academic supervision, and placement preparation offered by department;
 - **Basic demographics:** gender and nationality;
 - **Faculty and subject area;**
 - **Whether they received a graduate job offer or not.**
- We used this information to create our key set of variables.

Methodology: Framework

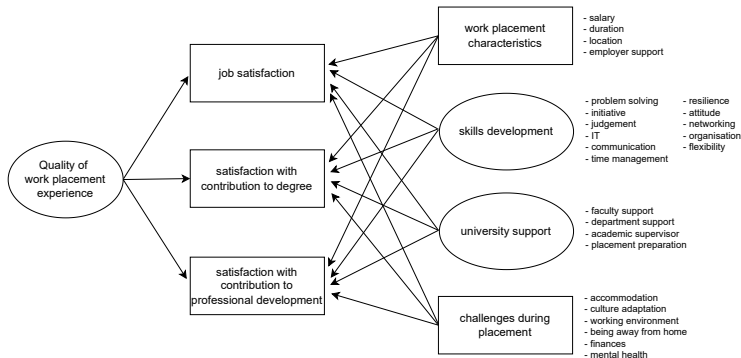


Figure: Quality of WP: base structural equation model (SEM).

Analysis: Steps

❶ Measures and factor analysis:

- (a) Adequacy of the data
- (b) Confirmatory factor analysis

❷ Generalised SEM to estimate the path coefficients in our framework → RQ1.

❸ Heterogeneity by gender, nationality, subject area → RQ2.

Three approaches: predictors of quality of WP; predictors of the three endogenous variables; multi-group GSEM.

❹ To explore mechanisms (RQ3):

- (a) Mediation analysis on skills → Quality of WP with employer/university support as mediators.
- (b) Moderated mediation analysis (using insights from step 3).

❺ Robustness

Next, we focus on steps 2, 3, and 4.

Results from GSEM (RQ1)

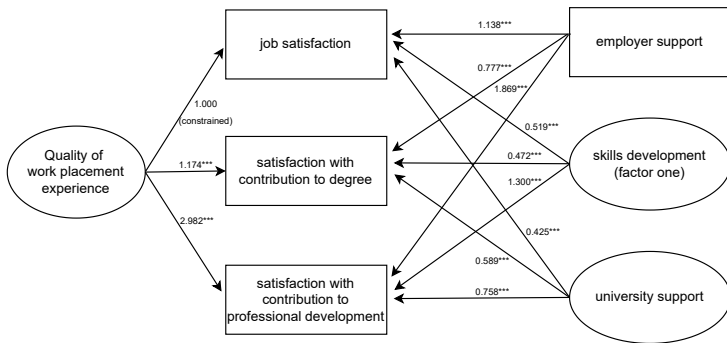


Figure: Main results from the GSEM ordinal probit model.

Results from GSEM with subject areas (RQ2)

Model	Subject variable included as	Coef	95% CI	
Model 1	subject stem → Qwp	-0.174**	-0.338	-0.011
Model 2	subject stem → job satisfaction	-0.068	-0.313	0.176
	subject stem → contr degree	-0.434***	-0.688	-0.180
	subject stem → contr prof development	-0.288	-0.826	0.249
Model 3	mean Qwp stem - mean Qwp non-stem = 0	-0.239***	-0.407	-0.071
Model 4	subject medical → Qwp	0.042	-0.147	0.232
Model 5	subject medical → job satisfaction	-0.152	-0.438	0.134
	subject medical → contr degree	0.443***	0.134	0.751
	subject medical → contr prof development	-0.145	-0.736	0.446
Model 6	mean Qwp medical - mean Qwp non-medical = 0	0.095	-0.110	0.301
Model 7	subject social → Qwp	0.079	-0.077	0.234
Model 8	subject social → job satisfaction	0.057	-0.183	0.297
	subject social → contr degree	0.103	-0.140	0.347
	subject social → contr prof development	0.242	-0.288	0.772
Model 9	mean Qwp social - mean Qwp non-social = 0	0.076	-0.092	0.244

Results from mediation analysis (RQ3)

Table: Mediation analysis: Skills development and the quality of the work placement experience.

Model A: <i>employer support</i> as mediator			
Endogenous variables	Direct effect	Indirect effect	Total effect
job satisfaction	0.502***	0.518***	1.020***
contr. to degree	0.450***	0.358***	0.808***
contr. to prof. development	1.095***	0.818***	1.913***
Model B: <i>university support</i> as mediator			
Endogenous variables	Direct effect	Indirect effect	Total effect
job satisfaction	0.502***	0.058*	0.560***
contr. to degree	0.450***	0.087*	0.537***
contr. to prof. development	1.095***	0.107*	1.203***

Note: based on a simplified GSEM (using main results).

Results from moderated mediation analysis (RQ3)

Table: Moderated mediation analysis: Skills development and the quality of the work placement experience.

Indirect effect Endogenous variables	STEM subject area as moderator		
	Model C1	Model C2	Model C3
job satisfaction	0.304*	0.569***	0.336*
contr. to degree	0.222*	0.447***	0.264*
contr. to prof. development	0.462*	0.974***	0.575*

Note: based on a simplified GSEM (using main results).

C1: skills → employer support moderated by STEM.

C2: employer support → endog. var. moderated by STEM.

C3: both paths moderated by STEM.

Key results and implications

- Employer and university support as well as skills development are crucial to the quality of WP experience.

↪ designing curricula embedding WP;

↪ ensuring quality standards to enhance WP experiences.

Examples:

- develop WP handbook and guidelines for stakeholders (students, academic supervisors and employers);
- promote university-employer collaboration to establish quality standards (e.g. learning outcomes and development plan);
- promote university-employer partnership to provide skills development opportunities.

Final remarks

- **Support from employers and the university** are crucial to the quality of students' WP experiences.
- Also, **skills development** (problem solving, communication, time management, judgement, resilience, attitude, initiative, flexibility) contribute to a positive WP experience.
- **Heterogeneous WP experiences** → lower for STEM subjects.
- Employer support **mediates** (strengthens) the link skills development-WP quality. STEM subject area weakens the mediation effect of employer support.
- Limitations:
 - Self-reported data; self-selection bias;
 - Other possible factors (e.g. size of employer and business life cycle) might affect WP experiences;
 - Data from a single institution;

Finally...

Thank you for your attention!

Any questions or ideas?

Contact information:

Panagiotis Arsenis: p.arsenis@surrey.ac.uk

Miguel Flores: miguel.flores@ncirl.ie