



## A Study Exploring Soft Skills in Higher Education

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### Abstract

There is a need for improved skills development within the UK's Higher Education Institutions (HEI) stemming from the disconnect between the expectations of employers of the skills graduates have and the skills graduates have gained during their degree. It is well-known now that there is a clear skills gap. The present study aims to explore the effect of graduates and students' perception of skills development in HEI in the UK. A total of 420 participants completed an online survey to explore their perception as well as their confidence of skills development by rating each skill on a Likert scale. The paper discusses the results in light of pedagogical strategies developed to teach soft skills in HE. The paper concludes with recommendations for teaching practice.

### Keywords

employability, confidence, soft skills, Higher Education, graduates, skills development

### Introduction

In the UK it is found that there are skill shortages across all sectors (Department for Digital, Culture, Media & Sport, 2021). Skills shortages are defined by having too few people with the right set of skills to fill existing positions (Hart et al., 2007). These skills shortages are often identified in the lack of soft skills which are valued by employers and are often the determining factor to hire or not hire someone (Noah & Aziz, 2020). More specifically, the employer-graduate skills gap is defined as the skills that employers feel that graduates lack and the soft skills that they should possess following graduating from university (Hart et al., 2007). The soft skills that are valued by employers include collaboration, communication skills, language skills, emotional empathy, time management, team working and leadership skills. Research has shown that employers often prioritise problem-solving and collaboration over university degrees (Noah & Aziz, 2020) A total of 64% of small and medium enterprises (SMEs) feel that students do not possess the soft skills required for the workplace (Chartered Institute of Personnel and Development (CIPD), 2021). The present study aims to explore the effect of graduates and students' perception of skills development in Higher Education Institutions (HEI) in the UK using an online survey.

Research has shown that soft skills are not given enough attention in training & education and that there is an over-emphasis on the hard skills that graduates should obtain (Noah & Aziz, 2020). This led to students being incapable of vocational positions. This has rendered the UK in what is currently the graduate skills gap. The 800,000 responses show a positive picture with the majority of graduates in either employment (79%) or further study (20%). In relation to subjective outcomes, 71% of

participants indicated that they were utilising what they learnt while studying. This can include subject-specific knowledge, but also wider transferable and employability skills developed during their university studies. Graduate outcomes data are also used by league tables, the three main league table producers being The Guardian, The Complete University Guide, and the Good University Guide. The Guardian includes a measure of Quality Assurance Agency (QAA) for HE in the UK that attempts to equip graduates with the capacity to gain employability skills (Swingler et al., 2019).

Graduate Outcomes is the biggest UK annual social survey and captures the perspectives and current status of recent graduates (Higher Education Statistics Agency (HESA), 2019). Graduates who have completed their course will be asked to take part in the survey 15 months after they finish their studies. The aim of the Graduate Outcomes survey is to help current and future students gain insight into career destinations and development. It also includes questions about what constitutes success for graduates after finishing their course and in this way offers a unique perspective on the relationship between academic, economic and interpersonal measures of success. Interesting to note is that success could mean different things to different people and successful outcomes go beyond measures of employment and salary. The latest data from the 2018-19 cohort of graduates (just under 'career after 6 months' which is the percentage of graduates who find graduate-level jobs, or are in further study at professional or Higher Education (HE) level, within six months of graduation (The Guardian, 2020). The Complete University Guide includes a measure of 'Graduate prospects' which is a guide to the success of graduates after leaving university (University League Tables, 2022). The Good University Guide includes a measure of 'graduate prospects,' also using the data from HESA (The Times, 2024). This shows that the emphasis on graduate outcomes and prospects is an important indicator when ranking and comparing universities and education providers.

This above-mentioned skills gap can be seen throughout HEI in the UK, including Russell Group universities (Daley & Baruah, 2021). A study by Ahmad et al., (2019) found that mastering communication skills, teamwork skills, leadership skills and innovativeness lead to better performance in the workplace. These skills have been found to be crucial in addition to motivation and business planning in enhancing employability skills for graduates, particularly in the computer science and engineering sectors (Okudan & Rzasa, 2004). Further skills identified as crucial which students and/or graduates typically lack are creativity, critical thinking, analytical skills, problem-solving, and the ability to work independently (Talentcorp, 2014).

Furthermore, the UK government has set up the Foresight Future of Skills and Lifelong Learning project which looks at reducing the general skills gap (not necessarily focused on graduates only), promoting lifelong learning and bringing economic growth to the UK economy (Government Office for Science, 2020). A review (Green et al., 2016) highlighted a few weaknesses in the UK economy and in the skills provision. In more detail, it showed that there was an under-investment by employers in skills that would allow them to raise the value-added of their activities, and certain groups of individuals have been identified who fall outside the reach of the current skills system. This suggests there is a need for increased skills training to ensure the skills gap is reduced.

In addition, the world of jobs is transforming due to Industrial Revolution 4.0 which not only means different jobs will emerge, but existing jobs will also change. This suggests that 42% of the core skills required to perform the existing jobs are expected to change and more than 1 billion people need to be reskilled by 2030 (World Economic Forum, 2020). Furthermore, as the world is becoming more and more digital, high-tech skills are in demand as well as specialised interpersonal skills. In sum, the world is facing a reskilling emergency. To put this into context, more than 1 billion jobs, almost one-third of all jobs worldwide, are likely to be transformed by technology in the next decade, according to OECD estimates (Government Office for Science, 2020). By just 2022, the World Economic Forum estimates 133 million new jobs in major economies will be created to meet the demands of the Fourth Industrial Revolution (World Economic Forum, 2020). At the same time, economic and demographic shifts are putting additional pressures on today's workforces. As we enter a new decade, one that the United Nations and others have called the 'decade of delivery' for important transitions to a more sustainable

world, we must also focus on achieving equitable, inclusive progress to equip and enable the world's people to thrive in the jobs of the future (Khadzir & Sumarmi, 2020; TalentCorp, 2014).

## Present Study

Based on the presented graduate skills gap problem, the present study aims to explore the effect of people's perception of skill development in HEIs in the UK. To do this, researchers conducted an online survey distributed to a number of students across the UK to gauge the skills that are currently taught in HEIs. Research has shown that in order to effectively evaluate a curriculum it is essential to gather views from both students and graduates (Eyal & Cohen, 2009). Moreover, the survey was also sent to recent graduates (who graduated within the past 3 years) and graduates who graduated more than 3 years ago to get an understanding of the confidence in the skills taught, which soft skills were used and utilised in their current positions, and to obtain information about what skills they should have been taught that are essential to their current role and future aspirations. The research question of the study is: What is the perception of skills development in HEI of students and graduates in the UK?

## Materials and Methods

### Design

The current research is a questionnaire design. Developing skills, confidence levels in skills and career adaptability served as the dependent variables, and career status (three levels) served as the independent variable. A combination of the Kruskal Wallis test, Mann-Whitney U test and a paired-samples t-test were conducted to explore the aims of the study and to test for differences on the dependent variables between students and graduates.

### Participants

A total of 420 individuals (277 female, 132 male, 2 non-binary, 2 who prefer to self-identify and 7 individuals who did not indicate their gender) participated in the study. In relation to age, 74.3% ( $n = 312$ ) were between 18-25 years old; 17.1% ( $n = 72$ ) were between 26-35 years old; 6.0% ( $n = 25$ ) were between 36-45 years old; 1.0% ( $n = 4$ ) were between 46-55 years old; 1.2% ( $n = 5$ ) were between 56-65 years old; and .5% ( $n = 2$ ) did not disclose their age. In terms of ethnic group membership, 40.5% ( $N = 170$ ) of participants were of Asian descent; 37.6% ( $n = 158$ ) were of White descent; 12.1% ( $n = 51$ ) were of Black descent; 6.0% ( $n = 25$ ) were of 'Mixed' heritage; 2.6% ( $n = 11$ ) were 'Other', and 1.2% ( $n = 5$ ) preferred not to say. Finally, in relation to the career stage of the participants, 80.5% ( $n = 338$ ) were students; 8.8% ( $n = 37$ ) indicated they were recent graduates (graduated within the past 3 years) and employed; 8.1% ( $n = 34$ ) of participants were in graduate employment for more than 3 years, and 2.6% ( $n = 11$ ) identified they were a recent graduate (graduated within the past 3 years) and unemployed. Participants had to be over the age of 18 and should currently be studying or have studied in the UK in order to take part in the study. Participants were recruited via social media.

### Materials

The study collected data via an online questionnaire using Qualtrics and consisted of approximate 18 questions

### Demographics

Participants were asked about their age, gender, religion, ethnicity, and career stage.

### Career Status

Participants who were students were asked a set of questions about their studies, e.g. town of study, name of institution, degree and discipline. Students were asked whether they had a job and if this is full-time or part-time.

Participants were asked questions about their previous qualifications, e.g. town of study, name of institute, their highest level of educational qualification and discipline studied. They were then asked about their job title, the industry they are working in, and the skills they need on a daily basis. Recent graduates were also asked what skills they would have liked to have developed to be prepared for their current job. Graduates and unemployed were then asked if they had a job since graduating and if yes, they were asked about that job title, the industry they were working in and the skills they needed on a daily basis. Finally, they were asked how long they have been unemployed. Recent unemployed graduates were asked what skills they need to develop in order to get a job. Graduate employment for more than 3 years were then asked about their job title, the industry they are working in, and the skills they need on a daily basis. These participants were also asked how they have become confident in soft skills and the training they received from their employer. Finally, they were asked about what skills they would like to develop further.

Participants who reported that they were in graduate employment for more than 3 years were asked about their previous qualifications, e.g. town of study, name of institute, the highest level of educational qualification and discipline.

### **Developing skills**

Participants were asked to complete and rate 28 items each on a particular soft skill that their university is currently developing (students) or had developed (graduates). Examples of soft skills included: team working skills, problem-solving skills, and leadership skills. Each item was scored on a 5-point Likert-type scale (1 = strongly disagree, 5 = strongly agree). All participant categories completed this section.

### **Confidence in skills**

Participants were asked to rate how confident they are in the same 28 soft skills. Examples of soft skills included: job interview skills, networking skills, and time management skills. Each item was scored on a 5-point Likert-type scale (1 = strongly disagree, 5 = strongly agree). All participants completed this section.

### **Career Adaptability Scale**

The Career Adaptability Scale (CAAS) (Savickas & Porfeli, 2012) measures concern of one's career (e.g., thinking about what my future will be like), control of one's career (e.g. making decisions by myself), curiosity of one's career (e.g., probing deeply into questions that I have) and confidence about one's career (e.g., working up to my ability) as psychosocial resources for managing occupational transitions, developmental tasks and work traumas. A combined measure of this scale (e.g., items 1-24) measure career adaptability which is how flexible someone is to their career. This questionnaire was used in this study to explore participants' adaptability in the workplace. There are 24 items that are rated on a 5-point scale (1 = not strong, 5 = strongest). The questionnaire was field-tested in 13 countries and the internal consistency for this questionnaire was excellent across all countries. In more detail, Cronbach's alpha for the overall scale was  $\alpha = .95$  and alphas for the subscales were  $\alpha = .88$  for concern,  $\alpha = .89$  for control,  $\alpha = .91$  for curiosity and  $\alpha = .92$  for confidence (Savickas & Porfeli, 2012). All participants had completed this section, excluding the participants who have been in graduate employment for more than 3 years. See Table 1 for Cronbach alpha for the current study.

**Table 1. Cronbach Alpha for the Current Study.**

Career status	Concern	Control	Curiosity	Confidence	Overall adaptability
S (n = 338)	.862	.856	.855	.875	.943
GE (n = 37)	.811	.564	.806	.723	.876
GU (n = 11)	.861	.827	.762	.869	.911

Note: S = student, GE = Recent graduates who are in employment and GU = Recent graduates who are unemployed.

## Procedure

Prior to collecting data, the authors obtained ethics approval from a Research Ethics Committee at the authors' educational institution (29917-A-Feb/2021- 31389-1). The data was gathered using convenience sampling, recruiting participants primarily using social media. First, participants read the participant information sheet that explained the purpose of the study and signed an informed consent sheet online. Second, participants were then directed to the survey which consisted of demographic items including specific demographic questions in relation to their career status. Participants were then taken to the questions about their skills. Finally, participants read a debriefing form that explained the purpose of the study in detail and also included contact details. Participation was strictly voluntary; no financial or other inducements were offered to participants.

## Results

All analyses were conducted using SPSS 26 (IBM, 2019).

### Missing participants

A total of 1004 participants started the survey but not all completed it. As a result, these participants were removed. In more detail, of these participants, 131 did not fill in the consent form, 112 did not continue after the location of the study, 84 were not eligible as they answered 'none of the above' to the career state question, 95 students did not complete the survey after the demographics, 17 recent graduates did not complete the survey after demographics, 28 graduates who are employed for 3 + years did not complete the survey after demographics, 1 recent graduate did not complete survey after demographics. A total of 115 of the participants indicated that they did not study in the UK and were subsequently removed. Finally, 1 participant did not engage with the survey and were removed. This led to a total of 420 responses that met the criteria for inclusion.

### Students: Developing skills and confidence in skills

Students were asked how they felt their educational institutions were developing a subset of soft skills. The means and standard deviations for each skill are shown in Table 2. A paired-samples t-test was conducted to explore differences between how the students felt that the university was developing their skills and how confident they felt in those skills. The results can be found in Table 3.

**Table 2 Means and Standard Deviation for the Skills that Students Report as Currently Being Developed at University.**

Skill	Development at university		Confidence in skill	
	Mean	Standard deviation	Mean	Standard deviation
Communication	3.88	.90	3.64	.86
Team working	3.93	.93	3.80	.84
Listening skills	3.86	.98	3.98	.79
Ability to work under pressure	4.09	.94	3.72	.86
Critical thinking	4.10	.97	3.64	.89

Willingness to learn	3.79	1.00	3.98	.94
Attention to detail	3.88	.95	3.82	.91
Planning skills	4.02	.95	3.77	.93
Ability to take responsibility	4.09	.93	4.01	.86
Professionalism	4.08	.98	3.90	.94
Emotional intelligence	3.46	1.16	3.74	.99
Public speaking	3.61	1.09	3.28	1.10
Ability to create ideas	3.86	.97	3.57	.99
Problem solving	3.95	.90	3.77	.83
Conflict management	3.57	1.08	3.49	.92
Leadership skills	3.57	1.12	3.51	.98
Ability to show empathy	3.49	1.13	3.96	.94
Ability to write a CV	3.44	1.25	3.49	1.02
Job interview	3.33	1.25	3.14	1.12
Ability to be resilient	3.73	.99	3.64	.92
Networking skills	3.54	1.15	3.27	1.13
Time management	4.01	.96	3.64	.98
Stress management	3.51	1.22	3.33	1.02
Self-confidence	3.57	1.15	3.52	1.01
Ability to take constructive criticism	3.88	.96	3.71	.94
Organisation skills	3.90	.96	3.79	.88
Ability to adapt to changes	3.95	.96	3.83	.91
Ability to give constructive criticism	3.78	1.02	3.62	.91
Stress management	3.88	.90	3.64	.86
Self-confidence	3.93	.93	3.80	.84
Ability to take constructive criticism	3.86	.98	3.98	.79
Organisation skills	4.09	.94	3.72	.86
Ability to adapt to changes	4.10	.97	3.64	.89
Ability to give constructive criticism	3.79	1.00	3.98	.94

Table 3 below represents the data from the students perception of skills developed at university and their confidence.

**Table 3 Paired Samples t-test for Students' Perception of Skills Being Developed at University and their Confidence in those Skills.**

Skill	t	p	d
Communication	3.79	< .001**	.21
Team working	2.16	.03**	.12
Listening skills	-	.07	.10
	1.84		
Ability to work under pressure	6.14	< .001**	.33
Critical thinking	7.95	< .001**	.43
Willingness to learn	-	.001**	-.18
	3.25		
Attention to detail	1.07	.29	.06
Planning skills	4.32	< .001**	.24
Ability to take responsibility	1.32	.19	.07
Professionalism	2.84	.005**	.15
Emotional intelligence	3.63	< .001**	.20
Public speaking	4.67	< .001**	.25
Ability to create ideas	4.67	< .001**	.25
Problem solving	3.32	.001**	.18
Conflict management	1.45	.15	.08
Leadership skills	.76	.45	.04
Ability to show empathy	-	< .001**	.04
	7.02		
Ability to write a CV	-	.48	.04
	.071		
Job interview	2.71	.007**	.15
Ability to be resilient	1.60	.11	.09
Networking skills	4.38	< .001**	.24
Time management	6.09	< .001**	.33
Stress management	2.54	.011**	.14
Self-confidence	.76	.45	.04
Ability to take constructive criticism	2.66	.008**	.15
Organisation skills	1.85	.07	.10
Ability to adapt to changes	1.96	.05**	.11
Ability to give constructive criticism	2.97	.003**	.16

*Note:* This table demonstrates the difference between the skills being developed at university and the student's confidence in those skills. Degrees of freedom for paired samples t-test are 37. \*\* signifies significant results.



Overall, students feel that their university is developing their communication skills, team working skills, listening skills, ability to work under pressure, critical thinking skills, willingness to learn, planning skills, professionalism, emotional intelligence, public speaking, create ideas, problem-solving skills, show empathy, job interview skills, networking skills, time management skills, stress management skills, ability to take constructive criticism, adapt to changes, ability to give constructive criticism but do not feel confident in these skills. These were significant in Table 3.

However, students felt that their university could improve in teaching listening skills, attention to detail, ability to take responsibility, conflict management, leadership skills, ability to write CV, ability to be resilient, self-confidence and organisation skills. These were not significant in Table 3.

### Graduates: Developing skills and confidence in skills

The data from graduates who were employed and graduates who have been graduates for more than 3 years were merged together. The data were merged due to the small sample of graduates who filled in the survey.

Graduates were asked if their educational institutions had developed a subset of soft skills. Descriptive statistics for each soft skill can be seen in Table 4. A paired-samples t-test was conducted to explore differences between how graduates felt their institution had developed their skills and how confident they felt. Results are shown in Table 4.

**Table 4 Means and Standard Deviation for the Skills that Graduates Report as Developed at University and their Confidence.**

Skill	Development at university		Confidence in skill	
	Mean	Standard deviation	Mean	Standard deviation
Communication	4.04	.82	4.10	.76
Team working	3.97	.84	4.27	.65
Listening skills	4.04	.92	4.23	.68
Ability to work under pressure	4.23	.93	4.28	.64
Critical thinking	4.27	.96	4.08	.87
Willingness to learn	4.10	1.03	4.42	.71
Attention to detail	4.10	.93	4.11	.84
Planning skills	4.18	.85	4.20	.80
Ability to take responsibility	4.27	.83	4.48	.67
Professionalism	4.20	.98	4.39	.71
Emotional intelligence	3.63	1.17	3.93	0.90
Public speaking	3.96	1.02	3.66	1.04
Ability to create ideas	3.83	.97	3.86	.83
Problem solving	4.20	.79	4.03	.77
Conflict management	3.45	1.14	3.62	.88
Leadership skills	3.72	1.03	3.90	.91



Ability to show empathy	3.54	1.04	4.08	1.08
Ability to write a CV	3.25	1.36	3.73	1.04
Job interview	3.04	1.49	3.63	1.09
Ability to be resilient	3.79	1.03	4.15	.77
Networking skills	3.62	1.19	3.61	1.21
Time management	4.13	.94	3.97	1.07
Stress management	3.69	1.19	3.68	.97
Self-confidence	3.86	1.05	3.79	1.03
Ability to take constructive criticism	4.00	.93	3.82	.99
Organisation skills	3.99	.87	4.11	.64
Ability to adapt to changes	3.93	.88	4.11	.82
Ability to give constructive criticism	3.75	1.01	3.80	.87
Stress management	4.04	.82	4.10	.76
Self-confidence	3.97	.84	4.27	.65
Ability to take constructive criticism	4.04	.92	4.23	.68
Organisation skills	4.23	.93	4.28	.64
Ability to adapt to changes	4.27	.96	4.08	.87
Ability to give constructive criticism	4.10	1.03	4.42	.71

Table 5 below represents the data from the graduates perception of skills developed at university and their confidence.

**Table 5 Paired Samples t-Test for Employed Graduates' Perception of Skills Being Developed at University and their Confidence in those Skills.**

Skill	<i>t</i>	<i>p</i>	<i>d</i>
Communication	-.46	.65	-.05
Team working	- 2.59	.012**	-.31
Listening skills	- 1.33	.19	-.16
Ability to work under pressure	-.051	.61	-.06
Critical thinking	1.58	.12	.19
Willingness to learn	- 2.70	.009**	-.32
Attention to detail	- 0.12	.90	-0.01
Planning skills	-.11	.91	-.01
Ability to take responsibility	- 1.73	.087	-.21

Professionalism	-	.14	-.18
	1.51		
Emotional intelligence	-	.04**	-.25
	2.08		
Public speaking	.200	.049**	.24
Ability to create ideas	-.23	.82	-.03
Problem solving	1.54	.13	.18
Conflict management	-	.28	-.13
	1.08		
Leadership skills	-	.22	-.15
	1.25		
Ability to show empathy	-	<.001**	-.47
	3.96		
Ability to write a CV	-	.004**	-.36
	2.99		
Job interview	-	.001**	-.40
	3.35		
Ability to be resilient	-	.006**	-.34
	2.84		
Networking skills	.09	.93	.01
Time management	1.17	.25	.14
Stress management	.09	.93	.01
Self-confidence	.45	.66	.05
Ability to take constructive criticism	1.63	.11	.19
Organisation skills	-	.30	-.12
	1.04		
Ability to adapt to changes	-	.15	-.18
	1.48		
Ability to give constructive criticism	-.47	.64	-.06

*Note:* This table demonstrates the difference between the skills developed at university and the graduate's confidence in those skills. The degree of freedom for paired samples t-test is 70. \*\* signifies significance.

Results showed that educational institutions developed communication skills, listening skills, ability to work under pressure, critical thinking, attention to detail, planning skills, ability to take responsibility, professionalism, ability to create ideas, problem-solving, conflict management, leadership skills, ability to show empathy, time management skills, ability to take constructive criticism, organisational skills, adapt to changes and ability to give constructive criticism and that graduates are quite confident in these skills. Graduates have practised team working skills, willing to learn, in employment based on what they have been taught in school. This was significant. However, educational institutions could do more in relation to emotional intelligence, public speaking, ability to write CVs, job interview skills, ability to be resilient, networking skills, stress management and self-confidence. This was not significant.

### Comparing confidence in skills between students and graduates

Graduates felt more confident than students in communication skills, team working skills, listening skills, ability to work under pressure, critical thinking skills, willingness to learn, attention to detail, planning skills, ability to take responsibility, professionalism, public speaking, ability to create ideas, problem solving skills, leadership skills, job interview skills, ability to be resilient, networking skills, time management, organisation skills, and ability to adapt to changes (all  $U < 10121.50$ , all  $p < .029$ ).

There was no significant difference in confidence level between graduates and students in the following skills: emotional intelligence, conflict management, ability to show empathy, ability to write

a CV, ability to take constructive criticism, and the ability to give constructive criticism (all  $U > 10587.50$ , all  $p > .098$ ).

## Career adaptability scale

### Adaptability score

A Kruskal-Wallis test was conducted to determine whether there is an effect of career status on the level of adaptability. The results indicate a trend towards significance  $H(2) = 5.71$ ,  $p = .058$  (Figure 1). Graduates who are employed showed higher adaptability ( $Md = 89.00$ ,  $n = 37$ ), followed by students ( $Md = 83.50$ ,  $n = 338$ ) and graduates who are unemployed ( $Md = 78.00$ ,  $n = 11$ ). Follow-up Mann-Whitney U tests were conducted to compare the career adaptability score between the students, the graduates who are employed, and the graduates who are unemployed. Results revealed a significant difference in the adaptability score between students ( $Md = 83.50$ ,  $n = 338$ ) and graduates who are employed ( $Md = 89.00$ ,  $n = 37$ ),  $U = 4906.50$ ,  $z = -2.15$ ,  $p = .031$ ,  $r = .11$ . Results also showed a significant difference in the adaptability score between graduates who are employed ( $Md = 89.00$ ,  $n = 37$ ) and graduates who are unemployed ( $Md = 78.00$ ,  $n = 11$ ),  $U = 115.50$ ,  $z = -2.16$ ,  $p = .031$ ,  $r = .31$ . There was no significant difference between students ( $Md = 83.50$ ,  $n = 338$ ) and graduates who are unemployed ( $Md = 78.00$ ,  $n = 11$ ),  $U = 1584.00$ ,  $z = -.84$ ,  $p = .40$ ,  $r = .04$ .

### Concern

A Kruskal-Wallis test was conducted to determine whether there is an effect of career status on the level of concern. The results indicate no significant differences  $H(2) = 1.28$ ,  $p = .53$ . Students had the highest level of concern ( $Md = 10.00$ ,  $n = 338$ ), followed by graduates who are employed ( $Md = 19.00$ ,  $n = 37$ ) as well as graduates who are unemployed ( $Md = 19.00$ ,  $n = 11$ ).

### Control

A Kruskal-Wallis test was conducted to determine whether there is an effect of career status on the level of control. The results indicate no significant differences  $H(2) = 4.56$ ,  $p = .10$ . Graduates who are employed had the highest level of concern ( $Md = 23.00$ ,  $n = 37$ ), followed by graduates who are unemployed ( $Md = 22.00$ ,  $n = 11$ ) and students ( $Md = 21.00$ ,  $n = 338$ ).

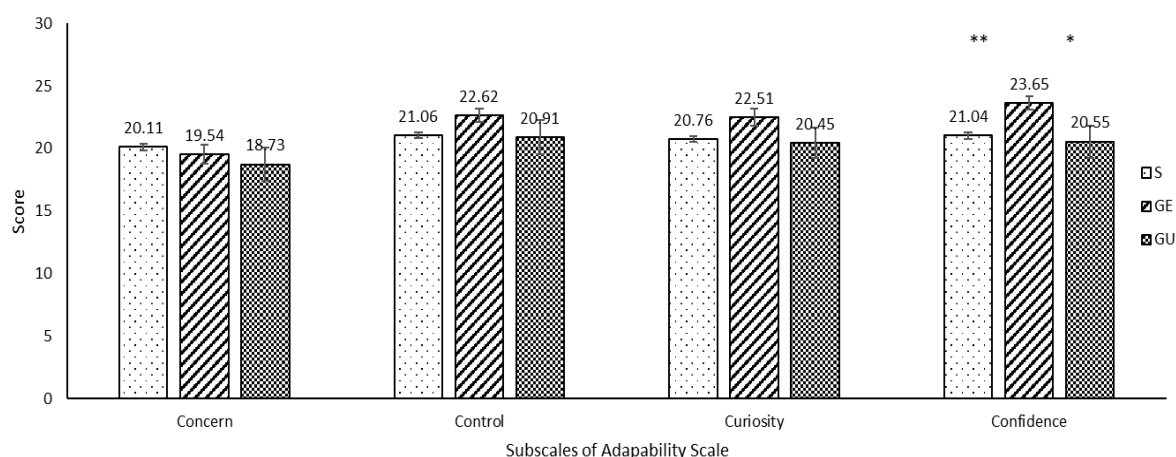
### Curiosity

A Kruskal-Wallis test was conducted to determine whether there is an effect of career status on the level of curiosity. The results indicate no significant differences  $H(2) = 4.00$ ,  $p = .14$ . Graduates who are employed had the highest level of curiosity ( $Md = 22.00$ ,  $n = 37$ ), followed by graduates who are unemployed ( $Md = 21.00$ ,  $n = 11$ ) as well as students ( $Md = 21.00$ ,  $n = 338$ ).

### Confidence

A Kruskal-Wallis test was conducted to determine whether there is an effect of career status on the level of confidence. The results indicate significant differences  $H(2) = 12.68$ ,  $p = .002$ . Graduates who are employed showed the highest levels of confidence ( $Md = 24.00$ ,  $n = 37$ ), followed by students ( $Md = 21.00$ ,  $n = 338$ ) and graduates who are unemployed ( $Md = 20.00$ ,  $n = 11$ ).

Follow-up Mann-Whitney U tests were conducted to compare the confidence scores between students, graduates who are employed, and graduates who are unemployed. Results showed significant differences in the confidence scores between students ( $Md = 21.00$ ,  $n = 338$ ) and graduates who are employed ( $Md = 24.00$ ,  $n = 37$ ),  $U = 4087.50$ ,  $z = -3.47$ ,  $p < .001$ ,  $r = .18$ . There was also a significant difference in the confidence scores between graduates who are employed ( $Md = 24.00$ ,  $n = 37$ ) and graduates who are unemployed ( $Md = 20.00$ ,  $n = 11$ ),  $U = 101.00$ ,  $z = -2.53$ ,  $p = .011$ ,  $r = .36$ . There was no significant difference between students ( $Md = 21.00$ ,  $n = 338$ ) and graduates who are unemployed ( $Md = 20.00$ ,  $n = 11$ ),  $U = 1702.00$ ,  $z = -.48$ ,  $p = .63$ ,  $r = .03$ .



**Figure 1. Scores for Each of the Subscales of Adaptability for the Three Career Groups; S = Students, GE = Graduates who are Employed, GU = Graduates who are Unemployed; \*\*  $p < .001$ , \*  $p < .05$ .**

## Discussion

The aim of the current study was to explore students' and graduates' perceptions of the soft skills taught in HEI in the UK. Through the distribution of a survey, it was found that there are a number of skills that students believe are taught at universities, but they do not feel confident in some soft skills that are taught at HEI. Similar results can be found for graduates. The results will be discussed in more detail below.

Students do not feel that their university is developing certain skills as they do not feel comfortable in applying those skills (e.g. job interview skills, ability to write CV and general emotional intelligence) when they graduate. Graduates feel confident in skills because they are able to practise the skills taught at university in current employment. There are more things that universities could do to develop these skills to ensure students feel more confident upon graduation. For a subset of skills, graduates felt more confident than students. Graduates who were employed had a higher adaptability score compared to students and graduates who are unemployed. From the four subscales, there was no effect of career status on the level of concern, control and curiosity. However, graduates who were employed were more confident than students and graduates who were unemployed.

Recently, Advance HE published a comprehensive narrative to the literature from 2016 to 2021 on the topic of employability in HE (Dalrymple et al., 2022). Findings indicate a variety of concepts that need to be discussed about employability within the sector and five are highlighted here. Firstly, there is a need to distinguish clearly between 'hard' and 'soft' skills and robust measures of accountability of employability-initiatives. Secondly, authentic assessments should be incorporated into the curriculum to enhance students' employability which is in line with our findings and recommendations. Thirdly, a stronger collaboration is required between the graduate job market and educational institutions to align the needs of graduate employers and the skills developed during education, which is one of our recommendations too. Fourth, career planning will remain crucial although there should also be a strong emphasis on embedding forms of employability learning into the curriculum and all this should consider inclusivity and be tailored support. Fifth, implementing work-based learning, placements, internships, or extracurricular employability-enhancing activities are crucial for skills development. Overall, engagement of employability in the curriculum is essential.

Students felt that their university could improve in developing listening skills, attention to detail, ability to take responsibility, conflict management, leadership skills, ability to write CV, ability to be resilient, self-confidence and organisation skills. It would be beneficial if these can be embedded within the curriculum where possible, otherwise via the facilitation of extracurricular activities. Effective communication in project teams is essential, but not often taught. A crucial element in teamwork is feedback which includes both peer feedback and instructor feedback (Donia et al., 2018).

This will help students with being able to take and give criticism. One way for students to practise and gain feedback on their team skills is through team-based assessment tasks using a rubric. In a recent study, students completed the rubric for themselves and for each of the students in their team. Results showed that this was a very successful way for students to develop teamwork skills including feedback by allowing feedback to be focused and consistent (Vaughan et al., 2019).

Presentation skills are a fundamental skill that should be taught, and communication skills training guides usually advise presenters to record their presentations to improve communication skills by being more self-aware (Taylor, 2016). Students could also submit a reflection on their presentation. This will, in turn, improve self-awareness (Oh et al., 2015). Improved self-awareness is key to a whole host of skills measured in this study for example leadership skills (Showry & Manasa, 2014), and emotional intelligence (Moreno-Fernandez et al., 2020). Another way to improve emotional intelligence is to get students to engage in role playing. This has been effective in improving emotional intelligence and empathy in counselling students and is common practice (Rismi et al., 2020). Role play has also been useful for developing leadership skills (Daley & Baruah, 2021; Edelman & Knippenberg, 2018).

Pedagogical strategies for improving listening skills are to engage in and practice metacognition in listening (Uggen, 2013). By practising active listening and improving communication skills, which students feel that the university is improving, students will also improve their conflict management skills. Educators could host workshops on employability modules to improve conflict management by maintaining a positive attitude and practice managing their emotions (Moreno-Fernandez et al., 2020; Valente & Lourenço, 2020). More importantly, students should learn how to compromise which will lead to better collaboration and team working skills.

To improve attention to detail, students should engage in games and puzzles and embrace a slower pace when completing tasks (Dickter et al., 2018). It is important that educators help students focus on small achievements, set small goals, seek out positive experiences (by not procrastinating), consider a rewards system and assist them in practising self-acceptance (Kaya et al, 2021; Mutiara & Astuti, 2021). Moreover, self-confidence comes from networking and mingling (Karsudianto, 2020), which is an area a lot of students are not confident in. See notes on networking for strategies on how to incorporate this in learning.

According to psychological research in order to improve the ability to take responsibility students need to be punctual, get organised, should not procrastinate, not complain, be dependable, be accountable and be willing to earn someone's trust (Succi & Canovi, 2020). Educators can provide this to students as a self-checklist for engagement. To improve organisation skills in students, educators could show students how to use visual tools such as Gantt charts, use a checklist or a to-do list which helps students stay on track with tasks with established priority and identify small goals and effectively meet them (Rumohr, 2018). This, in turn, develops self-confidence.

Willingness is essential for learning and includes motivation related to cognition and emotion (Hotifah & Yoenanto, 2020). Therefore, willingness to learn is a prerequisite for success (Tymon, 2013). Willingness to learn is not a concept that can be taught as a lesson, this is something that needs to be incorporated throughout the curriculum by keeping students engaged with the tasks and activities set. It also includes a component of motivating students, encouraging students, and reflection.

Being able to present yourself is crucial when you are graduating and looking for a job. Here is where both CV writing and job interview skills come in. An interview is for many people a nerve-wracking, anxiety-provoking experience especially in the preparation time leading up to the interview. Training is crucial to improve interview performances. Although graduates feel relatively confident in these skills, there is still much more that can be done in educational institutions to get students ready for the graduate job market, preparing their CVs and preparing them for the (many) interviews they will likely have before getting their first graduate job. Many educational institutions have dedicated career support for students, but engagement with these professional services is relatively low (Kapadia, 2018). Many institutions organise mock interview panels/events, but again uptake of these is relatively

low compared to the size of student cohorts. Therefore, more work and promotion can be done in this area, for example embedding the career support services more into the curriculum. Academics and working together with career support staff creates a community of support that will be beneficial not only for the student experience but also for their employability skills development. This has been proven to be beneficial in other settings such as academics and clinicians working together to prepare nursing students to work in mental health settings and can be expanded to other areas too (Curtis, 2007). In addition, developing authentic assessments where students practice, among other skills, oral presentation skills will improve their employability skills and their job interview skills (Sokhanvar, et al., 2021). Finally, with the increasing use and advances of technology, By using virtual reality and artificial intelligence, systems and products are created that can support students to prepare and practice for their interviews (Stanica et al, 2018).

Resilience is an essential skill for professional development and a skill that is often not easy to measure or define which makes teaching resilience harder compared to some of the other transferable skills. A recent study by Silva et al., (2020) using a quantitative approach showed that teaching social skills improves resilience in graduates. This was evident as the students who developed social skills (by receiving support, developing oral presentation skills, by articulating and by participating in discussion, etc.) had increased resilience levels compared to students whose social skills had not reached high levels. Therefore, resilience is a skill that is interlinked with the development of other skills, but resilience can still be developed through a variety of activities including case studies, impromptu activities as well as developing skills such as goal setting, problem-solving skills, peer-to-peer support and teamwork. Most importantly, encouraging students to fail and to learn, regroup, and try again will boost their resilience. For many people, failure is not an option, but by changing this mentality to embrace failure, success can also be achieved (Smith & Henriksen, 2016).

### **Comparing confidence in skills between students and graduate**

Graduates felt more confident in communication skills, team working skills, listening skills, ability to work under pressure, critical thinking skills, willingness to learn, attention to detail, planning skills, ability to take responsibility, professionalism, public speaking, ability to create ideas, problem solving skills, leadership skills, job interview skills, ability to be resilient, networking skills, time management organisation skills and ability to adapt to changes. There is a possibility that the reason for this difference is that graduates have had an opportunity to exercise these skills and also have been provided feedback in the context of the workplace. Students have not had these opportunities yet. It is for this reason that students require feedback when they develop these skills in university to have an opportunity to improve these skills before they enter the workplace. Based on these results, it is evident that employability in HE needs improvement in curriculum design due to the discrepancy in confidence and the skills identified between graduates and students (Eyan & Cohen, 2009).

### **Career adaptability scale**

The results from the career adaptability scale showed that graduates are more adaptable than students and those who are unemployed. This suggests that for a student to become adaptable, they should be exposed to a real working environment in the form of placements, internships or volunteering positions. This difference in adaptability could be due to a difference in confidence between employed graduates and students and unemployed graduates. Graduates have had more exposure to situations, interactions with other people, what it means to be in a working environment including the tasks and responsibilities. In addition, graduates have also gone through the process of writing their CV, applying for jobs, getting job interviews and receiving an offer. All these experiences and exposure have led to an increase in confidence levels. However, more work can be done to also increase confidence levels in students as mentioned above. The development of these employability skills do not have to wait till one is a graduate, all of this can start during a students' time at university.

### **Limitations and future work**



A few limitations to this research should be noted. For example, there was an unequal distribution of data collected between students and graduates. Researchers could have collected more graduate data to gain more insight into the use of skills taught at institutions. An additional limitation is that the researchers did not consider previous experience or extracurricular activities students engaged in. If future research replicates the current study, it would be good to consider gathering this type of data.

Future researchers could conduct a longitudinal study to investigate the long-term implications of applying the recommendations during the time students are studying. Additionally, researchers could conduct this research in different countries to investigate the views of students in different countries. Finally, researchers could conduct interviews with industry professionals to identify which skills graduates are missing.

## Recommendations

Based on the results of this study coupled with the literature, the current study provides some recommendations for educators in developing their students' employability skills. Universities should be clear on the skills that assignments will nurture.

1. Feedback on communication skills in any capacity should be practical with guidance for future presentations. There should also be an opportunity to discuss feedback with the student. Presentations could also be recorded and played back by students for self-reflection to improve self-awareness.
2. Assignments where there is the inclusion of team/group work should include feedback from the educator as well as anonymous peer feedback. By doing this, the student will be accountable for their engagement and will also be involved in giving and taking constructive criticism. However, this peer feedback could be reviewed by the educator who can also provide feedback to the peers about their peer feedback.
3. Educators could encourage passion about the topic taught. They could create real-life assignments which will elicit a willingness to learn resulting in life-long learners. Choosing real-life assignments will also foster solution-based problem solving.
4. Assignments should include a project management component as this promotes organisation skills and time management.
5. More opportunities for students to develop professionalism outside of the classroom. Some examples include networking events and conference attendance for final year projects. This would improve students' networking skills if they are encouraged to engage in networking at these events through unassessed observations.
6. To further improve networking skills, educators could consider including speed dating activities in the classroom, guest speakers for their modules from non-academic backgrounds and attendance of the relevant career events.
7. Educators should consider improving emotional intelligence by implementing role play in their modules. Other means of improving emotional intelligence include the analysis of silent videos and negotiation tasks.
8. Educators could consider debates to assist in nurturing leadership, conflict management and communication skills.
9. To improve public speaking, educators could include non-assessed presentations on a topic of the students own choice. Thereby fostering creativity, communication skills and encouraging engagement. Another means of improving public speaking is an assessment on non-verbal communication whereby students present a topic of their choice but only use non-verbal language with words that are muddled up. Feedback from educators needs to be clear and honest. Feedback from peers could be considered to improve the ability to take and give constructive criticism.



10. Students should have autonomy in their studies. This can be done by giving students the opportunity to choose their assignments. In turn, this will foster creativity and ability to create ideas.
11. Educators should consider providing a tailored CV experience rather than using facilities which provide general CV guidance. This could be in the form of invited speaker talk from industry or drawing on the educator's own experiences as well as peer feedback on their CVs.
12. Educators could practice interview skills with the job specifications provided by the student. However, consideration of educators' workload is important.
13. Encourage students to practice mindfulness as a strategy to cope with stress and become more resilient in the workplace and whilst studying.
14. Implement a reflective component in assignments to showcase the skills that students have learned and are comfortable with. Practising reflection could also assist students in assessing their outlook on any given scenario, allowing them to improve their awareness, set clear goals, identify and learn from their mistakes and be more self-reflective. Feedback from educators could comment on how students are reflective.
15. To enable students to adapt to change, it is important to incorporate this into the employability curriculum. For example, making changes to the topics taught or implementation on new assignments.

## Conclusion

Using data from students and graduates in the UK gathered through a survey, this research identified issues within the HEIs in teaching employability skills. Based on these results and consultation of the literature researchers propose some recommendations for employability educators to implement in their curriculum which after implementation could reduce the employer-graduate skills gap.

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## Declaration of Interest Statement

The authors declare that they have no conflict of interest.

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