

THE INFLUENCE OF DUAL HIGHER EDUCATION PROGRAMMES AND WORK EXPERIENCES ON SOFT SKILLS DEVELOPMENT IN MASTER'S DEGREE STUDENTS

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Abstract

Soft skills are crucial for graduate employability in a rapidly changing society. While dual higher education programs support their development, the specific skills gained remain unclear. Likewise, the role of non-curricular work experiences in shaping these skills is also underexplored. This study investigates the influences of DHE programmes and non-curricular work experiences on soft skills, focusing particularly on social competences, efficacy beliefs, flexibility, lifelong learning, and communication. A quantitative study was conducted on 96 students of two master's degrees in two distinct fields of study. Analysis of variance was employed to examine the differences in the mentioned skills across students with and without experiences in DHE programmes and non-curricular work experiences. The findings illustrate the complex effects of these experiences on soft skills development, highlighting a particularly positive impact of current DHE programmes on students' efficacy beliefs. Furthermore, the role of master's programmes is significant, especially concerning students' communication skills. The results suggest that well-structured DHE programmes can effectively foster both professional and personal growth. Nevertheless, further research is needed to clarify the nature of the found inconsistencies, including studies with larger sample sizes and longitudinal research designs.

1 Introduction

As society continues to grow more complex and diverse, the workplace is also becoming increasingly intricate. This means that higher education students must adapt to these changes and become more aware of their surroundings to face the challenges that arise (OECD, 2019). Global changes, such as digitalisation, climate change and artificial intelligence pose challenges for the future of students (OECD, 2019). Globalisation has led to the need for skilled labour (European Commission, 2017). Additionally, career paths are becoming less straightforward, requiring employees to adjust to various work settings (Santos, 2020). In this context, skills and, more specifically, soft skills have gained relevance and are thought to be helpful in facing these challenges (OECD,

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2019). In Europe, the Bologna Process emphasised the need for higher education institutions to develop these skills (Sin & Neave, 2016). However, despite efforts by higher education institutions to address this issue (Succi & Canovi, 2020), the skills shortage remains a concern (Jackson, 2024).

Working while studying has been found useful in the development of soft skills (Bennet et al., 2023). In this context, educational programmes such as Dual Higher Education (DHE) are gaining relevance as they integrate student curricula with practical experience gained through specific internship periods in qualified companies, allowing students to apply their theoretical knowledge in real-world settings (Pogatsnik, 2018; Turk, 2023). Many universities in Europe are in the process of implementing or have already implemented DHE programmes within their degree offerings (Dragan & Hochrinner, 2024; Dupouy & Bakni, 2024a; Dupouy & Bakni, 2024b; Viklund & Elgundi, 2024). These work experiences are incorporated into student programmes through initiatives like DHE, Work-Based Learning (WBL), or Work-Integrated Learning (WIL) (Ferns et al., 2024; Lester & Costley, 2010; Pogatsnik, 2018). These terms are often used interchangeably, but the terminology and structure of these programmes vary across countries (Varga & Sági, 2024). Apart from allowing for the integration of theory and practice, DHE programmes have been perceived as useful for soft skills development (Dupouy & Bikini, 2024; Tuononen et al., 2022), as they facilitate the application of discipline-specific knowledge and skills in the workplace (Clarke, 2017).

Nonetheless, the effectiveness of these programmes on all soft skills is still debated, as some soft skills are less represented in literature (Urkia-Basterra et al., 2025). Although paid work as an extra-curricular activity has been argued to be useful for soft skills development, research in this area is still limited (Clark et al., 2015). Moreover, to our knowledge, little research (Alves et al., 2017; Grooters et al., 2023; Martín-Lara et al., 2019) has been conducted on the relevance of DHE programmes and work experiences among master's degree students. To this end, this article presents an empirical study that compares the effects of DHE programmes and prior non-curricular work experiences on the development of soft skills among two master's programmes in distinct academic disciplines.

1.1 Theoretical framework

There has been a noticeable shift in literature towards the increasing importance of soft skills, moving from a focus on technical skills to a greater emphasis on non-technical skills (Zegwaard & Rowe, 2019). Moreover, the COVID-19 pandemic emphasises the role of skills such as communication and teamwork as essential to adapt to rapid changes (Konstantinou & Miller, 2021). Despite their importance, the definition and theoretical consistency of soft skills remain subjects of debate in academic literature, where terms such as soft skills, generic skills or transversal competencies are used interchangeably (Cinque, 2016; Marin-Zapata et al., 2022). Numerous frameworks have attempted to face this challenge, including Life Skills Education in School (WHO, 1993), 21st Century Skills (Ananiadou and Claro, 2009), and the OECD Future of Education and Skills 2030 project (OECD, 2019). The latter outlines skills as "the ability and capacity to carry out processes and to be able to use one's knowledge in a responsible way to achieve a goal." (OECD, 2019, p. 89). Additionally, it aims to clarify the knowledge, skills, attitudes, and values that students need to adjust to changes in their environment and everyday life, as well as to help shape the future (OECD, 2019).

To foster the development of soft skills, DHE programmes are thought to be useful due to the application of knowledge and skills in the workplace (Dupouy & Bikini, 2024; Tuononen et al., 2022). Although definitions of DHE programmes are still debated, several theoretical perspectives have been identified for application for work-based type of programmes (Ferns et al., 2024). The Situated Learning Theory emphasises that learning is fundamentally a social process, taking place through interactions and collaboration within social environments (Lave & Wenger, 1991). This concept is particularly relevant to DHE programmes, as students engage in practical learning within the workplace environment alongside experienced professionals (Ferns et al., 2024). Additionally, Sociocultural Theory states that learning is a social process, emphasising that knowledge and skill development arise through social interaction (Vygotsky, 1978). Engeström (1999) expanded this concept into Activity Theory, which emphasises the significance of collective activity and contextual learning. These perspectives align well with the structure of DHE programmes, where students acquire skills and knowledge relevant to the workplace through meaningful social interactions in real-world

professional environments (Ferns et al., 2024). In addition, Kolb's Experiential Learning Theory (1984) offers a valuable lens for understanding how students in DHE programmes acquire and refine soft skills. According to this model, learning occurs through a process of experience, reflection, conceptualisation, and active experimentation. Within the structure of DHE, this process is supported as students alternate between academic and workplace settings, learning as they engage in and reflect on real-world tasks and professional experiences (Ferns et al., 2024). In this context, the social interactions between students and university and world-of-work tutors also seem to be key to the effectiveness of DHE programmes (Dragan & Hochrinner, 2024; Tynjälä, 2008).

While higher education provides formal learning settings, the workplace offers chances for informal and spontaneous learning opportunities (Eraut, 2004). Through workplace learning, employees develop and enhance their knowledge, skills, and attitudes (Janssens et al., 2017). Workplace learning recognises the value of learning from peers and promotes the growth of various skills, personal development, and teamwork, among other advantages (Eraut, 2004). In particular, studies emphasise the potential benefits of working while studying in aspects such as career awareness, social skills and the development of professional skills (Brosnan et al., 2024; Clark et al., 2015). Research focusing on pre-entry work experiences also found benefits of these work experiences on skills such as communication, and career exploration and awareness (Bennett et al., 2023). Nevertheless, it is argued that this relationship between non-curricular work experiences and skills development is complex and seeks further research (Bennett et al., 2023). Work experiences, both non-curricular and through DHE programmes, offer significant advantages for student development. DHE programmes are also believed to be beneficial for soft skills development, with communication, problem-solving, critical thinking, and teamwork being the most emphasised in literature (Urkia-Basterra et al., 2025).

Effective communication is key for overall societal understanding (OECD, 2021) as well as team performance and communication in the workplace (Marlow et al., 2018). As mentioned above, communication skills represent one of the most extensively researched competencies in DHE programmes (Urkia-Basterra et al., 2025). Research conducted in a variety of fields of study has concluded that DHE programmes are perceived as helpful for developing communication skills (e.g. Doolan et al., 2019; Fleming & Haigh, 2017; Grooters et al., 2023; Jackson, 2013b, 2013a; Martín-Lara et al., 2019). However, although effective communication has been identified as one of the most important skills, it remains a skill students frequently lack (Moore & Morton, 2017).

The workplace and learning in the workplace is a social process (Leiß & Rausch, 2023), providing opportunities for experiential learning. The cognitive and behavioural development of students has been found to be directly correlated with the quality of their interactions with colleagues and supervisors (Tan et al., 2022), emphasising the importance of social competencies. Research has shown that social competences can be developed through paid work experiences (Bennett et al., 2023; Jackson et al., 2019). Moreover, in the field of education, social and communication skills gained from work experiences outside students' main fields of study have proven to be valuable in their future careers (Wylie & Cummins, 2013). Although social skills have been previously researched in the form of teamwork or interpersonal skills (Urkia-Basterra et al., 2025), stakeholders have still identified deficits in the social competences of students (Prikshat et al., 2019). Therefore, considering its transferability, the interactions of DHE programmes and non-curricular work experiences on social competencies are worth exploring.

From a career development perspective, students engaging in non-curricular work experiences demonstrate enhanced confidence in career decision-making processes (Brosnan et al., 2024). These students typically develop stronger connections between their academic studies and future employment prospects while simultaneously building greater self-efficacy regarding their career-related efficacy beliefs (Brosnan et al., 2024). In contrast, the influence of career-related efficacy beliefs in DHE programmes is underexplored (Urkia-Basterra et al., 2025).

Flexibility has been proven essential in navigating rapidly evolving workplace environments and the unknown future (Holmes, 2013; Jackson et al., 2019). In this context, immersive DHE experiences have been found to be particularly effective in fostering professionals with the ability to adapt to occurring changes (Gardner, 2017). For instance, Martín-Lara et al. (2019) found adapting to changes to be one of the most developed skills in their DHE programme according to students. Despite that, flexibility has been found to be a skill people often lack (Chinn et al., 2020). Succi and

Canovi (2020) also found that this skill is not considered important among students, unlike employers who rated it as one of the most essential skills. Therefore, the effectiveness of the workplace in developing this skill requires further research.

Students with higher lifelong learning scores seem to demonstrate superior workplace adaptation and performance (Drewery et al., 2017). Moreover, equipping students with lifelong learning skills is essential to their well-being and overall success (Ferns et al., 2024). Even so, research on lifelong learning remains emergent, with a pressing need to investigate the influence of DHE programmes and other non-curricular learning opportunities on this skill (Drewery et al., 2020).

1.2 The present study

As mentioned in the introduction, the development of soft skills among higher education students is essential in order for them to navigate the uncertainties of the workplace and society (OECD, 2019). Previous research has established the importance of both DHE programmes and non-curricular work experiences in developing soft skills (Jackson, 2013; Jackson & Bridgstock, 2021). Nevertheless, there is still a persistent skills gap and talent shortage (Jackson, 2024). Moreover, literature reveals inconsistencies in how different soft skills are represented in research, with communication skills receiving substantial attention while others like lifelong learning remain underexplored (Urkiabasterra et al., 2025). Furthermore, while DHE programmes have been perceived as useful for soft skills development (Clarke, 2017; Pogatsnik, 2018), more empirical evidence on non-curricular work experiences (Clark et al., 2015) and how they compare against structured DHE programmes is needed.

Given the significance of social interaction in learning within DHE programmes and Robles' (2012) definition of soft skills as a blend of interpersonal skills and career attributes, this study adopts a perspective that aligns soft skills with the meta-cognitive, social, and emotional competencies outlined in the OECD Future of Education and Skills 2030 framework (OECD, 2019). Interpersonal skills, referred to as social competences, are described as the capability to establish and maintain professional relationships, as well as the ability to collaborate effectively and foster a cooperative team environment (Scoupe et al., 2023). In the development of these social competences, communication skills are essential as they represent an individual's verbal and written communication skills, including their capacity to express their thoughts and opinions to a diverse range of stakeholders (Scoupe et al., 2023). Similarly, concerning career attributes, efficacy beliefs are occasionally described as the confidence individuals have in their capability to perform tasks within their specific field or discipline (Scoupe et al., 2023). Skills related to career attributes include flexibility, which involves both active and passive adaptation to change (Van Der Heijde and Van Der Heijden (2006); Scoupe et al., 2023). Additionally, lifelong learning is defined as the ability to secure future employment, develop professionalism, and contribute to job satisfaction (Dacre Pool and Sewell (2007); Scoupe et al., 2023).

Therefore, the primary aim of the present study is to examine the impact of DHE programmes and non-curricular work experiences on five key soft skills: social competencies, communication skills, flexibility, efficacy beliefs, and lifelong learning. By comparing these effects across two distinct master's programmes, we aim to provide insights into how gender and different academic disciplines may influence soft skill development outcomes. Through this investigation, we seek to enhance our understanding of how different forms of work experience contribute to developing the soft skills increasingly demanded in today's complex and diverse workplace environments (OECD, 2019; Santos, 2020), ultimately informing more effective higher education strategies for preparing students to meet contemporary workplace and societal challenges.

2 Methodology

2.1 Participants

The study sample comprises 96 students enrolled in two Master's degree programmes: one in Educational Sciences and the other in Business. Both programmes are offered at the same university in the Basque Country, in northern Spain.

Table 1. Demographic characteristics of the participants

<i>Master's</i>	<i>Total students</i>		<i>Female</i>		<i>Male</i>		<i>Non-binary</i>		<i>Prefer not to answer</i>	
Education	45		29	64.4%	14	31.1%	1	2.2%	1	2.2%
Business	51		34	66.6%	17	33.3%	0		0	
<i>Age range</i>	<i>20-25</i>		<i>26-30</i>		<i>31-40</i>		<i>41-50</i>		<i>50+</i>	
Education	13	28.9%	15	33.3%	5	11.1%	11	24.4%	1	2.2%
Business	44	86.3%	5	9.8%	2	3.9%	0		0	

2.2 Instruments

This study examined five soft skills - social competencies, communication skills, flexibility, efficacy beliefs, and lifelong learning - using the SECQ Questionnaire (Scoupe et al., 2023). The instrument employed a 5-point Likert-type scale ranging from 1 ("Completely disagree") to 5 ("Completely agree") across all dimensions.

The Social Competencies dimension comprised six items, including "I can operate within and contribute to a respectful, supportive, and cooperative group climate." The Efficacy Beliefs construct consisted of eight items, such as "I know what is required of me to successfully obtain the type of work I want to do" and "I feel confident and ready to start working." Flexibility was assessed through four items, exemplified by "In my field of expertise, I consider myself competent to add value by embracing new ideas and demonstrating creativity in addressing challenges and problems." The Lifelong Learning dimension incorporated six items, including "The academic tasks motivate me to put in a substantial amount of effort" and "I am focused on continuously developing myself." Finally, Oral and Written Communication skills were measured using five items, such as "I clearly express my thoughts and opinions in writing" and "I have strong oral communication skills." Reliability analysis revealed an internal consistency of a Cronbach's alpha of 0.63.

2.3 Procedure

Convenience sampling was employed to recruit participants who are students enrolled in the mentioned master's programmes for the 2024-2025 academic year, meaning that the study design is cross-sectional. Data was collected at the beginning of the academic year, between October and December 2024. The previously indicated skills, together with demographic questions, were presented in an online questionnaire. Participants were informed about the study's nature, with an emphasis on the fact that their participation was entirely voluntary and confidential. Prior to data collection, all students provided their electronic informed consent. The survey took approximately 10 minutes to complete. The study protocol was approved by the Ethics Committee for Research Involving Human Subjects of Mondragon University, approval number IEB-20240917.

2.4 Data analysis

We began the statistical analysis by performing descriptive statistics and correlation analysis for all variables. All variables showed adequate skewness and kurtosis values (skewness: range from -0.778 to 0.525; kurtosis: range from 0.227 to 1.307), which were considered acceptable for

normality. We followed by analysing the effects of previous and current dual programmes as well as the previous non-curricular work experiences in the aforementioned soft skills by conducting a MANOVA analysis. We also conducted ANOVA analyses on the statistically significant variables, along with post-hoc tests. All analyses were conducted using JAMOV version 2.3.28.0.

3 Results

3.1 Analysis of variance

Even though there are no multivariate effects of previous or current dual experiences or work experiences on the combination of soft skills, there are some specific significant interaction effects. Univariate analysis shows that the interaction between previous dual experiences and current dual experiences have a significant effect ($F = 5.225$; $p = 0.025$) on efficacy beliefs. The combination of previous dual experiences and previous non-curricular work experiences also shows a significant effect on social competences ($F = 5.115$; $p = 0.027$) and lifelong learning ($F = 4.123$; $p = 0.046$). The analysis also shows that previous dual experiences have a significant effect ($F = 4.503$; $p = 0.037$) on flexibility. Lastly, current dual experiences and previous non-curricular work experiences also have a significant effect ($F = 4.566$; $p = 0.036$) on student communication skills.

Table 2. Analysis of variance of soft skills with significant interactions

ANOVA		Sum of squares	df	F	p	η^2p
Efficacy beliefs	prev_DUAL	2,069	1	6,22	0,015 *	0.064
	pres_DUAL	0,826	1	2,48	0,119	0.026
	prev_DUAL * pres_DUAL	1,270	1	3,82	0,054	0.040
	Residuals	27,946	84			
Communication	prev_JOB	0,461	1	1,19	0,279	0.015
	pres_DUAL	0,936	1	2,41	0,124	0.029
	prev_JOB * pres_DUAL	1,922	1	4,95	0,029 *	0.058
	Residuals	31,046	80			
prev_DUAL	Independent variable assessing whether or not students have been enrolled in dual programmes in previous academic years.					
pres_DUAL	Independent variable assessing whether or not students are enrolled in dual programmes in the academic year the survey was sent.					
prev_JOB	Independent variable considering whether or not students have had non-curricular work experiences in previous academic years.					
Master's	Independent variable considering the master's degree programme, education or business, students are enrolled in.					

After analysing the dependent variables in independent ANOVA tests (Table 2), we found that previous dual experiences have a significant effect on efficacy beliefs with a medium effect size ($F = 6.22$; $p = 0.015$; $\eta^2p = 0.064$); nevertheless, the combined effect of current and previous dual experiences was not statistically significant. Moreover, post-hoc comparisons show a negative effect of the previous dual experiences on efficacy beliefs ($Mean\ diff = -0.413$; $p = 0.015$, $d = -0.747$). When also considering the master's programme as an independent variable, the analysis demonstrates a significant relationship between efficacy beliefs and both current dual programmes and master's programmes, but no significant relationship with previous dual experiences. Post-hoc comparisons show a significant differences between participants with and without current dual experiences ($Mean\ diff = 0.454$; $p = 0.025$, $d = 0.827$), with participants with current dual experiences

reporting higher efficacy beliefs. Furthermore, the analysis also indicates that Education students score significantly higher than their Business counterparts (*Mean diff* = 0.468; $p = 0.021$, $d = 0.852$).

Table 3. Analysis of variance of soft skills with significant interactions with the masters considered

ANOVA		Sum of squares	df	F	p	η^2p
Efficacy beliefs	prev_DUAL	0,529	1	1,756	0,189	0.021
	pres_DUAL	1,157	1	5,216	0,025 *	0.060
	Master's	1,670	1	5,539	0,021 *	0.064
	prev_DUAL * pres_DUAL	0,156	1	0,519	0,473	0.006
	prev_DUAL * Master's	0,276	1	0,914	0,342	0.011
	pres_DUAL * Master's	0,031	1	0,103	0,749	0.001
	prev_DUAL * pres_DUAL * Master's	5.18e-4	1	0,002	0,967	0.000
	Residuals	24,414	81			
Communication	prev_JOB	0,662	1	1,745	0,191	0.023
	pres_DUAL	3.15e-4	1	8.30e-4	0,977	0.000
	Master's	1,704	1	4,488	0,037 *	0.056
	prev_JOB * pres_DUAL	1,253	1	3,301	0,073	0.042
	prev_JOB * Master's	5.83e-4	1	0,002	0,969	0.000
	pres_DUAL * Master's	0,006	1	0,016	0,901	0.000
	prev_JOB * pres_DUAL * Master's	0,081	1	0,214	0,645	0.003
	Residuals	28,854	76			

The interaction between previous dual and working experiences also shows a significant interaction ($F = 4.511$; $p = 0.036$) on social competences; however, post-hoc comparisons show no significant interactions. Furthermore, when the master's programme is considered, the interaction between previous dual and working experiences on social competences shows no significant interaction. When analysing lifelong learning and previous dual and work experiences, as well as masters programmes, no significant interactions were observed. The analysis of neither previous dual experiences nor master's programme on flexibility revealed significant differences.

Lastly, the interaction between previous work experiences and current dual experiences also shows a significant interaction ($F = 4.95$; $p = 0.029$) effect on communication skills. Nevertheless, post-hoc comparisons show no significant difference. Furthermore, when master's programmes are also considered, data shows significant differences among master's programmes, with education students scoring higher than business students (*Mean diff* = 0.388; $p = 0.037$, $d = 0.630$), but no significant differences were found in previous work and current dual experiences.

4 Discussion

The aim of this study was to examine the influence of DHE programmes and non-curricular work experiences on five distinct soft skills. We observed a significant impact of DHE programmes on efficacy beliefs and flexibility. Additionally, there was a combined effect of DHE programmes and non-curricular work experiences on social competencies, communication, and lifelong learning. Nonetheless, our investigation revealed that the effects were intricate and multifaceted.

Our findings highlight a nuanced relationship between dual experiences, master programmes, and efficacy beliefs. The negative association between previous dual experiences and efficacy beliefs is an unexpected result. One possible explanation is that students who had prior exposure to

DHE programmes may have developed certain expectations that may not have been fully met by their current institution or programme. This mismatch could lead to a lowered confidence in their ability to manage academic and work-related tasks. This points to the potential role of institutional alignment with students' prior experiences and expectations. In contrast, students currently enrolled in DHE programmes did report significantly higher levels of efficacy beliefs, suggesting that the active engagement in these programmes may have a more immediate effect on students' self-perceptions. In this context, the articles of Cull et al. (2022) and Sambell et al. (2020) have also explored the relationship between DHE programmes and career-related efficacy beliefs (Urkia-Basterra et al., 2025). Although they do identify a positive impact of DHE programmes on career-related efficacy beliefs, the limitations of these studies include low response rates and sample sizes. Consequently, further research is needed to clarify the nature of these inconsistencies. Interestingly, non-curricular work experiences have not been found to be significant for efficacy beliefs.

The absence of statistical significance regarding social competences is worth noting, particularly since social skills are one of the most mentioned soft skills to be developed in DHE programmes (Urkia-Basterra et al., 2025). The lack of significance we found may stem from either the small sample size or the fact that the sample consists of master's students. When considering other research, in their analysis of various soft skills in DHE within a master's programme, Alves et al. (2017) identified critical and analytical thinking, problem-solving, and decision-making as particularly significant while not emphasising social skills. In a similar vein, Martín-Lara et al. (2019) found teamwork skills to be developed in their DHE programme but only after communication skills and adaptability. Nevertheless, Tuononen et al. (2024) found that students with work experience related to their study field scored higher in networking skills. Thus, further research is required to better understand the effectiveness of DHE programmes and non-curricular work experiences in developing social competences in master's students.

While we did not identify any statistically significant results concerning lifelong learning, we consider this an important finding that warrants further investigation, as previous research has shown that students who adopt a lifelong learning mindset tend to have greater confidence in their abilities and report a more fulfilling work experience (Drewery et al., 2020). Related to this, Fleming and Haigh (2017) did not find lifelong learning as being referred to in the intention of DHE programmes. The lack of significant interactions for lifelong learning and flexibility indicates that these attributes may be influenced by other factors, such as personal motivation rather than formal education or work experience alone. Alternatively, the absence of significant effects could also be due to ceiling effects, where participants already scored highly on these attributes, limiting the potential for measurable improvement. This suggests that greater emphasis should be placed on the importance of these skills, as well as on their integration into DHE programmes and curricula.

Although our findings indicate that non-curricular work experiences and current dual programmes have a significant interaction effect on communication skills, the absence of significant differences in the post-hoc test suggests that this effect is not straightforward. This finding contrasts other research that found communication skills to be the most developed skill in a master's degree DHE programme (Martín-Lara et al., 2019). Furthermore, the significant difference observed between students in Education and Business master's highlights their role in communication skill development. Moreover, the lack of significant effects from non-curricular work experiences and current dual programmes when master's programmes are considered may indicate that academic experiences have a stronger influence compared to work experiences regarding communication skills.

5 Limitations and further research

This study has a number of limitations worth acknowledging. The internal consistency, indicated by a Cronbach's alpha of 0.63, was below the commonly accepted 0.70. Given the exploratory nature of this study, this limitation is noted, and results should be interpreted cautiously. Thirdly, the relatively small sample size may have diminished statistical power and contributed to the lack of significance observed in some findings. Another limitation is the lack of information regarding the extent to which non-curricular work experiences are connected to students' fields of study. Moreover, we did not account for students' socio-economic status, which may provide crucial context for

interpreting the impact of work experiences, as the motivation behind engaging in such experiences may have implications on skill development and overall learning experiences. Finally, the cross-sectional nature of this study limits our ability to determine cause-and-effect relationships. A longitudinal approach would be better suited to distinguish between pre-existing differences among participants and actual changes resulting from their experiences.

Regarding further research, a larger sample could provide more robust conclusions, and a more reliable measurement, particularly in light of the relatively low internal consistency. Additionally, a longitudinal approach could provide further information about how DHE programmes and non-curricular work experiences contribute to long-term growth in soft skills. Understanding the connection between non-curricular work experiences and students' fields of study is also worth considering, as it could clarify whether these experiences reinforce academic learning or serve other purposes. Future studies should also consider students' socio-economic factors, assess whether they influence students' engagement in DHE programmes and non-curricular work experience, and better understand how these factors may influence soft skill development in these experiences. Finally, given that interactions between university and workplace tutors with students are essential for students' learning processes in DHE programmes (Winchester-Seeto et al., 2016), further research should consider assessing the nature of those interactions and their influence on the soft skills development of the students.

6 Conclusion

This study highlights the complex and nuanced effects of DHE programmes and non-curricular work experiences on the development of soft skills. While previous dual experiences were found to negatively affect students' efficacy beliefs, the significant positive impact of current dual experiences in master's students indicates that actively participating in structured learning and work environments may influence efficacy beliefs perceptions. Furthermore, the role of master's programmes in enhancing communication skills, along with the differences observed between Education and Business students, underscores the importance of fields and academic programmes on soft skills.

To enhance these outcomes, curriculum designers should consider embedding structured reflective practice sessions within DHE placements, helping students to critically engage with their experiences and better internalise soft skill development. Additionally, establishing stronger links between academic content and workplace tasks, offering targeted training in soft skills, and incorporating mentorship components could further support the development of students. Finally, providing opportunities for feedback from both academic and workplace supervisors may help students better understand and track their progress in these key areas. Overall, these findings imply that well-structured DHE programmes can create valuable learning opportunities that promote both professional and personal growth.

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