



Bridging pre-professional identities: the contribution of trustworthiness and academic socialisation to undergraduates' employability

Journal:	<i>Higher Education, Skills and Work-Based Learning</i>
Manuscript ID	HESWBL-02-2024-0040.R2
Manuscript Type:	Research Paper
Keywords:	Employability, Career transitions, Academic support

SCHOLARONE™
Manuscripts

Bridging pre-professional identities: the contribution of trustworthiness and academic socialisation to undergraduates' employability

Purpose. The evolving dynamics of the labour market make graduates' future employability an important issue for higher education institutions, prompting universities to complement the conventional graduate skills approach with a wider focus on graduate forms of capital that may enhance their sense of employability. This study, adopting a capital perspective, explores whether and how teachers in higher education, when acknowledged as knowledgeable trustworthy actors, may affect graduates' employability. It investigates how they can mobilise undergraduate cultural capital through socialisation, and shape their pre-professional identity, paving the way for university-to-work transition.

Design/Methodology. To test the hypothesised model, a self-report online questionnaire was administered to a sample of 616 undergraduates attending different Italian universities. Multiple mediating models were tested using the SEM framework.

Findings. Results supported the tested model and showed that trust in knowledgeable HE teachers was associated with undergraduates' perceived employability both directly and through both mediators (i.e., academic socialisation and identification with future professionalism).

Implications. This research explores a capital conceptualisation of graduate employability, identifying possible processes for implementing graduates' capital across their academic experience and providing initial evidence of their interplay and contribution to transition into the labour market.

Originality. These findings provide empirical support to possible forms of capital that higher education institutions may fulfil to enhance their undergraduate employability throughout their academic career, which serves as a liminal space allowing undergraduates to begin building a tentative professional identity.

Keywords: Graduate capital model, Employability, Trustworthiness, Academic socialisation, Pre-professional identity, University-to-work transition

Introduction

Dominant discourses on graduates' employability acknowledge undergraduates' role in an increasingly knowledge-based labour market, including knowledge and skills acquired during university education that align with the demands of employers, thereby adding competitive value to their professional contributions (Tomlinson, 2017). In line with this perspective, several governments aim to enhance university graduates' employability, conferring universities a pivotal role in providing education that enhances their readiness for the labour market (González-Romá, Gamboa, and Peirò, 2018; Reid *et al.*, 2008; Trede *et al.*, 2012). Therefore, future employability is becoming an increasingly significant focus of higher education (hereafter, HE) policy (Holmes, 2013; Smith, 2010; Tomlinson, 2012; Trevor-Roberts, 2006).

However, the growing labour market flexibility and instability contribute to the dynamic and fluid nature of professional identities, even more negotiated within specific work contexts. Hence, the conventional conceptualisation of employability as a status output of the academic career, where undergraduates are seen as repositories of knowledge valuable for the labour market, needs to be complemented with a conceptualisation of employability as an active social process. In this view, undergraduates engage in building and seeking legitimisation for their future professional identities within the labour market, thus allowing the transition from the identity of a student towards that of a graduate worker (Artess *et al.*, 2017; Clarke, 2018; Fugate, Kinicki, and Ashforth, 2004; Petruzzello, Nimi, & Mariani, 2024; Smith, 2010; Tomlinson, 2012).

On the other hand, the changing nature of the labour market asks institutions for consistent change, challenging them to complement the conventional graduate skills approach to be more attuned to this dynamism. Specifically, universities should question how they can contribute to their graduates' employability by supporting the construction of a preprofessional identity as an ongoing process that develops throughout their academic careers. Some evidence suggests that graduates' employability also depends on the extent to which they can establish sound professional identities, grounding a bridge to their future employability (Jackson, 2016; Trede *et al.*, 2012; Tomlinson and Jackson, 2021) and framing emergent work identities to claim to employers (Anderson and Tomlinson, 2021; Holmes, 2015).

In this perspective, the academic career becomes not only a learning environment to enhance undergraduates' knowledge and skills, that is their human capital, but also a transitional space where they can mitigate uncertainty about their future and shape their

1
2
3 professional identities whilst building other forms of career resources (Handley, 2018;
4 Jackson, 2024).

5
6 While the importance of the different forms of capital is widely acknowledged by academics
7 and practitioners alike, our understanding of employability capital is still limited. Existing
8 employability theory identifies several core forms of capital, including human, psychological,
9 social, cultural, identity, scholastic, and market-value capital (see Donald et al., 2024).
10 However, this conceptualisation is fragmented and needs a solid framework to integrate them.
11 Hence, research should address issues such as defining the relationships between these forms,
12 determining how to operationalise each of them effectively, and empirically validating their
13 relationships with employability outcomes and interplay with other factors (e.g., individual
14 characteristics, organisational culture, national HE practices, and labour market
15 characteristics). Despite its importance, empirical evidence in this area remains limited, with
16 few studies incorporating this perspective into employability research (Donald, Baruch, and
17 Ashleigh, 2019; Gonzales-Romà *et al.*, 2018; Tomlinson and Jackson, 2021).

18
19 The present study aims to address this gap by exploring the key social processes that may
20 help undergraduates to emerge and shape their pre-professional identities, thus enhancing
21 their employability. The employability capital perspective posits that strengthening graduates'
22 human capital by equipping them with formal academic learning and skills, should be
23 extended with practices that enhance other personal resources. These resources are helpful for
24 navigating unstable career trajectories, translating acquired knowledge into workplace
25 performance, and establishing connections between employment opportunities, future goals,
26 and personal resources and attitudes (Donald *et al.*, 2019; Fugate et al., 2004; Lo Presti and
27 Pluviano, 2016; Tomlinson et al., 2022; Trevor-Roberts 2006; Wheelahan, 2022).

28
29 Drawing on this conceptual model, we propose that HE teachers¹, when perceived as
30 trustworthy knowledgeable actors, may enhance undergraduate social capital by helping them
31 build relational resources. They also contribute to undergraduates' employability through a
32 twofold process. Firstly, they help make sense of professional standards and how practices
33 unfold and relate to future professional settings, thereby enhancing the undergraduates'
34 socialisation process. Secondly, they serve as models, affecting how emerging identities are

35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
¹ In academic settings, the role of a teacher may be either clearly defined and distinct from that of researchers or professors (who typically hold more senior positions); or fulfilled by playing these multiple roles simultaneously. This is the case of countries like Italy, the national context in which this research was carried out. In this study, we use the term "teacher" inclusively to encompass any academic who undertakes educational responsibilities with HE students (i.e., who engages in lecturing, supervising, instructing, or other educational activities), regardless of their specific title or position within the academic hierarchy and other kind of activities they may play.

1
2
3 negotiated and constructed. These processes, in turn, contribute to undergraduates'
4 employability, on the whole strengthening their social, cultural and identity forms of capital
5 because these resources are crucial in shaping future graduates' relationships with their
6 professional contexts and practices.
7
8
9

10 In doing so, this study contributes to the literature in three ways. First, it addresses
11 Donald and colleagues' (2024) call to add to the empirical base of the capital conceptual
12 model, by providing empirical evidence to support it, identifying and operationalising some
13 core forms of undergraduates' capital and their role in fostering undergraduate perceived
14 employability. This study further addresses this call, exploring how these different forms of
15 capital interrelate, outlining a comprehensive path that contributes to undergraduates'
16 employability. Third, it also extends the traditional focus on the graduates' university-to-work
17 final transition, to the whole undergraduate academic career as a liminal period. Indeed, the
18 transition from higher education to work is an active process during which undergraduates
19 can empower their knowledge but also feel a safe context that allows and encourages the
20 emergence of their pre-professional identity through negotiation and legitimation processes
21 involving significant actors (Holmes, 2015; Tomlinson, 2023). This adds to the conversation
22 about potential higher education policies, outlining implications for practice, including the
23 important role that HE teachers play in enhancing students' capitals development.
24
25
26
27
28
29
30
31
32
33

34 The paper is structured as follows. The first section introduces the theoretical concepts
35 that inform the study, reviewing the literature on undergraduates' employability and
36 pinpointing some processes that may enable it. We then propose a process model to account
37 for perceived employability, via pre-professional identity enhancement. Finally, we outline
38 the research methodology and present our main findings. In the Discussion section, we relate
39 our model to important current themes in pre-professional identity literature, suggest possible
40 areas for further research, and discuss the implications of the findings for employability
41 policies.
42
43
44
45
46
47
48
49

50 **Theoretical framework**

51 *Undergraduates' employability*

52
53 Adopting a social construction perspective (Tomlinson, 2012; Holmes, 2015),
54 undergraduate employability can be conceptualised as an ongoing identity work that
55 underpins a future-oriented perspective and expresses the individuals' capability to
56 proactively nurture and exploit personal resources to address university-to-work transitions.
57 In doing so, they effectively address the challenges of the labour market and pursue career
58
59
60

opportunities aligned with their desired professional identity (Fugate *et al.*, 2004). More specifically, perceived employability relates to the likelihood of successfully securing a desired job, going beyond the appropriateness to a graduate's qualification level criteria (Rothwell, Jewell, and Hardie, 2009), and encompassing personal expectations and perception of being worthy of such employment (Handley, 2018; Holmes, 2013).

The growing turbulence and unpredictability that inform the labour market pose challenges to the process of employability. This heightened uncertainty contributes to a sense of insecurity among undergraduates, lowering their confidence in envisioning their job prospects and shaping their professional trajectories (Smith, 2010).

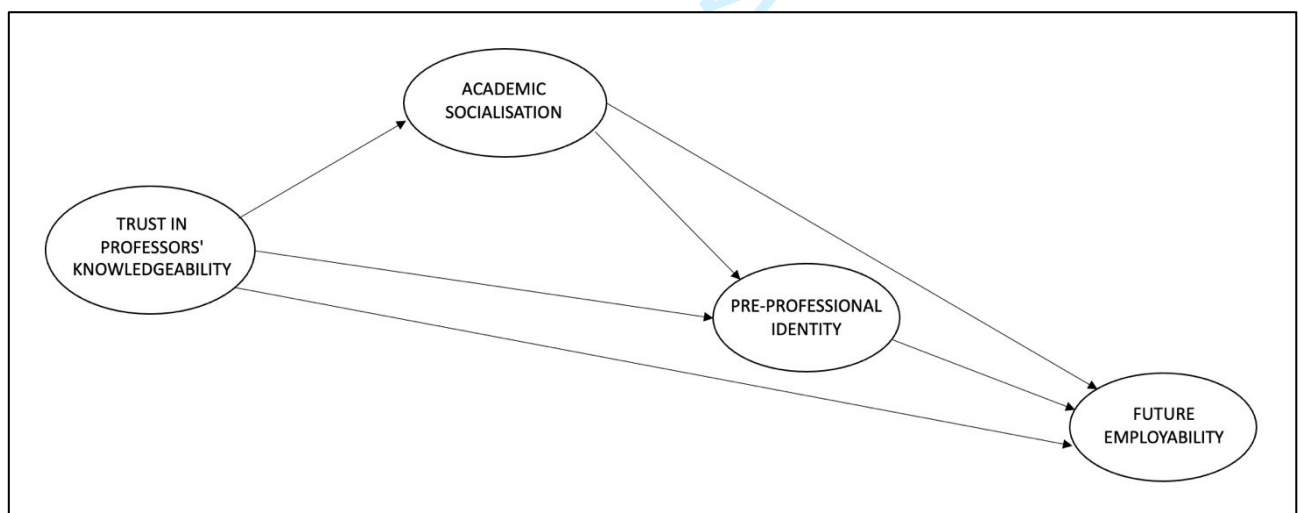
Given these contextual conditions, we contend that universities can enhance employability not only by strengthening their undergraduates' *human capital* (i.e., providing them with the most desirable level of formal learning and skills) but also by fostering their pre-professional identity development through other forms of capital. The resource-based approach to employability includes various forms of capital helpful to support the undergraduate university-to-work transition, as outlined in Tomlinson's (2017) Graduate Capital Model, Clarke's (2018) model, and Donald *et al.*'s (2019) model; recently integrated into Donald *et al.*'s (2024) Employability Capital Grow Model. These models propose an articulated and fragmented set of capital forms, which can nonetheless be encompassed into the human, social, cultural, identity and psychological forms of capital, as key resources affecting undergraduates' potential employability (see Tomlinson, 2017).

In this study, adopting a relational focus, we specifically examined the contribution of social capital, identity capital and cultural capital to undergraduate employability, excluding psychological capital which pertains to intrapsychic aspects. *Social* capital helps undergraduates mobilise their human capital through social ties with significant others, promoting networks, and facilitating access to a wealth of information and opportunities (Clarke, 2018; Donald *et al.*, 2019). *Identity* capital pertains to how undergraduates perceive themselves as future professionals, the opportunities they believe are feasible, how they form goals and strategic choices, and how they anticipate and proactively pursue their future careers (Jackson, 2016; Tomlinson and Jackson, 2021; Trede *et al.*, 2012). *Cultural* capital involves the development of cultural knowledge and accepted behaviours that align with potential professional settings and workplaces. This encompasses the ability to understand and differentiate various organisational contexts, to act in line with field-specific rules, to manage interpersonal relationships with sound and appropriate behaviours, and to be aware of cultural values and practices (Donald *et al.*, 2019; Tomlinson, 2017). Overall, this form of

capital empowers undergraduates to feel and be recognised as integral members of a professional community and to negotiate their own membership within that community (Tomlinson, 2021). Similarly, Hinchliffe and Jolly (2011) suggest that understanding the enactment of professional practices and constructing a legitimate identity are core processes for undergraduate employability, more than skill possession.

In the following, we propose a model (see Figure 1) hypothesising that, when university-level teachers are recognised as trustworthy knowledgeable actors, they play a central role in supporting undergraduates' employability through a dual process aimed at reducing uncertainty and anticipating job opportunities. Specifically, they may enhance an overall anticipatory socialisation process, that is a form of cultural capital involving learnings beneficial for understanding key professional competencies, gaining clarity on potential future roles, and linking academic knowledge to employer expectations (Korte and Lin, 2013). Additionally, HE teachers may exert a modelling function, serving as proxies for the professionals that undergraduates aspire to become (Sluss *et al.*, 2012). For instance, they may offer a landscape of practices, provide work-integrated learning experiences, and embody professional values, thereby contributing to the shaping of undergraduate identity capital and, in turn, fostering stronger perceived employability. They also play a role in shaping students' professional knowledge, outlooks and dispositions that may be empowering for them.

Figure 1. The theoretical model.



HE teachers' trustworthiness and undergraduate employability

Trustworthiness represents a key relational resource that contributes to enhancing both bonding ties, strengthening cohesion among members of a group; and bridging ties,

1
2
3 facilitating connections to other groups or contexts. Specifically, in the context of
4 employability, interpersonal trust helps foster reciprocal relations based on positive implicit
5 expectations about the other party's knowledge and reputation, for instance between employer
6 and potential new hired; facilitates the expansion of personal networks, assuming that others
7 will act in a professional way; and enhances own perception of being a person worthy of
8 being employed (Gelderblom, 2018; Holmes, 2013). Institutional trust further frames
9 overarching expectations that extend beyond specific interactions or individuals, enabling the
10 expression of professionalism in relationships involving both formal and informal
11 intermediaries (Pearce, 2000).

12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
This study focuses on trust in HE teachers' knowledgeability, defined as the set of
competencies, skills, and knowledge essential for exerting influence within a specific
professional domain (Mayer and Davis, 1999). We argue that, when undergraduates perceive
their teachers as trustworthy in ability and valuable sources of knowledge, this may contribute
to their social capital for employability in several ways (Niedlich *et al.*, 2021). Firstly,
teachers are enablers of institutional trust, representing the university as a reputable HE
institution capable of transferring to graduates the requisite attributes and legitimacy to foster
their employability. Indeed, when they are perceived as trusted and valued ties, they may
represent epistemic sources (Kruglanski *et al.*, 2009) and impart important insights into
professional domains. In low predictable labour market conditions, this intermediary role
becomes particularly relevant because generalised expectations need to be complemented
with a more specific and contextualised understanding of the other (e.g., the single university
reputation; Rothwell *et al.*, 2009).

In this sense, HE teachers act as 'gatekeepers' in the relationship between individual
graduates and the field of employment opportunities, including potential employers,
professional associations, and recruitment companies (Holmes, 2013; Smith, 2010). The
trustworthiness of teachers serves as a resource that can be transferred to their undergraduates,
rendering them worthy of trust in their abilities as well. This trust spillover process enhances
undergraduates' legitimacy, as they are endorsed by a trusted agency (Bachmann, Gillespie,
and Priem, 2015; Farnese, Benevene, and Barbieri, 2022). It extends their social capital,
acting both as a bonding resource within a network the undergraduates identify with and
belong to (Korte and Lin, 2013), and as a bridging resource, facilitating their access to future
career-related relationships (González-Romá *et al.*, 2018). Overall, teachers' trustworthiness
represents a crucial initial source for social capital development. When perceived as trusted
and valued relational ties, teachers foster undergraduates' feeling of membership toward a

1
2
3 professional community, both within the academic context and beyond. This contributes to
4 imparting important insights into professional domains and establishing a bridging link
5 between undergraduates' academic careers and their future professions.
6
7

8 While existing literature highlights the significant role of trust in employability, there is a
9 shortage of empirical evidence on this relationship. Drawing on the above literature, this
10 study aims to examine the trustworthiness–employability relationship, hypothesising that the
11 higher the perception of teachers' trustworthiness in knowledge and skills, the more
12 undergraduates will feel worthy of being employed:
13
14

15
16
17 *H1: Trust in HE teachers' knowledgeability positively relates to perceived employability.*
18
19

20 ***The learning path through academic socialisation***

21
22 An important process that we propose contributes to undergraduates' perceived
23 employability is enhancing their cultural capital by increasing their degree of learning and
24 mastery across different academic socialisation domains. Studies within the academic context
25 showed that the socialisation process facilitates student's adjustment to their new roles within
26 the university organisation, allows integration into explicit and implicit social norms, and
27 fosters workplace relationships (Day and Livingstone, 2003; Farnese, Spagnoli, and Livi,
28 2022; Lo Presti *et al.*, 2023; Padgett *et al.*, 2010; Weidman, DeAngelo, and Bethea, 2014).
29 Successful academic socialisation also provides a bridge toward socialisation in professional
30 practices and workplaces (Shields, 2002), enabling undergraduates to acquire essential values,
31 attitudes, knowledge and skills, and envision future career paths. Hence, graduate
32 socialisation can be conceptualised as a “double process” where new students simultaneously
33 acquire the role of graduates and receive anticipatory socialisation to understand how
34 professional practices unfold in their future careers (Anderson and Tomlinson, 2021; Golde,
35 1998; Hinchliffe and Jolly, 2011). It is therefore a significant bedrock to their formation of
36 professional identity.
37
38

39
40 The development of this form of cultural capital, achieved through ongoing information-
41 seeking and sense-giving processes, allows undergraduates to build frameworks helpful to
42 learning how to align with current and future professional settings, thus paving the way for a
43 heightened sense of employability. In line with the uncertainty reduction perspective,
44 suggesting that relevant others are crucial sources for achieving socialisation goals (Haueter *et*
45 *al.*, 2003; Louis, 1980; Taormina, 2004), we posit that in educational contexts HE teachers
46 potentially embody one of the most relevant information sources for students (Myers and
47 Knox, 2001). They function as expert guides by virtue of their supervisory role and expertise,
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 with their behaviours reflecting abilities, competencies, reliability, and ways of performing
4 different professional roles (Jungermann *et al.*, 1995; Romero, 2015; Tschannen-Moran,
5 2004). Therefore, when teachers are acknowledged as experienced and knowledgeable actors,
6 they become prominent sources of information that may provide an interpretative schema for
7 the understanding of the academic context and their student's role (e.g., performing key
8 professional features, showcasing different potential professional roles, reflecting on labour
9 market opportunities). Meanwhile, they serve an anticipatory socialisation role that helps
10 undergraduates make sense of their emergent professional identity, bridging it to future
11 potential professional contexts (Holmes, 2015; Jackson, 2016; Louis, 1980). Overall, we
12 propose the following hypothesis:

20 *H2: Academic socialisation mediates the relationship between trust in HE teachers'*
21 *knowledgeability and perceived employability.*

24 ***The modelling path through pre-professional identity***

25
26 Identity capital is another significant resource for graduate employability, supporting
27 their graduation-to-work transition and enhancing their career readiness (Tomlinson *et al.*,
28 2021). The progressive development of a future working self acts as a cognitive framework
29 that helps undergraduates envision their future careers, gauge their fit with different labour
30 market scenarios, and support their motivation to actively pursue opportunities aligned with
31 their aspirations (Fugate *et al.*, 2004). Therefore, a stronger pre-professional identity improves
32 undergraduates' sense of potentially being worthy employable workers (Handley, 2018;
33 Jackson, 2016; Trede *et al.*, 2012) and helps them construct a legitimate professional identity
34 (Hinchliffe and Jolly, 2011).

35
36 Scholars suggest that the development of identity work occurs through ongoing
37 comparison with significant others who have identity features representing different degrees
38 of prototypicality. This comparison enacts a self-evaluative process that can influence
39 attitudes and behaviours (Hogg, 2000), confirm or challenge the claimed identity (Holmes,
40 2015), and motivate individuals to seek membership within a professional group and attain
41 acceptance as full members (Hogg, 2000). Therefore, we posit that an additional factor
42 influencing perceived undergraduate employability is the shaping function trustworthy may
43 play on their emerging professional identity. In other words, trust in knowledgeable teachers
44 may nurture undergraduate pre-professional identity by enhancing their sense of "being a
45 professional" (Paterson *et al.*, 2002; Sluss *et al.*, 2012).

1
2
3 For instance, epistemic theory (Kruglanski *et al.*, 2009; Raviv *et al.*, 2003) provides
4 insights into how the perceived authority of a source influences individuals'
5 acknowledgement and engagement in seeking information from that source. Thus, when
6 teachers are perceived as authorities possessing profession-related knowledge and
7 competence, they are likely to become representative of prototypical features of the profession
8 they teach. This leads undergraduates to consider them as reliable sources within the
9 professional domain, considering them as epistemic authorities to trust and rely upon.
10 Teachers, in this context, serve as guides, providing students with sense-making tools for
11 learning how to think and act in a professional way (Louis, 1980).

12
13 In a similar vein, social learning theory (Bandura, 2016) suggests that significant social
14 actors can serve as models for identification. The more attractive these models are perceived
15 (e.g., prestigious, expert) the greater the observers' attention to their behaviour and the
16 motivation to become similar to them, mirroring those behaviours in an effort to acquire the
17 models' skills and related rewards. In essence, these theories suggest that trustworthy teachers
18 may function as role models, leading undergraduates to inhabit similar identities, thereby
19 contributing towards shaping their future professional identity and, subsequently, perceived
20 employability. Building on this framework, we propose the following hypothesis:

21
22
23
24
25
26
27
28
29
30
31
32 *H3: Pre-professional identity mediates the relationship between trust in teachers'*
33 *knowledgeability and perceived employability.*
34
35
36

37 We also posit that socialisation plays a role in shaping undergraduate identity capital,
38 since its primary aim is to transform newcomers into full members of their organisations
39 (Ashforth, 2001). This identity transition involves internalising the norms, values and
40 behaviours associated with one's future professional role (Fugate *et al.*, 2004).

41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
Socialisation can enhance pre-professional identity formation through a twofold process.
Firstly, by progressively supporting the acquisition of specific knowledge and skills essential
for their expected professionalism, connecting them to the intended profession and embedding
them into their self-concept, socialisation leads undergraduates towards developing a sense of
"being professionals" (Ashforth, 2001). Secondly, by understanding how to interact with
significant others, gaining awareness of and sharing cultural values and practices, and feeling
accepted by a professional community, socialisation affects the undergraduate process of
identification and the emergence of group identity (Lo Presti *et al.*, 2023; Sluss *et al.*, 2012).
Hence, socialisation may expedite the university-to-work transition, contributing to

1
2
3 sharpening undergraduates' pre-professional identity and, in turn, fostering their perception of
4 being employable graduates.

5
6 In summary, we hypothesise that trustworthiness in knowledgeable teachers contributes
7 to greater self-perceived employability also through a third pathway, involving both the
8 socialisation and pre-professional identity work processes:

9
10
11 H4: *Academic socialisation and pre-professional identity mediate the relationship*
12 *between trust in teachers' knowledgeability and perceived employability.*
13
14

15 16 17 **Method**

18 19 ***Context of the research***

20 This study focuses on Italian undergraduates, facing a challenging labour market
21 compared to other European Union countries. Indeed, Italy exhibits a significant gap in the
22 percentage of graduates compared to the European average, with only 26.8% of individuals
23 holding a degree, as opposed to the EU average of 41.6% (Istat report 2022). Additionally, the
24 return to employment for Italian graduates is lower on average, with a youth employment rate
25 of 82.1%, compared to the European rate of 86.4% (Istat report 2022). Specifically, the
26 employment rate among graduates one year after graduation is about 77.1% for master's
27 degrees (Alma Laurea, 2023), even if the trend showed a progressive improvement after the
28 severe economic crisis between 2008 and 2012, which strongly impacted the Italian labour
29 market, especially affecting young people (Lo Presti et al., 2023). Hence, the expansion of
30 higher education in Italy appears to mismatch a consistent demand in the labour market,
31 influencing the perception among new graduates regarding their prospects of successfully
32 finding a qualified job.
33

34 This scenario makes the role of HE institutions even more relevant not only in ensuring
35 their students graduate with effective knowledge and skills but also in shaping their pre-
36 professional identities and equipping them with a wider set of capital to support their
37 university-to-work transition through a more nuanced and dynamic pattern.
38
39

40 41 42 43 ***Participants and procedure***

44 A total of 616 Italian undergraduates aged 19 to 30 (M= 23.44; SD= 2.36) were involved
45 in the study. The sample was composed of 210 (34.1%) males and 406 (65.9%) females.
46 Participants attended different courses in several Italian universities in the north, centre and
47 south of Italy. Participants attended a three-year bachelor's degree 261 (42.4%), a master's
48 degree 278 (45.1%), or a single-cycle degree 62 (10.1%). They attended different degree
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 courses (Psychology 37.2%; Engineering 10.1%; Economy 9.6%; Medicine and Biology
4 8.1%; Law 7.5%; Social Sciences 7.0%; Arts and Literature 5.4%; Others 12.7%) while 15
5 (2,4%) did not respond. There were 402 (65.3%) unemployed students, 180 (29.2%) of them
6 part-time workers, 31 (5%) full-time workers and 3 (0.5%) missing.
7
8
9

10 Data were collected through online questionnaires using a non-discriminative snowball
11 sampling approach: psychology students attending a practical laboratory were invited to
12 forward the overall survey to students from their and other courses in their network.
13 Participants were informed that acceptance was voluntary and that the research was not
14 commissioned by the University they were enrolled. In addition, the research team member
15 clarified that students' responses would be kept confidential and anonymous and that data
16 would always be reported in an aggregate form. The first author's Ethics Committee approved
17 the study.
18
19
20
21
22
23
24
25

26 **Measures**

27 **Trust in the teachers' knowledgeability** was measured using 5 items from
28 trustworthiness Mayer and Davis's (1999) scale, with the university teachers being the items'
29 referent. This measure assesses the undergraduates' perception of their teachers' knowledge
30 and ability (i.e., "*My course teachers are very capable of performing their job*"). Responses
31 were given on a five-point scale varying from 1 "strongly disagree" to 5 "strongly agree".
32
33
34
35

36 **Academic socialisation** was assessed with the 18-item Undergraduate Socialization
37 Questionnaire (Farnese, Spagnoli, and Livi, 2022), an adaptation of the Organizational
38 Socialization Questionnaire (Haueter *et al.*, 2003) to the academic context. It includes three
39 facets, related to different socialisation learning domains. The first domain –task– relates to
40 acquiring the knowledge and skills necessary to perform the student's job, such as
41 understanding their main responsibilities and priorities and identifying relevant information
42 sources (7 items i.e. "*I understand how to perform the tasks that are required in order to*
43 *complete my work*"); the second domain –group– relates to learning about the explicit and
44 implicit norms within the class, values in use and appropriate behaviour (5 items i.e. "*I know*
45 *how to manage relationships within my group of colleagues*"); and the third domain –
46 organisation– relates to acquiring knowledge regarding procedures, specific language, politics
47 and shared values of the Faculty or University (6 items i.e. "*I understand the organisational*
48 *procedures of this Faculty - e.g., who does what, forms, schedules*"). Participants were asked
49 to respond on a five-point scale ranging from 1 "strongly disagree" to 5 "strongly agree".
50
51
52
53
54
55
56
57
58
59
60

1
2
3 ***Pre-professional identity*** was measured with a single item developed by Bergami and
4 Bagozzi (2000) to capture identity self-categorization, previously adapted to undergraduates.
5 “Please think about the typical professional formed by your degree course (e.g., Psychology >
6 psychologist; Law > lawyer). How much do you feel like this professional?”. The participants
7 were asked to indicate the degree of overlap on a five-point scale ranging from 1 “not at all
8 similar” to 5 “quite similar”.

9
10
11
12
13 ***Perceived employability*** of undergraduates was measured using the future prospects 5-
14 item scale from the Organizational Socialization Inventory (Taormina, 2004) (i.e., “*This*
15 *Faculty offers in-depth training to develop professional knowledge and job skills*”).
16 Responses were given on a five-point scale varying from 1 “strongly disagree” to 5 “strongly
17 agree”.

18 For each measure, a rigorous translation process was conducted.

19
20
21
22
23 ***Control variables.*** Control variables included gender, age, degree courses, hours of
24 studying, and employment status. Specifically, given the difficult comparison of academic
25 tenure among different study paths, we considered *Age* as a proxy for academic tenure.
26 Research on graduate samples showed that awareness of one’s own employability changes
27 over time. While some studies confirmed a positive relationship between self-perceived
28 employability and the university career stage, assuming growing awareness and capabilities
29 (for instance a study on an Italian sample found that master’s students exhibited greater
30 awareness of their potential for employment and achieving their own professional goals,
31 compared to bachelor’s students; Caricati *et al.*, 2016), some others highlighted a negative
32 relationship, due to the growing awareness of the challenges of employability going on in the
33 academic career (Jackson and Wilton, 2017; Qenani *et al.*, 2014).

34
35
36
37
38
39
40
41
42 *Gender* was considered a potential control factor since different studies highlighted a
43 complexity in gender differences buffering effect on employability (Caricati *et al.*, 2016;
44 Donald *et al.*, 2019), for instance related to job opportunities and the likelihood of becoming
45 employed shortly after graduating (Connor, Tyers, Modood, and Hillage, 2004).

46
47
48
49
50
51 *Hours of studying* were tapped by a behavioural self-report single item (i.e., “*How many*
52 *hours do you study on average in a day?*”) rated on a 5-point frequency scale from 1 “Not at
53 all” to 5 “More than 6 hours a day”. This indicator was considered a proxy for students’
54 engagement.

55
56
57
58
59
60 Given the prevalence of psychology students in our sample, we also took into account
this factor, differentiating psychology students from all other students. Hence, *Degree courses*
were recorded in two groups: psychologists (37.3%) and other courses (60.2%).

Employment status was considered a potential control factor since it was found that workers display higher levels of employability, cope better with job insecurity and in general perceive greater job opportunities (Fugate *et al.*, 2004).

Data analyses

Means, standard deviations, reliabilities, and intercorrelations among study variables were implemented using the statistical software SPSS 25. The hypotheses were tested with regression-based structural equation modelling in Mplus Version 7.0 (Muthén and Muthén, 2012) using Robust Maximum Likelihood (MLR) estimation method. In order to obtain 95% confidence intervals for the indirect effects, the bootstrap procedure (5000 in our case) was used. All observed scores were loaded on the related latent construct.

Model fit was assessed according to the following criteria: χ^2 , CFI (Comparative Fit Index), TLI (Tucker-Lewis Index), RMSEA (Root Mean Square Error of Approximation) and SRMR (Standardized Root Mean Square Residual). Since the χ^2 test is sensitive to large sample sizes and easily produces a statistically significant result (Kline, 2016), we only considered the indices of CFI, TLI, RMSEA and SRMR to evaluate the goodness of our model, where TLI and CFI values greater than .90 (Bentler, 1990) indicate models with good data fit, while RMSEA and SRMR values should be less than .08 (Hu and Bentler, 1999).

Results

Table 1 shows the zero-order correlations among study variables and their reliability. Strong positive correlations were found among all four study variables. The reliability coefficients expressed by Cronbach α ranged from 0.74 to 0.90, indicating satisfactory internal reliability for all variables.

In order to exclude nonsignificant control variables that unnecessarily reduce statistical power (Becker, 2005), we also computed correlations with the control variables. Based on zero-order correlation results among them (see Table 1), three control variables (*age*, *hours of studying* and *degree courses*) were included in our hypothesised model.

Table 1. Descriptions, inter-correlations, and reliabilities of the study variables.

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1. Gender	–	–									

1											
2											
3											
4	2. Age	23.44	2.36	-.13**							
5											
6	3. Degree courses	–	–	-.26**	-.06						
7											
8	4. Employment status	–	–	-.12**	.21**	.02					
9											
10	5. Hours of studying	3.19	.96	.16**	.10*	-.01	-.04				
11											
12	6. Trust in teachers' knowledgeability	3.81	.63	.13**	.06	-.11**	-.08	.17**	(.74)		
13											
14	7. Academic socialization	3.69	.51	-.01	.12**	-.04	.00	.14**	.32**	(.88)	
15											
16	8. Pre-professional identity	3.40	.98	-.04	-.01	.06	-.05	.18**	.25**	.30**	–
17											
18	9. Perceived employability	3.06	.86	-.01	-.09*	.07	-.08	.10*	.48**	.40**	.39**
19											(.90)
20											
21											
22											

Note: Gender was coded as 1= men and 2= women; Employment status was coded as 1= unemployed, 2= part-time work and 3 = full-time work; Degree courses was coded as 1= psychologist; 2= other courses. $p < 0.001$; * $p < 0.05$; Cronbach's alphas are in the diagonal in bold.

Estimates for the hypothesised relationships

Results of the SEM analysis indicated that the hypothesised multi-mediated model with latent variables (Model 1) fitted the data quite well, except for TLI= .89. Following modification indices, we correlated the error terms of items 2 and 3 (both from the future employability scale) and items 7 and 9 (both from the trustworthiness in the teachers' ability scale). These covariances of item errors indicate similar conceptual content, since they present a unique variance origin (Brown, 2015). The new fit (Model 2) improved, showing adequate fit indices (Table 2).

Table 2. Fit indices of the multi-mediated model with latent variables.

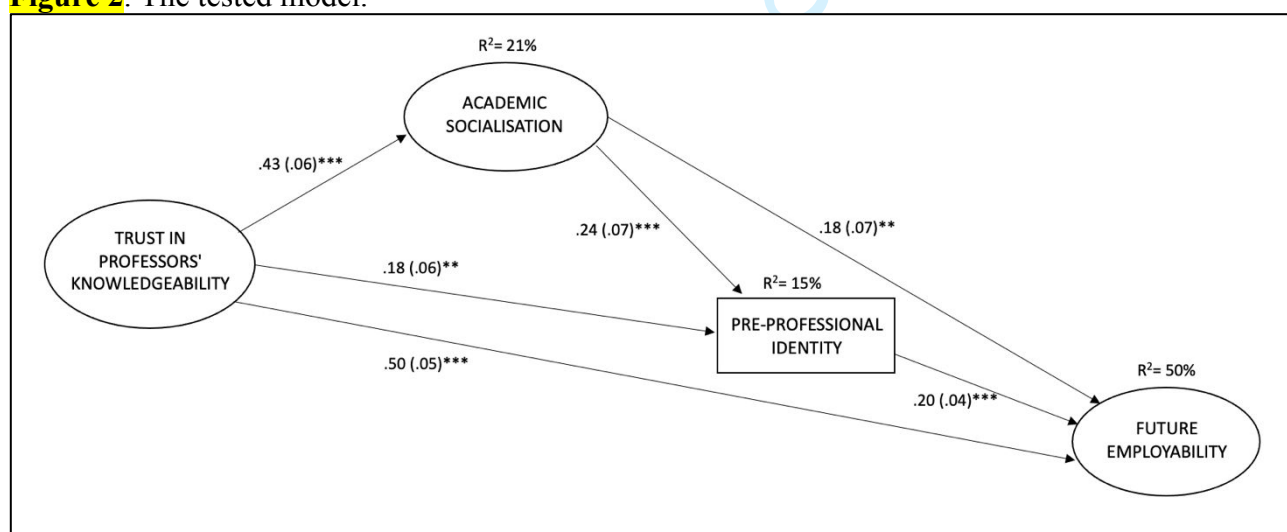
Models	X ² (df)	CFI	TLI	RMSEA	SRMR
<i>Model 1:</i> Multi-mediated model without correlations	432.044 (105)	.909	.885	.072	.056
<i>Model 2:</i> Multi-mediated model with error terms correlations	297.771 (103)	.946	.930	.056	.048

Hypothesis 1 predicted that trustworthiness in the teachers' ability would be positively related to future employability. As shown in [Figure 2](#), trustworthiness was positively and strongly related to employability ($B = .497$, $p = .000$), providing support for it. Hypothesis 2

proposed that academic socialisation would mediate the relationship between trustworthiness and perceived employability. Our results confirmed this mediation path (estimate = .077, 95% bootstrap CI: .030 to .123) that explained 21% of the variance of the direct effect. Hypothesis 3 stated that pre-professional identity would mediate the relationship between trustworthiness and perceived employability. Results confirmed the existence of this mediation path (estimate = .036, 95% bootstrap CI: .013 to .059), which explained 15% of the variance of the direct effect. Finally, Hypothesis 4 proposed the existence of a multi-mediating effect through both academic socialisation and pre-professional identity in the trustworthiness-employability relationship. Our results also provided support for this hypothesis (estimate = .021, 95% bootstrap CI: .008 to .034).

Moreover, future employability was negatively related to age ($B = -.134$; $p = .000$) and positively to degree courses ($B = .093$; $p = .007$), meaning that students who are further in their academic careers felt less employable compared to those in the early stages; and that Psychology students felt less employable than those attending other courses. Identification as well was positively related to degree courses ($B = .078$, $p = .042$), meaning that Psychology students felt less employable than others, and to hours of studying ($B = .113$, $p = .004$), the more identified undergraduates being also more engaged in studying. Finally, academic socialisation was positively related to age ($B = .101$, $p = .019$) and to hours of studying ($B = .103$, $p = .030$), that is the more socialised undergraduates are also more engaged and further in their academic careers.

Figure 2. The tested model.



Note: Age, hours of studying and degree courses were the main control variables. Standardised parameter estimates for the relationships are included in the research multi-mediating model. Standard errors are within parentheses. * $p < .05$; ** $p < .01$; *** $p < .001$.

Discussion

The present study examined how specific forms of capital impact the perceived employability of undergraduates. The findings revealed that trust in knowledgeable teachers acted as a relational capital capable of strengthening the undergraduates' sense of employability both directly and indirectly, mobilising their understanding of the academic context and role (part of their cultural capital) and pre-professional identity development (part of their identity capital).

Theoretical and practical implications

These findings offer preliminary empirical support for the capital model in several ways. Firstly, they support the model conceptualisation by showing how several forms of capital shape undergraduate employability, complementing the well-established human capital contribution (Donald *et al.*, 2019; Donald *et al.*, 2024; Clarke, 2018; PetruzzIELLO *et al.*, 2024; Tomlinson, 2017). Secondly, the study proposes a potential operationalisation of capital, showing how each of the different forms of capital (i.e., social, cultural and identity capitals) can be actualised in specific constructs that foster employability (in this study, respectively, trustworthiness, socialisation and pre-professional identity). Thirdly, the tested model shows how each form of capital relates to employability and how the interplay among them contributes to a comprehensive path that enhances undergraduates' employability. Indeed, the tested model shows that each form of capital represents a resource affecting the degree undergraduates' sense of being employable both directly and indirectly, through a dual process fostering their capability to understand and foresee future work contexts, and a progressively clearer definition of the desired future professional identity.

This study also offers insights by focusing on the whole undergraduate academic career and positing it as a crucial liminal space where undergraduates initiate their employability efforts and continue to negotiate their identities and build resources (Jackson, 2016; Holmes, 2015; Tomlinson, 2023). Throughout this period, students actively shape tentative professional identities, also thanks to comparisons and negotiations with significant others, in this study trusted teachers in HE (Niedlich *et al.*, 2021). These processes usually unfold with low awareness. However, HE can also actively and continuously empower these processes through dedicated policies and interventions. For instance, universities can implement interventions for undergraduates aimed at intertwining their human capital, developed through academic courses, with a deeper understanding of the future professional context. Among

1
2
3 them, are *mentorship programs*, where mentors (e.g., alumni, professionals) can offer
4 valuable guidance, advice, and insights to help students navigate their career paths; *internship*
5 *experiences* in real-world settings, that enhance students' skills while enabling them to build
6 relationships with professionals in their field; and *diversity and inclusion initiatives* to create a
7 welcoming and inclusive environment for undergraduates, emphasising the value of diversity
8 in the workplace and fostering a climate of psychological safety that allow exploring their
9 own identities (e.g., unique knowledge and attitudes, professional expectations, cultural
10 backgrounds). Overall, these interventions can provide students with information, raise
11 awareness of the context, and promote reflexivity on the interplay between theories and
12 professional practices in use, thus paving the way to develop HE students' social, cultural and
13 identity capital.

14
15 Concurrently, universities can implement interventions targeting HE-level educators
16 aimed to enhance their awareness of the modelling role they play in shaping undergraduates'
17 future professional identities and establishing connections with the labour market. For
18 instance, HE may offer training and professional development programmes for teachers and
19 other educators, to support their role in promoting and mediating students' own professional
20 identities, knowledge, and practices. Teachers can so empower this function by encouraging
21 work-integrated learning experiences during their classes, such as inviting experts or
22 professionals, conducting workshops, supervising internship activities, sharing professional
23 experiences, and analysing case studies. These and other interventions can help
24 undergraduates anticipate the feeling of being part of a professional community and develop
25 their employability.

26
27 Overall, higher education institutions may fulfil a foremost function for anticipatory
28 socialisation by providing models of core professional features and ways to perform
29 professional practices that help undergraduates to reflect on "who they are" and "who they
30 want to be", start defining their desired professional self, and adjust behaviours, feelings and
31 thoughts in line with the foreshadowed future professionalism (Fugate *et al.*, 2004). In other
32 words, universities represent a "transition bridge" for employability, allowing their
33 undergraduates to assess different opportunities, various roles, and multiple identities through
34 social interaction with knowledgeable actors (Ashforth, 2001; Sluss *et al.*, 2012; Smith,
35 2010). The role of significant others, such as HE teachers and also other professional
36 practitioners, may be crucial; especially for those who do not have family-derived capitals.

37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 ***Limitations and research future directions***

1
2
3 The current study has several limitations that warrant consideration. Firstly, the cross-
4 sectional design of the research hinders a comprehensive examination of the mediation paths,
5 thus future longitudinal studies should be conducted to confirm our results. Furthermore,
6 convenience sampling led to a prevalence of psychology students. Although this aspect was
7 controlled for in the model, the results showed some specific effects. Therefore, future studies
8 could provide a granular analysis of possible differences depending on the course of study
9 (e.g., stem degrees vs non-stem). Additionally, the exclusive reliance on self-reported data
10 implies the possibility of methodological bias (Podsakoff *et al.*, 2003). Future research should
11 strive to include objective indicators of success in the university-to-labour market transition,
12 such as effective employment or other outcomes (Donald *et al.*, 2024).

20
21 Another limitation is the broad interpretation of the role of teachers, which may vary
22 across different national and academic contexts. Future studies could analyse in more detail
23 how the several actors composing the academic staff contribute to the employment process.
24 They could also focus on cross-cultural comparison, considering the specificities of national
25 backgrounds and differences in the labour market occupational prospects for graduates, thus
26 contributing to generalising results to other EU or non-European countries. Moreover, while
27 we treated teachers as a collective entity, it's worth exploring how the perceived
28 trustworthiness of individual teachers as specific epistemic sources (Kruglanski *et al.*, 2009)
29 may affect HE students' preprofessional identity and, in turn, their employability.
30 Furthermore, in case of low trust or even distrust, the enabling role of HE teachers may be
31 ineffective in supporting model practices and behaviours, thus further studies could explore
32 whether and how they engender counter-productive patterns.

41 In general, forthcoming studies grounded in the capital model could contribute to its
42 enhancement by additional constructs for operationalising different forms of capital. This
43 would result in a nuanced conceptualisation capable of capturing specific and multifaceted
44 features associated with each form of capital. To gain a deeper understanding of the
45 relationships between forms of capital and employment, future studies should also consider
46 the interplay with other forms of capital such as the psychological capital, related to
47 individuals' attitudes (e.g., self-efficacy, optimism, proactivity, learning orientation). As well,
48 some contextual variables (such as differences in degree courses, Caricati *et al.*, 2016; or
49 student employment, Jackson, 2024) or other external factors (Clarke, 2018; Donald *et al.*,
50 2024) might play a buffering role in undergraduates' agency and the onset of a sense of
51 employability.
52
53
54
55
56
57
58
59
60

1
2
3 *Ethical approval:* Institutional Review Board of Department of Psychology, Sapienza
4
5 University of Rome, prot. 00152.
6
7

8 9 10 **References**

- 11 AlmaLaurea (2023). *Rapporto 2023 sul profilo e sulla condizione occupazionale dei laureati*.
12 https://www.almalaurea.it/sites/default/files/2023-06/3_Sintesi_RapportoAlmaLaurea2023_0.pdf
13
14 Anderson, V., and Tomlinson, M. (2021), “Signaling standout graduate employability: The employer
15 perspective”, *Human Resource Management Journal*, Vol.31, No.3, pp.675-693.
16 Artess, J, Hooley, T. and Mellors-Bourne, R. (2017), *Employability: A review of the literature 2012-*
17 *2016*, Higher Education Academy, York.
18 Ashforth, B.K. (2001), *Role transitions in organizational life. An identity-based perspective*.
19 Routledge.
20 Ashforth, B.K., and Saks, A.M. (1996), “Socialization tactics: Longitudinal effects on newcomer
21 adjustment”, *Academy of Management Journal*, Vol.39, pp.149-178.
22 Bachmann, R., Gillespie, N., and Priem, R. (2015), “Repairing trust in organizations and institutions:
23 Toward a conceptual framework”, *Organization Studies*, Vol.36, No.9, pp.1123-1142.
24 Bandura, A. (2016), The power of observational learning through social modeling. In R. Stenberg, S.
25 Fiske, and D. Foss (eds) *Scientists making a difference* (pp.235-239).
26 Becker, T.E. (2005), “Potential problems in the statistical control of variables in organizational
27 research: A qualitative analysis with recommendations”, *Organizational Research Methods*,
28 Vol.8, No.3, pp.274-289.
29 Bentler, P.M. (1990), “Comparative fit indexes in structural models”, *Psychological Bulletin*, Vol.107,
30 pp.238-246.
31 Bergami, M., and Bagozzi, R.P. (2000), “Self-categorization, affective commitment, and group
32 self-esteem are distinct aspects of the organisation’s social identity”, *British Journal of Social*
33 *Psychology*, Vol.39, pp.555-577.
34 Brown, T.A. (2015), *Confirmatory factor analysis for applied research*, Guilford publications.
35 Caricati, L., Chiesa, R., Guglielmi, D., and Mariani, M.G. (2016), “Real and perceived employability:
36 a comparison among Italian graduates”, *Journal of Higher Education Policy and Management*,
37 Vol.38, No.4, pp.490-502.
38 Clarke, M. (2018), “Rethinking graduate employability: The role of capital, individual attributes and
39 context”, *Studies in Higher Education*, Vol.43, No.11, pp.1923-1937.
40 Connor, H., Tyers, C., Modood, T., and Hillage, J. (2004), “Why the difference? A closer look at
41 higher education minority ethnic students and graduates”, *Institute for Employment Studies*
42 *research report*, p.552.
43 Day, A.L., and Livingstone, H.A. (2003), “Gender differences in perceptions of stressors and
44 utilization of social support among university students”, *Canadian Journal of Behavioural*
45 *Science/Revue Canadienne Des Sciences Du Comportement*, Vol.35, No.2, pp.73-83.
46 <https://doi.org/10.1037/h0087190>
47
48 Donald, W.E., Baruch, Y., and Ashleigh, M. (2019), “The undergraduate self-perception of
49 employability: Human capital, careers advice, and career ownership”. *Studies in Higher*
50 *Education*, Vol.44, No.4, pp.599-614.
51 Donald, W.E., Baruch, Y., and Ashleigh, M.J. (2024), “Construction and operationalisation of an
52 Employability Capital Growth Model (ECGM) via a systematic literature review (2016-2022)”,
53 *Studies in Higher Education*, Vol.49, No.1, pp.1-15.
54 Edmond, V.P., Brannon, D.L., Stewart, A., and Williams, J. (2017), “Gender differences in
55 entrepreneurial leadership skills training”, *Global Journal of Entrepreneurship*, Vol.1, pp.32-52.
56 Farnese, M.L., Benevene, P., and Barbieri, B. (2022), “Learning to trust in social enterprises: The
57 contribution of organisational culture to trust dynamics”, *Journal of Trust Research*, Vol.12,
58 No.2, pp.153-178.
59
60

- 1
2
3 Farnese, M.L., Spagnoli, P., and Livi, S. (2022), "Undergraduates' academic socialization. A
4 cross-time analysis", *British Journal of Educational Psychology*, Vol.92, No.4, pp.1239-1255.
- 5 Fugate, M., Kinicki, A., and Ashforth, B. (2004), "Employability: A psycho-social construct, its
6 dimensions, and applications", *Journal of Vocational Behavior*, Vol.65, pp.14-38.
- 7 Gelderblom, D. (2018). "The limits to bridging social capital: Power, social context and the theory of
8 Robert Putnam". *The Sociological Review*, Vol.66, No.6, pp.1309-1324.
- 9 Golde, C.M. (1998), "Beginning graduate school: Explaining first-year doctoral attrition". In M.S.
10 Anderson (Ed.), *The experience of being in graduate school: An exploration* (pp.55-64). Jossey-
11 Bass, San Francisco.
- 12 González-Romá, V., Gamboa, J.P., and Peiró, J.M. (2018), "University graduates' employability,
13 employment status, and job quality", *Journal of Career Development*, Vol.45, No.2, 132-149.
- 14 Handley, K. (2018), "Anticipatory socialization and the construction of the employable graduate: A
15 critical analysis of employers' graduate careers websites", *Work, Employment and Society*,
16 Vol.32, No.2, pp.239-256.
- 17 Haueter, J., Hoff Macan, T., and Winter, J. (2003). Measurement of newcomer socialization: Construct
18 validation of a multidimensional scale. *Journal of Vocational Behavior*, Vol.63, pp.20-39.
- 19 Hinchliffe, G.W., and Jolly, A. (2011). Graduate identity and employability. *British Educational
20 Research Journal*, Vol.37, No.4, pp.563-584.
- 21 Hogg, M.A. (2000), "Subjective uncertainty reduction through self-categorization: A motivational
22 theory of social identity processes", *European Review of Social Psychology*, Vol.11, No.1, pp.223-
23 255.
- 24 Holmes, L. (2013), "Competing perspectives on graduate employability: possession, position or
25 process?", *Studies in Higher Education*, Vol.38, No.4, pp.538-554.
- 26 Holmes, L. (2015), "Becoming a graduate: The warranting of an emergent identity", *Education +
27 Training*, Vol.57, No.2, 219-238. doi: 10.1108/ET-08-2013-0100
- 28 Hu, L. and Bentler, P.M. (1999), "Cutoff criteria for fit indexes in covariance structure analysis:
29 Conventional criteria versus new alternatives", *Structural Equation Modeling*, Vol.6, pp.1-55.
- 30 Istat (2022). *Livelli di istruzione e ritorni occupazionali, anno 2021*.
31 <https://www.istat.it/it/files/2022/10/Livelli-di-istruzione-e-ritorni-occupazionali-anno-2021.pdf>
- 32 Jackson, D. (2016), "Re-conceptualising graduate employability: The importance of pre-professional
33 identity", *Higher Education Research and Development*, Vol.35, pp.925-939.
- 34 Jackson, D. (2024), "The relationship between student employment, employability-building activities
35 and graduate outcomes", *Journal of Further and Higher Education*, Vol.48, No.1, pp.14-30.
- 36 Jackson, D., and N. Wilton (2017), "Perceived employability among undergraduates and the
37 importance of career self- management, work experience and individual characteristics" *Higher
38 Education Research & Development*, Vol.36, No.4, pp.747-762.
- 39 Johansen, V. (2013), "Entrepreneurship education and start-up activity: A gender perspective",
40 *International Journal of Gender and Entrepreneurship*, Vol.5, pp.219-231.
- 41 Jungermann, H., Pfister, H.R., and Fischer, K. (1996), "Credibility, information preferences, and
42 information interests", *Risk analysis*, Vol.16, No.2, pp.251-261.
- 43 Kline, R. (2016), *Principles and practice of structural equation modelling*. New York: Guilford Press.
- 44 Korte, R., and Lin, S. (2013), "Getting on board: Organizational socialization and the contribution of
45 social capital", *Human Relations*, Vol.66, No.3, 407-428.
- 46 Kruglanski, A.W., Dechesne, M., Orehek, E., and Pierro, A. (2009), "Three decades of lay epistemics:
47 The why, how, and who of knowledge formation", *European Review of Social Psychology*, Vol.20,
48 No.1, pp.146-191.
- 49 Lo Presti, A., and Pluviano, S. (2016), "Looking for a route in turbulent waters: Employability as a
50 compass for career success", *Organizational Psychology Review*, Vol.6, No.2, pp.192-211.
- 51 Lo Presti, A., Costantini, A., Akkermans, J., Sartori, R., & De Rosa, A. (2023), "Employability
52 development during internships: A three-wave study on a sample of psychology graduates in
53 Italy", *Journal of Career Development*, Vol.50, No.6, pp.1155-1171. 08948453231161291.
- 54 Louis, M.R. (1980), "Surprise and sense making: What newcomers experience in entering unfamiliar
55 organizational settings", *Administrative Science Quarterly*, Vol.25, pp.226-251.
- 56 Mayer, R.C., and Davis, J.H. (1999). The effect of the performance appraisal system on trust for
57 management: A field quasi-experiment. *Journal of Applied Psychology*, 84, 123-136.
- 58
59
60

- Muthen, L., and Muthen, B. (2012), *Mplus version 7 user's guide: Version 7*. Muthen and Muthen, 850.
- Myers, S.A., and Knox, R.L. (2001), "The relationship between college student information-seeking behaviors and perceived instructor verbal behaviors", *Communication Education*, Vol.50, pp.343-356. doi:10.1080/03634520109379260
- Niedlich, S., Kallfaß, A., Pohle, S., & Bormann, I. (2021), "A comprehensive view of trust in education: Conclusions from a systematic literature review", *Review of Education*, Vol.9, No.1, pp.124-158.
- Padgett, R.D., Goodman, K.M., Johnson, M.P., Saichaie, K., Umbach, P.D., and Pascarella, E.T. (2010), "The impact of college student socialization, social class, and race on need for cognition", *New Directions for Institutional Research*, Vol.145, pp.99-111.
- Paterson, J., Higgs, J., Wilcox, S., and Villeneuve, M. (2002), "Clinical reasoning and self-directed learning: Key dimensions in professional education and professional socialisation", *Focus on Health Professional Education*, Vol.4, No.2, pp.5-21.
- Pearce, J. (2000), "Employability as trustworthiness". In: Leana, C. and Rousseau, D. (eds) *Relational wealth: The advantages of stability in a changing economy*. Oxford: Oxford University Press, pp.79-90.
- Petruzzello, G., Nimmi, P.M., & Mariani, M.G. (2024), "The dynamics of employability capitals for the transition to work: Career identity, cultural capital, job interview self-efficacy and self-perceived employability", *Higher Education, Skills and Work-Based Learning*, Advanced Online Publication. <https://doi.org/10.1108/HESWBL-01-2024-0015>
- Qenani, E., MacDougall, N., and Sexton, C. (2014), "An Empirical Study of Self-Perceived Employability: Improving the Prospects for Student Employment Success in an Uncertain Environment", *Active Learning in Higher Education*, Vol.15, No.3, pp.199-213.
- Raviv, A., Bar-Tal, D., Raviv, A., Biran, B., and Sela, Z. (2003), "Teachers' epistemic authority: Perceptions of students and teachers", *Social Psychology of Education*, Vol.6, No.1, pp.17-42.
- Reid, A., Dahlgren, L.O., Petocz, P., and Dahlgren, M.A. (2008), "Identity and engagement for professional formation", *Studies in Higher Education*, Vol.33, No.6, pp.729-742. <https://doi.org/10.1080/03075070802457108>
- Romero, L.S. (2015), "Trust, behavior, and high school outcomes", *Journal of Educational Administration*, Vol.53, pp.215-236.
- Rothwell, A., Jewell, S., and Hardie, M. (2009), "Self-perceived employability: Investigating the responses of post-graduate students", *Journal of Vocational Behavior*, Vol.75, No.2, pp.152-161.
- Shields, N. (2002), "Anticipatory socialization, adjustment to university life, and perceived stress: Generational and sibling effects", *Social Psychology of Education*, Vol.5, No.4, pp.365-392.
- Sluss, D.M., Ployhart, R.E., Cobb, M.G., and Ashforth, B.E. (2012), "Generalizing newcomers' relational and organizational identifications: Processes and prototypicality", *Academy of Management Journal*, Vol.55, pp.949-975.
- Smith, V. (2010), "Enhancing employability: Human, cultural, and social capital in an era of turbulent unpredictability", *Human Relations*, Vol.63, No.2, pp.279-300.
- Taormina, R. (2004), "Convergent validation of two measures of organizational socialization", *The International Journal of Human Resource Management*, Vol.15, pp.76-94.
- Tomlinson, M. (2012), "Graduate employability: A review of conceptual and empirical themes", *Higher Education Policy*, Vol.25, No.4, pp.407-431.
- Tomlinson, M. (2017), "Forms of graduate capital and their relationship to graduate employability", *Education+ Training*, Vol.59, No.4, pp.338-352. doi: 10.1108/ET-05-2016-0090
- Tomlinson, M. (2021), "Employers and Universities: Conceptual dimensions, research evidence and implications", *Higher Education Policy*, Vol.34, No.1, pp.132-154.
- Tomlinson, M. (2023), "Conceptualising transitions from higher education to employment: Navigating liminal spaces", *Journal of Youth Studies*, pp.1-18.
- Tomlinson, M., McCafferty, H., Port, A., Maguire, N., Zabelski, A.E., Butnaru, A., ... and Kirby, S. (2022), "Developing graduate employability for a challenging labour market: the validation of the graduate capital scale", *Journal of Applied Research in Higher Education*, Vol.14, No.3, pp.1193-1209.
- Tomlinson, M., and Jackson, D. (2021). "Professional identity formation in contemporary higher education students". *Studies in Higher Education*, Vol.46, No.4, pp.885-900.

- 1
2
3 Trede, F., Macklin, R., and Bridges, D. (2012), "Professional identity development: A review of the
4 higher education literature", *Studies in Higher Education*, Vol.37, No.3, pp.365-384.
5 Trevor-Roberts, E. (2006), "Are you sure? The role of uncertainty in career", *Bulletin of Employment
6 Counseling*, Vol.43, No.3, pp.98-116.
7 Tschannen-Moran, M. (2004), *Trust Matters: Leadership for Successful Schools*, Jossey-Bass, San
8 Francisco.
9 Weidman, J.C., DeAngelo, L., and Bethea, K.A. (2014), "Understanding student identity from a
10 socialization perspective", *New Directions for Higher Education*, Vol.166, pp.43-51.
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3
4 **Bridging pre-professional identities: the contribution of trustworthiness and academic**
5
6 **socialisation to undergraduates' employability**
7
8
9

10
11 **Purpose.** The evolving dynamics of the labour market make graduates' future
12 employability an important issue for higher education institutions, prompting universities to
13 complement the conventional graduate skills approach with a wider focus on graduate forms
14 of capital that may enhance their sense of employability. This study, adopting a capital
15 perspective, explores whether and how teachers in higher education, when acknowledged as
16 knowledgeable trustworthy actors, may affect graduates' employability. It investigates how
17 they can mobilise undergraduate cultural capital through socialisation, and shape their pre-
18 professional identity, paving the way for university-to-work transition.
19
20
21
22
23

24
25 **Design/Methodology.** To test the hypothesised model, a self-report online questionnaire
26 was administered to a sample of 616 undergraduates attending different Italian universities.
27 Multiple mediating models were tested using the SEM framework.
28
29

30
31 **Findings.** Results supported the tested model and showed that trust in knowledgeable HE
32 teachers was associated with undergraduates' perceived employability both directly and
33 through both mediators (i.e., academic socialisation and identification with future
34 professionalism).
35
36

37
38 **Implications.** This research explores a capital conceptualisation of graduate
39 employability, identifying possible processes for implementing graduates' capital across their
40 academic experience and providing initial evidence of their interplay and contribution to
41 transition into the labour market.
42
43

44
45 **Originality.** These findings provide empirical support to possible forms of capital that
46 higher education institutions may fulfil to enhance their undergraduate employability
47 throughout their academic career, which serves as a liminal space allowing undergraduates to
48 begin building a tentative professional identity.
49
50
51

52
53 **Keywords:** Graduate capital model, Employability, Trustworthiness, Academic socialisation,
54 Pre-professional identity, University-to-work transition
55
56
57
58
59
60

Introduction

Dominant discourses on graduates' employability acknowledge undergraduates' role in an increasingly knowledge-based labour market, including knowledge and skills acquired during university education that align with the demands of employers, thereby adding competitive value to their professional contributions (Tomlinson, 2017). In line with this perspective, several governments aim to enhance university graduates' employability, conferring universities a pivotal role in providing education that enhances their readiness for the labour market (González-Romá, Gamboa, and Peirò, 2018; Reid *et al.*, 2008; Trede *et al.*, 2012). Therefore, future employability is becoming an increasingly significant focus of higher education (hereafter, HE) policy (Holmes, 2013; Smith, 2010; Tomlinson, 2012; Trevor-Roberts, 2006).

However, the growing labour market flexibility and instability contribute to the dynamic and fluid nature of professional identities, even more negotiated within specific work contexts. Hence, the conventional conceptualisation of employability as a status output of the academic career, where undergraduates are seen as repositories of knowledge valuable for the labour market, needs to be complemented with a conceptualisation of employability as an active social process. In this view, undergraduates engage in building and seeking legitimisation for their future professional identities within the labour market, thus allowing the transition from the identity of a student towards that of a graduate worker (Artess *et al.*, 2017; Clarke, 2018; Fugate, Kinicki, and Ashforth, 2004; Petruzzello, Nimi, & Mariani, 2024; Smith, 2010; Tomlinson, 2012).

On the other hand, the changing nature of the labour market asks institutions for consistent change, challenging them to complement the conventional graduate skills approach to be more attuned to this dynamism. Specifically, universities should question how they can contribute to their graduates' employability by supporting the construction of a preprofessional identity as an ongoing process that develops throughout their academic careers. Some evidence suggests that graduates' employability also depends on the extent to which they can establish sound professional identities, grounding a bridge to their future employability (Jackson, 2016; Trede *et al.*, 2012; Tomlinson and Jackson, 2021) and framing emergent work identities to claim to employers (Anderson and Tomlinson, 2021; Holmes, 2015).

In this perspective, the academic career becomes not only a learning environment to enhance undergraduates' knowledge and skills, that is their human capital, but also a transitional space where they can mitigate uncertainty about their future and shape their

1
2
3 professional identities whilst building other forms of career resources (Handley, 2018;
4 Jackson, 2024).

5
6 While the importance of the different forms of capital is widely acknowledged by academics
7 and practitioners alike, our understanding of employability capital is still limited. Existing
8 employability theory identifies several core forms of capital, including human, psychological,
9 social, cultural, identity, scholastic, and market-value capital (see Donald et al., 2024).
10 However, this conceptualisation is fragmented and needs a solid framework to integrate them.
11 Hence, research should address issues such as defining the relationships between these forms,
12 determining how to operationalise each of them effectively, and empirically validating their
13 relationships with employability outcomes and interplay with other factors (e.g., individual
14 characteristics, organisational culture, national HE practices, and labour market
15 characteristics). Despite its importance, empirical evidence in this area remains limited, with
16 few studies incorporating this perspective into employability research (Donald, Baruch, and
17 Ashleigh, 2019; Gonzales-Romà *et al.*, 2018; Tomlinson and Jackson, 2021).

18
19 The present study aims to address this gap by exploring the key social processes that may
20 help undergraduates to emerge and shape their pre-professional identities, thus enhancing
21 their employability. The employability capital perspective posits that strengthening graduates'
22 human capital by equipping them with formal academic learning and skills, should be
23 extended with practices that enhance other personal resources. These resources are helpful for
24 navigating unstable career trajectories, translating acquired knowledge into workplace
25 performance, and establishing connections between employment opportunities, future goals,
26 and personal resources and attitudes (Donald *et al.*, 2019; Fugate et al., 2004; Lo Presti and
27 Pluviano, 2016; Tomlinson et al., 2022; Trevor-Roberts 2006; Wheelahan, 2022).

28
29 Drawing on this conceptual model, we propose that HE teachers¹, when perceived as
30 trustworthy knowledgeable actors, may enhance undergraduate social capital by helping them
31 build relational resources. They also contribute to undergraduates' employability through a
32 twofold process. Firstly, they help make sense of professional standards and how practices
33 unfold and relate to future professional settings, thereby enhancing the undergraduates'
34 socialisation process. Secondly, they serve as models, affecting how emerging identities are

35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
¹ In academic settings, the role of a teacher may be either clearly defined and distinct from that of researchers or professors (who typically hold more senior positions); or fulfilled by playing these multiple roles simultaneously. This is the case of countries like Italy, the national context in which this research was carried out. In this study, we use the term "teacher" inclusively to encompass any academic who undertakes educational responsibilities with HE students (i.e., who engages in lecturing, supervising, instructing, or other educational activities), regardless of their specific title or position within the academic hierarchy and other kind of activities they may play.

1
2
3 negotiated and constructed. These processes, in turn, contribute to undergraduates'
4 employability, on the whole strengthening their social, cultural and identity forms of capital
5 because these resources are crucial in shaping future graduates' relationships with their
6 professional contexts and practices.
7
8
9

10 In doing so, this study contributes to the literature in three ways. First, it addresses
11 Donald and colleagues' (2024) call to add to the empirical base of the capital conceptual
12 model, by providing empirical evidence to support it, identifying and operationalising some
13 core forms of undergraduates' capital and their role in fostering undergraduate perceived
14 employability. This study further addresses this call, exploring how these different forms of
15 capital interrelate, outlining a comprehensive path that contributes to undergraduates'
16 employability. Third, it also extends the traditional focus on the graduates' university-to-work
17 final transition, to the whole undergraduate academic career as a liminal period. Indeed, the
18 transition from higher education to work is an active process during which undergraduates
19 can empower their knowledge but also feel a safe context that allows and encourages the
20 emergence of their pre-professional identity through negotiation and legitimation processes
21 involving significant actors (Holmes, 2015; Tomlinson, 2023). This adds to the conversation
22 about potential higher education policies, outlining implications for practice, including the
23 important role that HE teachers play in enhancing students' capitals development.
24
25
26
27
28
29
30
31
32
33

34 The paper is structured as follows. The first section introduces the theoretical concepts
35 that inform the study, reviewing the literature on undergraduates' employability and
36 pinpointing some processes that may enable it. We then propose a process model to account
37 for perceived employability, via pre-professional identity enhancement. Finally, we outline
38 the research methodology and present our main findings. In the Discussion section, we relate
39 our model to important current themes in pre-professional identity literature, suggest possible
40 areas for further research, and discuss the implications of the findings for employability
41 policies.
42
43
44
45
46
47
48
49

50 **Theoretical framework**

51 *Undergraduates' employability*

52
53 Adopting a social construction perspective (Tomlinson, 2012; Holmes, 2015),
54 undergraduate employability can be conceptualised as an ongoing identity work that
55 underpins a future-oriented perspective and expresses the individuals' capability to
56 proactively nurture and exploit personal resources to address university-to-work transitions.
57 In doing so, they effectively address the challenges of the labour market and pursue career
58
59
60

1
2
3 opportunities aligned with their desired professional identity (Fugate *et al.*, 2004). More
4 specifically, perceived employability relates to the likelihood of successfully securing a
5 desired job, going beyond the appropriateness to a graduate's qualification level criteria
6 (Rothwell, Jewell, and Hardie, 2009), and encompassing personal expectations and perception
7 of being worthy of such employment (Handley, 2018; Holmes, 2013).
8
9

10
11 The growing turbulence and unpredictability that inform the labour market pose
12 challenges to the process of employability. This heightened uncertainty contributes to a sense
13 of insecurity among undergraduates, lowering their confidence in envisioning their job
14 prospects and shaping their professional trajectories (Smith, 2010).
15
16

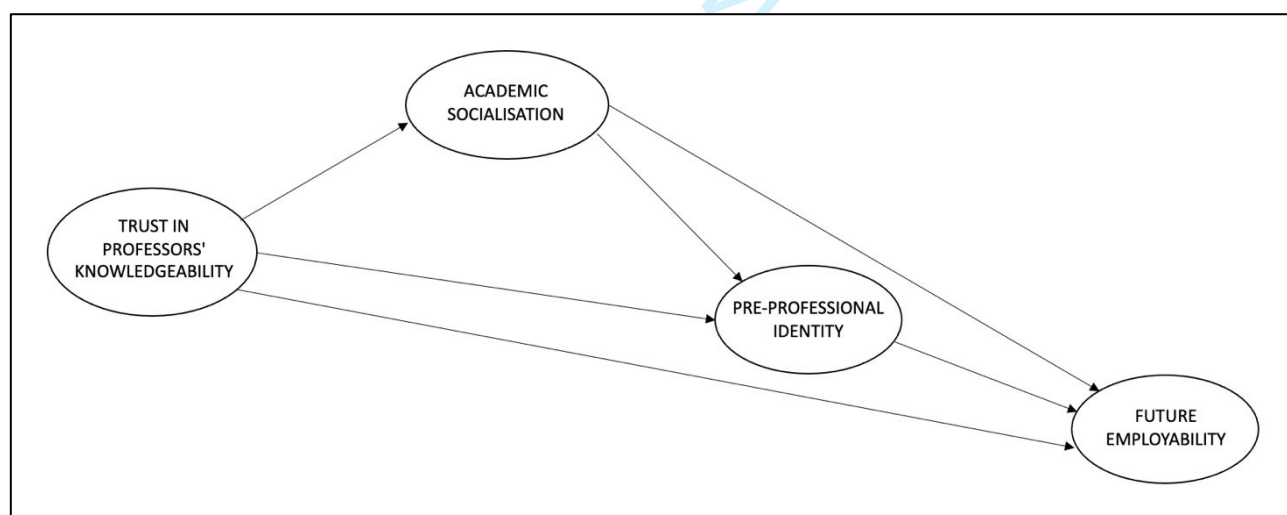
17
18 Given these contextual conditions, we contend that universities can enhance
19 employability not only by strengthening their undergraduates' *human capital* (i.e., providing
20 them with the most desirable level of formal learning and skills) but also by fostering their
21 pre-professional identity development through other forms of capital. The resource-based
22 approach to employability includes various forms of capital helpful to support the
23 undergraduate university-to-work transition, as outlined in Tomlinson's (2017) Graduate
24 Capital Model, Clarke's (2018) model, and Donald *et al.*'s (2019) model; recently integrated
25 into Donald *et al.*'s (2024) Employability Capital Grow Model. These models propose an
26 articulated and fragmented set of capital forms, which can nonetheless be encompassed into
27 the human, social, cultural, identity and psychological forms of capital, as key resources
28 affecting undergraduates' potential employability (see Tomlinson, 2017).
29
30
31
32
33
34
35
36

37
38 In this study, adopting a relational focus, we specifically examined the contribution of
39 social capital, identity capital and cultural capital to undergraduate employability, excluding
40 psychological capital which pertains to intrapsychic aspects. *Social* capital helps
41 undergraduates mobilise their human capital through social ties with significant others,
42 promoting networks, and facilitating access to a wealth of information and opportunities
43 (Clarke, 2018; Donald *et al.*, 2019). *Identity* capital pertains to how undergraduates perceive
44 themselves as future professionals, the opportunities they believe are feasible, how they form
45 goals and strategic choices, and how they anticipate and proactively pursue their future
46 careers (Jackson, 2016; Tomlinson and Jackson, 2021; Trede *et al.*, 2012). *Cultural* capital
47 involves the development of cultural knowledge and accepted behaviours that align with
48 potential professional settings and workplaces. This encompasses the ability to understand
49 and differentiate various organisational contexts, to act in line with field-specific rules, to
50 manage interpersonal relationships with sound and appropriate behaviours, and to be aware of
51 cultural values and practices (Donald *et al.*, 2019; Tomlinson, 2017). Overall, this form of
52
53
54
55
56
57
58
59
60

capital empowers undergraduates to feel and be recognised as integral members of a professional community and to negotiate their own membership within that community (Tomlinson, 2021). Similarly, Hinchliffe and Jolly (2011) suggest that understanding the enactment of professional practices and constructing a legitimate identity are core processes for undergraduate employability, more than skill possession.

In the following, we propose a model (see Figure 1) hypothesising that, when university-level teachers are recognised as trustworthy knowledgeable actors, they play a central role in supporting undergraduates' employability through a dual process aimed at reducing uncertainty and anticipating job opportunities. Specifically, they may enhance an overall anticipatory socialisation process, that is a form of cultural capital involving learnings beneficial for understanding key professional competencies, gaining clarity on potential future roles, and linking academic knowledge to employer expectations (Korte and Lin, 2013). Additionally, HE teachers may exert a modelling function, serving as proxies for the professionals that undergraduates aspire to become (Sluss *et al.*, 2012). For instance, they may offer a landscape of practices, provide work-integrated learning experiences, and embody professional values, thereby contributing to the shaping of undergraduate identity capital and, in turn, fostering stronger perceived employability. They also play a role in shaping students' professional knowledge, outlooks and dispositions that may be empowering for them.

Figure 1. The theoretical model.



HE teachers' trustworthiness and undergraduate employability

Trustworthiness represents a key relational resource that contributes to enhancing both bonding ties, strengthening cohesion among members of a group; and bridging ties,

1
2
3 facilitating connections to other groups or contexts. Specifically, in the context of
4 employability, interpersonal trust helps foster reciprocal relations based on positive implicit
5 expectations about the other party's knowledge and reputation, for instance between employer
6 and potential new hired; facilitates the expansion of personal networks, assuming that others
7 will act in a professional way; and enhances own perception of being a person worthy of
8 being employed (Gelderblom, 2018; Holmes, 2013). Institutional trust further frames
9 overarching expectations that extend beyond specific interactions or individuals, enabling the
10 expression of professionalism in relationships involving both formal and informal
11 intermediaries (Pearce, 2000).

12
13
14
15
16
17
18
19 This study focuses on trust in HE teachers' knowledgeability, defined as the set of
20 competencies, skills, and knowledge essential for exerting influence within a specific
21 professional domain (Mayer and Davis, 1999). We argue that, when undergraduates perceive
22 their teachers as trustworthy in ability and valuable sources of knowledge, this may contribute
23 to their social capital for employability in several ways (Niedlich *et al.*, 2021). Firstly,
24 teachers are enablers of institutional trust, representing the university as a reputable HE
25 institution capable of transferring to graduates the requisite attributes and legitimacy to foster
26 their employability. Indeed, when they are perceived as trusted and valued ties, they may
27 represent epistemic sources (Kruglanski *et al.*, 2009) and impart important insights into
28 professional domains. In low predictable labour market conditions, this intermediary role
29 becomes particularly relevant because generalised expectations need to be complemented
30 with a more specific and contextualised understanding of the other (e.g., the single university
31 reputation; Rothwell *et al.*, 2009).

32
33
34
35
36
37
38
39
40
41 In this sense, HE teachers act as 'gatekeepers' in the relationship between individual
42 graduates and the field of employment opportunities, including potential employers,
43 professional associations, and recruitment companies (Holmes, 2013; Smith, 2010). The
44 trustworthiness of teachers serves as a resource that can be transferred to their undergraduates,
45 rendering them worthy of trust in their abilities as well. This trust spillover process enhances
46 undergraduates' legitimacy, as they are endorsed by a trusted agency (Bachmann, Gillespie,
47 and Priem, 2015; Farnese, Benevene, and Barbieri, 2022). It extends their social capital,
48 acting both as a bonding resource within a network the undergraduates identify with and
49 belong to (Korte and Lin, 2013), and as a bridging resource, facilitating their access to future
50 career-related relationships (González-Romá *et al.*, 2018). Overall, teachers' trustworthiness
51 represents a crucial initial source for social capital development. When perceived as trusted
52 and valued relational ties, teachers foster undergraduates' feeling of membership toward a

1
2
3 professional community, both within the academic context and beyond. This contributes to
4 imparting important insights into professional domains and establishing a bridging link
5 between undergraduates' academic careers and their future professions.
6
7

8 While existing literature highlights the significant role of trust in employability, there is a
9 shortage of empirical evidence on this relationship. Drawing on the above literature, this
10 study aims to examine the trustworthiness–employability relationship, hypothesising that the
11 higher the perception of teachers' trustworthiness in knowledge and skills, the more
12 undergraduates will feel worthy of being employed:
13
14

15
16
17 *H1: Trust in HE teachers' knowledgeability positively relates to perceived employability.*
18
19

20 ***The learning path through academic socialisation***

21
22 An important process that we propose contributes to undergraduates' perceived
23 employability is enhancing their cultural capital by increasing their degree of learning and
24 mastery across different academic socialisation domains. Studies within the academic context
25 showed that the socialisation process facilitates student's adjustment to their new roles within
26 the university organisation, allows integration into explicit and implicit social norms, and
27 fosters workplace relationships (Day and Livingstone, 2003; Farnese, Spagnoli, and Livi,
28 2022; Lo Presti *et al.*, 2023; Padgett *et al.*, 2010; Weidman, DeAngelo, and Bethea, 2014).
29 Successful academic socialisation also provides a bridge toward socialisation in professional
30 practices and workplaces (Shields, 2002), enabling undergraduates to acquire essential values,
31 attitudes, knowledge and skills, and envision future career paths. Hence, graduate
32 socialisation can be conceptualised as a “double process” where new students simultaneously
33 acquire the role of graduates and receive anticipatory socialisation to understand how
34 professional practices unfold in their future careers (Anderson and Tomlinson, 2021; Golde,
35 1998; Hinchliffe and Jolly, 2011). It is therefore a significant bedrock to their formation of
36 professional identity.
37
38

39 The development of this form of cultural capital, achieved through ongoing information-
40 seeking and sense-giving processes, allows undergraduates to build frameworks helpful to
41 learning how to align with current and future professional settings, thus paving the way for a
42 heightened sense of employability. In line with the uncertainty reduction perspective,
43 suggesting that relevant others are crucial sources for achieving socialisation goals (Haueter *et*
44 *al.*, 2003; Louis, 1980; Taormina, 2004), we posit that in educational contexts HE teachers
45 potentially embody one of the most relevant information sources for students (Myers and
46 Knox, 2001). They function as expert guides by virtue of their supervisory role and expertise,
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 with their behaviours reflecting abilities, competencies, reliability, and ways of performing
4 different professional roles (Jungermann *et al.*, 1995; Romero, 2015; Tschannen-Moran,
5 2004). Therefore, when teachers are acknowledged as experienced and knowledgeable actors,
6 they become prominent sources of information that may provide an interpretative schema for
7 the understanding of the academic context and their student's role (e.g., performing key
8 professional features, showcasing different potential professional roles, reflecting on labour
9 market opportunities). Meanwhile, they serve an anticipatory socialisation role that helps
10 undergraduates make sense of their emergent professional identity, bridging it to future
11 potential professional contexts (Holmes, 2015; Jackson, 2016; Louis, 1980). Overall, we
12 propose the following hypothesis:

13
14
15
16
17
18
19
20
21 *H2: Academic socialisation mediates the relationship between trust in HE teachers'*
22 *knowledgeability and perceived employability.*

23 24 25 ***The modelling path through pre-professional identity***

26
27 Identity capital is another significant resource for graduate employability, supporting
28 their graduation-to-work transition and enhancing their career readiness (Tomlinson *et al.*,
29 2021). The progressive development of a future working self acts as a cognitive framework
30 that helps undergraduates envision their future careers, gauge their fit with different labour
31 market scenarios, and support their motivation to actively pursue opportunities aligned with
32 their aspirations (Fugate *et al.*, 2004). Therefore, a stronger pre-professional identity improves
33 undergraduates' sense of potentially being worthy employable workers (Handley, 2018;
34 Jackson, 2016; Trede *et al.*, 2012) and helps them construct a legitimate professional identity
35 (Hinchliffe and Jolly, 2011).

36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
60
Scholars suggest that the development of identity work occurs through ongoing
comparison with significant others who have identity features representing different degrees
of prototypicality. This comparison enacts a self-evaluative process that can influence
attitudes and behaviours (Hogg, 2000), confirm or challenge the claimed identity (Holmes,
2015), and motivate individuals to seek membership within a professional group and attain
acceptance as full members (Hogg, 2000). Therefore, we posit that an additional factor
influencing perceived undergraduate employability is the shaping function trustworthy may
play on their emerging professional identity. In other words, trust in knowledgeable teachers
may nurture undergraduate pre-professional identity by enhancing their sense of "being a
professional" (Paterson *et al.*, 2002; Sluss *et al.*, 2012).

1
2
3 For instance, epistemic theory (Kruglanski *et al.*, 2009; Raviv *et al.*, 2003) provides
4 insights into how the perceived authority of a source influences individuals'
5 acknowledgement and engagement in seeking information from that source. Thus, when
6 teachers are perceived as authorities possessing profession-related knowledge and
7 competence, they are likely to become representative of prototypical features of the profession
8 they teach. This leads undergraduates to consider them as reliable sources within the
9 professional domain, considering them as epistemic authorities to trust and rely upon.
10 Teachers, in this context, serve as guides, providing students with sense-making tools for
11 learning how to think and act in a professional way (Louis, 1980).

12
13 In a similar vein, social learning theory (Bandura, 2016) suggests that significant social
14 actors can serve as models for identification. The more attractive these models are perceived
15 (e.g., prestigious, expert) the greater the observers' attention to their behaviour and the
16 motivation to become similar to them, mirroring those behaviours in an effort to acquire the
17 models' skills and related rewards. In essence, these theories suggest that trustworthy teachers
18 may function as role models, leading undergraduates to inhabit similar identities, thereby
19 contributing towards shaping their future professional identity and, subsequently, perceived
20 employability. Building on this framework, we propose the following hypothesis:

21
22
23
24
25
26
27
28
29
30
31
32 *H3: Pre-professional identity mediates the relationship between trust in teachers'*
33 *knowledgeability and perceived employability.*

34
35
36
37 We also posit that socialisation plays a role in shaping undergraduate identity capital,
38 since its primary aim is to transform newcomers into full members of their organisations
39 (Ashforth, 2001). This identity transition involves internalising the norms, values and
40 behaviours associated with one's future professional role (Fugate *et al.*, 2004).

41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846
847
848
849
850
851
852
853
854
855
856
857
858
859
860
861
862
863
864
865
866
867
868
869
870
871
872
873
874
875
876
877
878
879
880
881
882
883
884
885
886
887
888
889
890
891
892
893
894
895
896
897
898
899
900
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
921
922
923
924
925
926
927
928
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952
953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
974
975
976
977
978
979
980
981
982
983
984
985
986
987
988
989
990
991
992
993
994
995
996
997
998
999
1000

Hence, socialisation may expedite the university-to-work transition, contributing to

1
2
3 sharpening undergraduates' pre-professional identity and, in turn, fostering their perception of
4 being employable graduates.
5

6 In summary, we hypothesise that trustworthiness in knowledgeable teachers contributes
7 to greater self-perceived employability also through a third pathway, involving both the
8 socialisation and pre-professional identity work processes:
9

10
11 H4: *Academic socialisation and pre-professional identity mediate the relationship*
12 *between trust in teachers' knowledgeability and perceived employability.*
13
14

15 16 17 **Method**

18 19 ***Context of the research***

20 This study focuses on Italian undergraduates, facing a challenging labour market
21 compared to other European Union countries. Indeed, Italy exhibits a significant gap in the
22 percentage of graduates compared to the European average, with only 26.8% of individuals
23 holding a degree, as opposed to the EU average of 41.6% (Istat report 2022). Additionally, the
24 return to employment for Italian graduates is lower on average, with a youth employment rate
25 of 82.1%, compared to the European rate of 86.4% (Istat report 2022). Specifically, the
26 employment rate among graduates one year after graduation is about 77.1% for master's
27 degrees (Alma Laurea, 2023), even if the trend showed a progressive improvement after the
28 severe economic crisis between 2008 and 2012, which strongly impacted the Italian labour
29 market, especially affecting young people (Lo Presti et al., 2023). Hence, the expansion of
30 higher education in Italy appears to mismatch a consistent demand in the labour market,
31 influencing the perception among new graduates regarding their prospects of successfully
32 finding a qualified job.
33
34

35 This scenario makes the role of HE institutions even more relevant not only in ensuring
36 their students graduate with effective knowledge and skills but also in shaping their pre-
37 professional identities and equipping them with a wider set of capital to support their
38 university-to-work transition through a more nuanced and dynamic pattern.
39
40
41

42 43 44 45 46 47 48 49 50 51 ***Participants and procedure***

52 A total of 616 Italian undergraduates aged 19 to 30 ($M= 23.44$; $SD= 2.36$) were involved
53 in the study. The sample was composed of 210 (34.1%) males and 406 (65.9%) females.
54 Participants attended different courses in several Italian universities in the north, centre and
55 south of Italy. Participants attended a three-year bachelor's degree 261 (42.4%), a master's
56 degree 278 (45.1%), or a single-cycle degree 62 (10.1%). They attended different degree
57
58
59
60

1
2
3 courses (Psychology 37.2%; Engineering 10.1%; Economy 9.6%; Medicine and Biology
4 8.1%; Law 7.5%; Social Sciences 7.0%; Arts and Literature 5.4%; Others 12.7%) while 15
5 (2,4%) did not respond. There were 402 (65.3%) unemployed students, 180 (29.2%) of them
6 part-time workers, 31 (5%) full-time workers and 3 (0.5%) missing.
7
8
9

10 Data were collected through online questionnaires using a non-discriminative snowball
11 sampling approach: psychology students attending a practical laboratory were invited to
12 forward the overall survey to students from their and other courses in their network.
13 Participants were informed that acceptance was voluntary and that the research was not
14 commissioned by the University they were enrolled. In addition, the research team member
15 clarified that students' responses would be kept confidential and anonymous and that data
16 would always be reported in an aggregate form. The first author's Ethics Committee approved
17 the study.
18
19
20
21
22
23
24
25

26 **Measures**

27 **Trust in the teachers' knowledgeability** was measured using 5 items from
28 trustworthiness Mayer and Davis's (1999) scale, with the university teachers being the items'
29 referent. This measure assesses the undergraduates' perception of their teachers' knowledge
30 and ability (i.e., "*My course teachers are very capable of performing their job*"). Responses
31 were given on a five-point scale varying from 1 "strongly disagree" to 5 "strongly agree".
32
33
34
35

36 **Academic socialisation** was assessed with the 18-item Undergraduate Socialization
37 Questionnaire (Farnese, Spagnoli, and Livi, 2022), an adaptation of the Organizational
38 Socialization Questionnaire (Haueter *et al.*, 2003) to the academic context. It includes three
39 facets, related to different socialisation learning domains. The first domain –task– relates to
40 acquiring the knowledge and skills necessary to perform the student's job, such as
41 understanding their main responsibilities and priorities and identifying relevant information
42 sources (7 items i.e. "*I understand how to perform the tasks that are required in order to*
43 *complete my work*"); the second domain –group– relates to learning about the explicit and
44 implicit norms within the class, values in use and appropriate behaviour (5 items i.e. "*I know*
45 *how to manage relationships within my group of colleagues*"); and the third domain –
46 organisation– relates to acquiring knowledge regarding procedures, specific language, politics
47 and shared values of the Faculty or University (6 items i.e. "*I understand the organisational*
48 *procedures of this Faculty - e.g., who does what, forms, schedules*"). Participants were asked
49 to respond on a five-point scale ranging from 1 "strongly disagree" to 5 "strongly agree".
50
51
52
53
54
55
56
57
58
59
60

1
2
3 **Pre-professional identity** was measured with a single item developed by Bergami and
4 Bagozzi (2000) to capture identity self-categorization, previously adapted to undergraduates.
5 “Please think about the typical professional formed by your degree course (e.g., Psychology >
6 psychologist; Law > lawyer). How much do you feel like this professional?”. The participants
7 were asked to indicate the degree of overlap on a five-point scale ranging from 1 “not at all
8 similar” to 5 “quite similar”.

9
10
11
12
13 **Perceived employability** of undergraduates was measured using the future prospects 5-
14 item scale from the Organizational Socialization Inventory (Taormina, 2004) (i.e., “This
15 Faculty offers in-depth training to develop professional knowledge and job skills”).
16 Responses were given on a five-point scale varying from 1 “strongly disagree” to 5 “strongly
17 agree”.

18 For each measure, a rigorous translation process was conducted.

19
20
21
22
23 **Control variables.** Control variables included gender, age, degree courses, hours of
24 studying, and employment status. Specifically, given the difficult comparison of academic
25 tenure among different study paths, we considered *Age* as a proxy for academic tenure.
26 Research on graduate samples showed that awareness of one’s own employability changes
27 over time. While some studies confirmed a positive relationship between self-perceived
28 employability and the university career stage, assuming growing awareness and capabilities
29 (for instance a study on an Italian sample found that master’s students exhibited greater
30 awareness of their potential for employment and achieving their own professional goals,
31 compared to bachelor’s students; Caricati *et al.*, 2016), some others highlighted a negative
32 relationship, due to the growing awareness of the challenges of employability going on in the
33 academic career (Jackson and Wilton, 2017; Qenani *et al.*, 2014).

34
35
36
37
38
39
40
41
42 *Gender* was considered a potential control factor since different studies highlighted a
43 complexity in gender differences buffering effect on employability (Caricati *et al.*, 2016;
44 Donald *et al.*, 2019), for instance related to job opportunities and the likelihood of becoming
45 employed shortly after graduating (Connor, Tyers, Modood, and Hillage, 2004).

46
47
48
49
50
51
52
53
54
55 *Hours of studying* were tapped by a behavioural self-report single item (i.e., “How many
56 hours do you study on average in a day?”) rated on a 5-point frequency scale from 1 “Not at
57 all” to 5 “More than 6 hours a day”. This indicator was considered a proxy for students’
58 engagement.

59
60 Given the prevalence of psychology students in our sample, we also took into account
this factor, differentiating psychology students from all other students. Hence, *Degree courses*
were recorded in two groups: psychologists (37.3%) and other courses (60.2%).

Employment status was considered a potential control factor since it was found that workers display higher levels of employability, cope better with job insecurity and in general perceive greater job opportunities (Fugate *et al.*, 2004).

Data analyses

Means, standard deviations, reliabilities, and intercorrelations among study variables were implemented using the statistical software SPSS 25. The hypotheses were tested with regression-based structural equation modelling in Mplus Version 7.0 (Muthén and Muthén, 2012) using Robust Maximum Likelihood (MLR) estimation method. In order to obtain 95% confidence intervals for the indirect effects, the bootstrap procedure (5000 in our case) was used. All observed scores were loaded on the related latent construct.

Model fit was assessed according to the following criteria: χ^2 , CFI (Comparative Fit Index), TLI (Tucker-Lewis Index), RMSEA (Root Mean Square Error of Approximation) and SRMR (Standardized Root Mean Square Residual). Since the χ^2 test is sensitive to large sample sizes and easily produces a statistically significant result (Kline, 2016), we only considered the indices of CFI, TLI, RMSEA and SRMR to evaluate the goodness of our model, where TLI and CFI values greater than .90 (Bentler, 1990) indicate models with good data fit, while RMSEA and SRMR values should be less than .08 (Hu and Bentler, 1999).

Results

Table 1 shows the zero-order correlations among study variables and their reliability. Strong positive correlations were found among all four study variables. The reliability coefficients expressed by Cronbach α ranged from 0.74 to 0.90, indicating satisfactory internal reliability for all variables.

In order to exclude nonsignificant control variables that unnecessarily reduce statistical power (Becker, 2005), we also computed correlations with the control variables. Based on zero-order correlation results among them (see Table 1), three control variables (*age*, *hours of studying* and *degree courses*) were included in our hypothesised model.

Table 1. Descriptions, inter-correlations, and reliabilities of the study variables.

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1. Gender	–	–									

1											
2											
3											
4	2. Age	23.44	2.36	-.13**							
5											
6	3. Degree courses	–	–	-.26**	-.06						
7											
8	4. Employment status	–	–	-.12**	.21**	.02					
9											
10	5. Hours of studying	3.19	.96	.16**	.10*	-.01	-.04				
11											
12	6. Trust in teachers' knowledgeability	3.81	.63	.13**	.06	-.11**	-.08	.17**	(.74)		
13											
14											
15	7. Academic socialization	3.69	.51	-.01	.12**	-.04	.00	.14**	.32**	(.88)	
16											
17											
18	8. Pre-professional identity	3.40	.98	-.04	-.01	.06	-.05	.18**	.25**	.30**	–
19											
20											
21	9. Perceived employability	3.06	.86	-.01	-.09*	.07	-.08	.10*	.48**	.40**	.39**
22											(.90)

Note: Gender was coded as 1= men and 2= women; Employment status was coded as 1= unemployed, 2= part-time work and 3 = full-time work; Degree courses was coded as 1= psychologist; 2= other courses. $p < 0.001$; * $p < 0.05$; Cronbach's alphas are in the diagonal in bold.

Estimates for the hypothesised relationships

Results of the SEM analysis indicated that the hypothesised multi-mediated model with latent variables (Model 1) fitted the data quite well, except for TLI= .89. Following modification indices, we correlated the error terms of items 2 and 3 (both from the future employability scale) and items 7 and 9 (both from the trustworthiness in the teachers' ability scale). These covariances of item errors indicate similar conceptual content, since they present a unique variance origin (Brown, 2015). The new fit (Model 2) improved, showing adequate fit indices (Table 2).

Table 2. Fit indices of the multi-mediated model with latent variables.

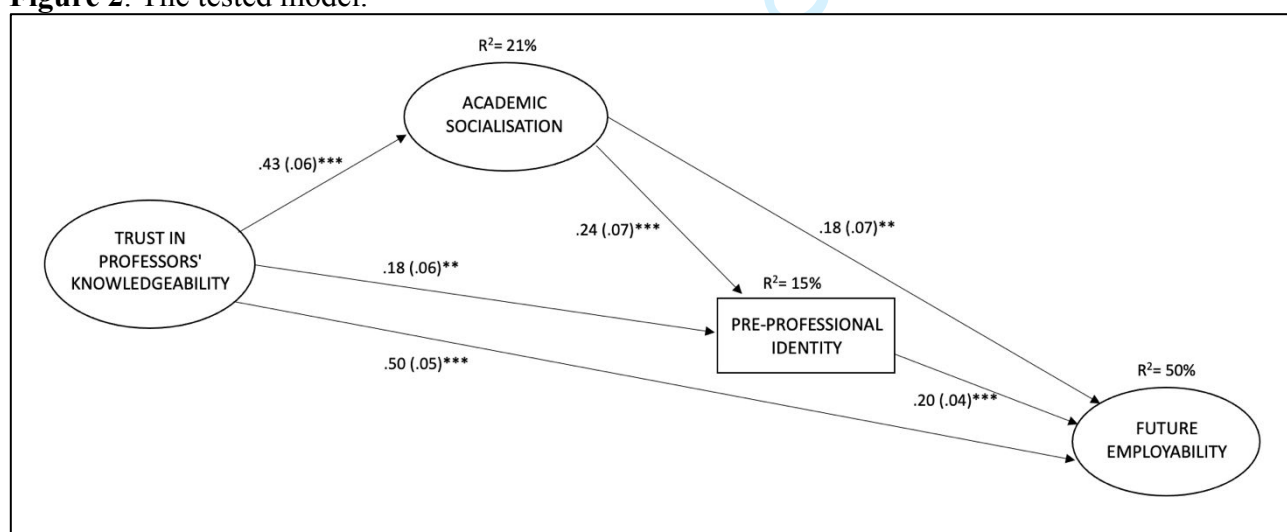
Models	X ² (df)	CFI	TLI	RMSEA	SRMR
<i>Model 1:</i> Multi-mediated model without correlations	432.044 (105)	.909	.885	.072	.056
<i>Model 2:</i> Multi-mediated model with error terms correlations	297.771 (103)	.946	.930	.056	.048

Hypothesis 1 predicted that trustworthiness in the teachers' ability would be positively related to future employability. As shown in Figure 2, trustworthiness was positively and strongly related to employability ($B = .497$, $p = .000$), providing support for it. Hypothesis 2

proposed that academic socialisation would mediate the relationship between trustworthiness and perceived employability. Our results confirmed this mediation path (estimate = .077, 95% bootstrap CI: .030 to .123) that explained 21% of the variance of the direct effect. Hypothesis 3 stated that pre-professional identity would mediate the relationship between trustworthiness and perceived employability. Results confirmed the existence of this mediation path (estimate = .036, 95% bootstrap CI: .013 to .059), which explained 15% of the variance of the direct effect. Finally, Hypothesis 4 proposed the existence of a multi-mediating effect through both academic socialisation and pre-professional identity in the trustworthiness-employability relationship. Our results also provided support for this hypothesis (estimate = .021, 95% bootstrap CI: .008 to .034).

Moreover, future employability was negatively related to age ($B = -.134$; $p = .000$) and positively to degree courses ($B = .093$; $p = .007$), meaning that students who are further in their academic careers felt less employable compared to those in the early stages; and that Psychology students felt less employable than those attending other courses. Identification as well was positively related to degree courses ($B = .078$, $p = .042$), meaning that Psychology students felt less employable than others, and to hours of studying ($B = .113$, $p = .004$), the more identified undergraduates being also more engaged in studying. Finally, academic socialisation was positively related to age ($B = .101$, $p = .019$) and to hours of studying ($B = .103$, $p = .030$), that is the more socialised undergraduates are also more engaged and further in their academic careers.

Figure 2. The tested model.



Note: Age, hours of studying and degree courses were the main control variables. Standardised parameter estimates for the relationships are included in the research multi-mediating model. Standard errors are within parentheses. * $p < .05$; ** $p < .01$; *** $p < .001$.

Discussion

The present study examined how specific forms of capital impact the perceived employability of undergraduates. The findings revealed that trust in knowledgeable teachers acted as a relational capital capable of strengthening the undergraduates' sense of employability both directly and indirectly, mobilising their understanding of the academic context and role (part of their cultural capital) and pre-professional identity development (part of their identity capital).

Theoretical and practical implications

These findings offer preliminary empirical support for the capital model in several ways. Firstly, they support the model conceptualisation by showing how several forms of capital shape undergraduate employability, complementing the well-established human capital contribution (Donald *et al.*, 2019; Donald *et al.*, 2024; Clarke, 2018; Petruzzello *et al.*, 2024; Tomlinson, 2017). Secondly, the study proposes a potential operationalisation of capital, showing how each of the different forms of capital (i.e., social, cultural and identity capitals) can be actualised in specific constructs that foster employability (in this study, respectively, trustworthiness, socialisation and pre-professional identity). Thirdly, the tested model shows how each form of capital relates to employability and how the interplay among them contributes to a comprehensive path that enhances undergraduates' employability. Indeed, the tested model shows that each form of capital represents a resource affecting the degree undergraduates' sense of being employable both directly and indirectly, through a dual process fostering their capability to understand and foresee future work contexts, and a progressively clearer definition of the desired future professional identity.

This study also offers insights by focusing on the whole undergraduate academic career and positing it as a crucial liminal space where undergraduates initiate their employability efforts and continue to negotiate their identities and build resources (Jackson, 2016; Holmes, 2015; Tomlinson, 2023). Throughout this period, students actively shape tentative professional identities, also thanks to comparisons and negotiations with significant others, in this study trusted teachers in HE (Niedlich *et al.*, 2021). These processes usually unfold with low awareness. However, HE can also actively and continuously empower these processes through dedicated policies and interventions. For instance, universities can implement interventions for undergraduates aimed at intertwining their human capital, developed through academic courses, with a deeper understanding of the future professional context. Among

1
2
3 them, are *mentorship programs*, where mentors (e.g., alumni, professionals) can offer
4 valuable guidance, advice, and insights to help students navigate their career paths; *internship*
5 *experiences* in real-world settings, that enhance students' skills while enabling them to build
6 relationships with professionals in their field; and *diversity and inclusion initiatives* to create a
7 welcoming and inclusive environment for undergraduates, emphasising the value of diversity
8 in the workplace and fostering a climate of psychological safety that allow exploring their
9 own identities (e.g., unique knowledge and attitudes, professional expectations, cultural
10 backgrounds). Overall, these interventions can provide students with information, raise
11 awareness of the context, and promote reflexivity on the interplay between theories and
12 professional practices in use, thus paving the way to develop HE students' social, cultural and
13 identity capital.

14
15 Concurrently, universities can implement interventions targeting HE-level educators
16 aimed to enhance their awareness of the modelling role they play in shaping undergraduates'
17 future professional identities and establishing connections with the labour market. For
18 instance, HE may offer training and professional development programmes for teachers and
19 other educators, to support their role in promoting and mediating students' own professional
20 identities, knowledge, and practices. Teachers can so empower this function by encouraging
21 work-integrated learning experiences during their classes, such as inviting experts or
22 professionals, conducting workshops, supervising internship activities, sharing professional
23 experiences, and analysing case studies. These and other interventions can help
24 undergraduates anticipate the feeling of being part of a professional community and develop
25 their employability.

26
27 Overall, higher education institutions may fulfil a foremost function for anticipatory
28 socialisation by providing models of core professional features and ways to perform
29 professional practices that help undergraduates to reflect on "who they are" and "who they
30 want to be", start defining their desired professional self, and adjust behaviours, feelings and
31 thoughts in line with the foreshadowed future professionalism (Fugate *et al.*, 2004). In other
32 words, universities represent a "transition bridge" for employability, allowing their
33 undergraduates to assess different opportunities, various roles, and multiple identities through
34 social interaction with knowledgeable actors (Ashforth, 2001; Sluss *et al.*, 2012; Smith,
35 2010). The role of significant others, such as HE teachers and also other professional
36 practitioners, may be crucial; especially for those who do not have family-derived capitals.

37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 ***Limitations and research future directions***

1
2
3 The current study has several limitations that warrant consideration. Firstly, the cross-
4 sectional design of the research hinders a comprehensive examination of the mediation paths,
5 thus future longitudinal studies should be conducted to confirm our results. Furthermore,
6 convenience sampling led to a prevalence of psychology students. Although this aspect was
7 controlled for in the model, the results showed some specific effects. Therefore, future studies
8 could provide a granular analysis of possible differences depending on the course of study
9 (e.g., stem degrees vs non-stem). Additionally, the exclusive reliance on self-reported data
10 implies the possibility of methodological bias (Podsakoff *et al.*, 2003). Future research should
11 strive to include objective indicators of success in the university-to-labour market transition,
12 such as effective employment or other outcomes (Donald *et al.*, 2024).

20
21 Another limitation is the broad interpretation of the role of teachers, which may vary
22 across different national and academic contexts. Future studies could analyse in more detail
23 how the several actors composing the academic staff contribute to the employment process.
24 They could also focus on cross-cultural comparison, considering the specificities of national
25 backgrounds and differences in the labour market occupational prospects for graduates, thus
26 contributing to generalising results to other EU or non-European countries. Moreover, while
27 we treated teachers as a collective entity, it's worth exploring how the perceived
28 trustworthiness of individual teachers as specific epistemic sources (Kruglanski *et al.*, 2009)
29 may affect HE students' preprofessional identity and, in turn, their employability.
30 Furthermore, in case of low trust or even distrust, the enabling role of HE teachers may be
31 ineffective in supporting model practices and behaviours, thus further studies could explore
32 whether and how they engender counter-productive patterns.

41 In general, forthcoming studies grounded in the capital model could contribute to its
42 enhancement by additional constructs for operationalising different forms of capital. This
43 would result in a nuanced conceptualisation capable of capturing specific and multifaceted
44 features associated with each form of capital. To gain a deeper understanding of the
45 relationships between forms of capital and employment, future studies should also consider
46 the interplay with other forms of capital such as the psychological capital, related to
47 individuals' attitudes (e.g., self-efficacy, optimism, proactivity, learning orientation). As well,
48 some contextual variables (such as differences in degree courses, Caricati *et al.*, 2016; or
49 student employment, Jackson, 2024) or other external factors (Clarke, 2018; Donald *et al.*,
50 2024) might play a buffering role in undergraduates' agency and the onset of a sense of
51 employability.
52
53
54
55
56
57
58
59
60

Ethical approval: Institutional Review Board of Department of Psychology, Sapienza University of Rome, prot. 00152.

References

- AlmaLaurea (2023). *Rapporto 2023 sul profilo e sulla condizione occupazionale dei laureati*. https://www.almalaurea.it/sites/default/files/2023-06/3_Sintesi_RapportoAlmaLaurea2023_0.pdf
- Anderson, V., and Tomlinson, M. (2021), "Signaling standout graduate employability: The employer perspective", *Human Resource Management Journal*, Vol.31, No.3, pp.675-693.
- Artes, J, Hooley, T. and Mellors-Bourne, R. (2017), *Employability: A review of the literature 2012-2016*, Higher Education Academy, York.
- Ashforth, B.K. (2001), *Role transitions in organizational life. An identity-based perspective*. Routledge.
- Ashforth, B.K., and Saks, A.M. (1996), "Socialization tactics: Longitudinal effects on newcomer adjustment", *Academy of Management Journal*, Vol.39, pp.149-178.
- Bachmann, R., Gillespie, N., and Priem, R. (2015), "Repairing trust in organizations and institutions: Toward a conceptual framework", *Organization Studies*, Vol.36, No.9, pp.1123-1142.
- Bandura, A. (2016), The power of observational learning through social modeling. In R. Stenberg, S. Fiske, and D. Foss (eds) *Scientists making a difference* (pp.235-239).
- Becker, T.E. (2005), "Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations", *Organizational Research Methods*, Vol.8, No.3, pp.274-289.
- Bentler, P.M. (1990), "Comparative fit indexes in structural models", *Psychological Bulletin*, Vol.107, pp.238-246.
- Bergami, M., and Bagozzi, R.P. (2000), "Self-categorization, affective commitment, and group self-esteem are distinct aspects of the organisation's social identity", *British Journal of Social Psychology*, Vol.39, pp.555-577.
- Brown, T.A. (2015), *Confirmatory factor analysis for applied research*, Guilford publications.
- Caricati, L., Chiesa, R., Guglielmi, D., and Mariani, M.G. (2016), "Real and perceived employability: a comparison among Italian graduates", *Journal of Higher Education Policy and Management*, Vol.38, No.4, pp.490-502.
- Clarke, M. (2018), "Rethinking graduate employability: The role of capital, individual attributes and context", *Studies in Higher Education*, Vol.43, No.11, pp.1923-1937.
- Connor, H., Tyers, C., Modood, T., and Hillage, J. (2004), "Why the difference? A closer look at higher education minority ethnic students and graduates", *Institute for Employment Studies research report*, p.552.
- Day, A.L., and Livingstone, H.A. (2003), "Gender differences in perceptions of stressors and utilization of social support among university students", *Canadian Journal of Behavioural Science/Revue Canadienne Des Sciences Du Comportement*, Vol.35, No.2, pp.73-83. <https://doi.org/10.1037/h0087190>
- Donald, W.E., Baruch, Y., and Ashleigh, M. (2019), "The undergraduate self-perception of employability: Human capital, careers advice, and career ownership". *Studies in Higher Education*, Vol.44, No.4, pp.599-614.
- Donald, W.E., Baruch, Y., and Ashleigh, M.J. (2024), "Construction and operationalisation of an Employability Capital Growth Model (ECGM) via a systematic literature review (2016-2022)", *Studies in Higher Education*, Vol.49, No.1, pp.1-15.
- Edmond, V.P., Brannon, D.L., Stewart, A., and Williams, J. (2017), "Gender differences in entrepreneurial leadership skills training", *Global Journal of Entrepreneurship*, Vol.1, pp.32-52.
- Farnese, M.L., Benevene, P., and Barbieri, B. (2022), "Learning to trust in social enterprises: The contribution of organisational culture to trust dynamics", *Journal of Trust Research*, Vol.12, No.2, pp.153-178.

- 1
2
3 Farnese, M.L., Spagnoli, P., and Livi, S. (2022), "Undergraduates' academic socialization. A
4 cross-time analysis", *British Journal of Educational Psychology*, Vol.92, No.4, pp.1239-1255.
- 5 Fugate, M., Kinicki, A., and Ashforth, B. (2004), "Employability: A psycho-social construct, its
6 dimensions, and applications", *Journal of Vocational Behavior*, Vol.65, pp.14-38.
- 7 Gelderblom, D. (2018). "The limits to bridging social capital: Power, social context and the theory of
8 Robert Putnam". *The Sociological Review*, Vol.66, No.6, pp.1309-1324.
- 9 Golde, C.M. (1998), "Beginning graduate school: Explaining first-year doctoral attrition". In M.S.
10 Anderson (Ed.), *The experience of being in graduate school: An exploration* (pp.55-64). Jossey-
11 Bass, San Francisco.
- 12 González-Romá, V., Gamboa, J.P., and Peiró, J.M. (2018), "University graduates' employability,
13 employment status, and job quality", *Journal of Career Development*, Vol.45, No.2, 132-149.
- 14 Handley, K. (2018), "Anticipatory socialization and the construction of the employable graduate: A
15 critical analysis of employers' graduate careers websites", *Work, Employment and Society*,
16 Vol.32, No.2, pp.239-256.
- 17 Haueter, J., Hoff Macan, T., and Winter, J. (2003). Measurement of newcomer socialization: Construct
18 validation of a multidimensional scale. *Journal of Vocational Behavior*, Vol.63, pp.20-39.
- 19 Hinchliffe, G.W., and Jolly, A. (2011). Graduate identity and employability. *British Educational
20 Research Journal*, Vol.37, No.4, pp.563-584.
- 21 Hogg, M.A. (2000), "Subjective uncertainty reduction through self-categorization: A motivational
22 theory of social identity processes", *European Review of Social Psychology*, Vol.11, No.1, pp.223-
23 255.
- 24 Holmes, L. (2013), "Competing perspectives on graduate employability: possession, position or
25 process?", *Studies in Higher Education*, Vol.38, No.4, pp.538-554.
- 26 Holmes, L. (2015), "Becoming a graduate: The warranting of an emergent identity", *Education +
27 Training*, Vol.57, No.2, 219-238. doi: 10.1108/ET-08-2013-0100
- 28 Hu, L. and Bentler, P.M. (1999), "Cutoff criteria for fit indexes in covariance structure analysis:
29 Conventional criteria versus new alternatives", *Structural Equation Modeling*, Vol.6, pp.1-55.
- 30 Istat (2022). *Livelli di istruzione e ritorni occupazionali, anno 2021*.
31 <https://www.istat.it/it/files/2022/10/Livelli-di-istruzione-e-ritorni-occupazionali-anno-2021.pdf>
- 32 Jackson, D. (2016), "Re-conceptualising graduate employability: The importance of pre-professional
33 identity", *Higher Education Research and Development*, Vol.35, pp.925-939.
- 34 Jackson, D. (2024), "The relationship between student employment, employability-building activities
35 and graduate outcomes", *Journal of Further and Higher Education*, Vol.48, No.1, pp.14-30.
- 36 Jackson, D., and N. Wilton (2017), "Perceived employability among undergraduates and the
37 importance of career self- management, work experience and individual characteristics" *Higher
38 Education Research & Development*, Vol.36, No.4, pp.747-762.
- 39 Johansen, V. (2013), "Entrepreneurship education and start-up activity: A gender perspective",
40 *International Journal of Gender and Entrepreneurship*, Vol.5, pp.219-231.
- 41 Jungermann, H., Pfister, H.R., and Fischer, K. (1996), "Credibility, information preferences, and
42 information interests", *Risk analysis*, Vol.16, No.2, pp.251-261.
- 43 Kline, R. (2016), *Principles and practice of structural equation modelling*. New York: Guilford Press.
- 44 Korte, R., and Lin, S. (2013), "Getting on board: Organizational socialization and the contribution of
45 social capital", *Human Relations*, Vol.66, No.3, 407-428.
- 46 Kruglanski, A.W., Dechesne, M., Orehek, E., and Pierro, A. (2009), "Three decades of lay epistemics:
47 The why, how, and who of knowledge formation", *European Review of Social Psychology*, Vol.20,
48 No.1, pp.146-191.
- 49 Lo Presti, A., and Pluviano, S. (2016), "Looking for a route in turbulent waters: Employability as a
50 compass for career success", *Organizational Psychology Review*, Vol.6, No.2, pp.192-211.
- 51 Lo Presti, A., Costantini, A., Akkermans, J., Sartori, R., & De Rosa, A. (2023), "Employability
52 development during internships: A three-wave study on a sample of psychology graduates in
53 Italy", *Journal of Career Development*, Vol.50, No.6, pp.1155-1171. 08948453231161291.
- 54 Louis, M.R. (1980), "Surprise and sense making: What newcomers experience in entering unfamiliar
55 organizational settings", *Administrative Science Quarterly*, Vol.25, pp.226-251.
- 56 Mayer, R.C., and Davis, J.H. (1999). The effect of the performance appraisal system on trust for
57 management: A field quasi-experiment. *Journal of Applied Psychology*, 84, 123-136.
- 58
59
60

- Muthen, L., and Muthen, B. (2012), *Mplus version 7 user's guide: Version 7*. Muthen and Muthen, 850.
- Myers, S.A., and Knox, R.L. (2001), "The relationship between college student information-seeking behaviors and perceived instructor verbal behaviors", *Communication Education*, Vol.50, pp.343-356. doi:10.1080/03634520109379260
- Niedlich, S., Kallfaß, A., Pohle, S., & Bormann, I. (2021), "A comprehensive view of trust in education: Conclusions from a systematic literature review", *Review of Education*, Vol.9, No.1, pp.124-158.
- Padgett, R.D., Goodman, K.M., Johnson, M.P., Saichaie, K., Umbach, P.D., and Pascarella, E.T. (2010), "The impact of college student socialization, social class, and race on need for cognition", *New Directions for Institutional Research*, Vol.145, pp.99-111.
- Paterson, J., Higgs, J., Wilcox, S., and Villeneuve, M. (2002), "Clinical reasoning and self-directed learning: Key dimensions in professional education and professional socialisation", *Focus on Health Professional Education*, Vol.4, No.2, pp.5-21.
- Pearce, J. (2000), "Employability as trustworthiness". In: Leana, C. and Rousseau, D. (eds) *Relational wealth: The advantages of stability in a changing economy*. Oxford: Oxford University Press, pp.79-90.
- Petruzzello, G., Nimmi, P.M., & Mariani, M.G. (2024), "The dynamics of employability capitals for the transition to work: Career identity, cultural capital, job interview self-efficacy and self-perceived employability", *Higher Education, Skills and Work-Based Learning*, Advanced Online Publication. <https://doi.org/10.1108/HESWBL-01-2024-0015>
- Qenani, E., MacDougall, N., and Sexton, C. (2014), "An Empirical Study of Self-Perceived Employability: Improving the Prospects for Student Employment Success in an Uncertain Environment", *Active Learning in Higher Education*, Vol.15, No.3, pp.199-213.
- Raviv, A., Bar-Tal, D., Raviv, A., Biran, B., and Sela, Z. (2003), "Teachers' epistemic authority: Perceptions of students and teachers", *Social Psychology of Education*, Vol.6, No.1, pp.17-42.
- Reid, A., Dahlgren, L.O., Petocz, P., and Dahlgren, M.A. (2008), "Identity and engagement for professional formation", *Studies in Higher Education*, Vol.33, No.6, pp.729-742. <https://doi.org/10.1080/03075070802457108>
- Romero, L.S. (2015), "Trust, behavior, and high school outcomes", *Journal of Educational Administration*, Vol.53, pp.215-236.
- Rothwell, A., Jewell, S., and Hardie, M. (2009), "Self-perceived employability: Investigating the responses of post-graduate students", *Journal of Vocational Behavior*, Vol.75, No.2, pp.152-161.
- Shields, N. (2002), "Anticipatory socialization, adjustment to university life, and perceived stress: Generational and sibling effects", *Social Psychology of Education*, Vol.5, No.4, pp.365-392.
- Sluss, D.M., Ployhart, R.E., Cobb, M.G., and Ashforth, B.E. (2012), "Generalizing newcomers' relational and organizational identifications: Processes and prototypicality", *Academy of Management Journal*, Vol.55, pp.949-975.
- Smith, V. (2010), "Enhancing employability: Human, cultural, and social capital in an era of turbulent unpredictability", *Human Relations*, Vol.63, No.2, pp.279-300.
- Taormina, R. (2004), "Convergent validation of two measures of organizational socialization", *The International Journal of Human Resource Management*, Vol.15, pp.76-94.
- Tomlinson, M. (2012), "Graduate employability: A review of conceptual and empirical themes", *Higher Education Policy*, Vol.25, No.4, pp.407-431.
- Tomlinson, M. (2017), "Forms of graduate capital and their relationship to graduate employability", *Education+ Training*, Vol.59, No.4, pp.338-352. doi: 10.1108/ET-05-2016-0090
- Tomlinson, M. (2021), "Employers and Universities: Conceptual dimensions, research evidence and implications", *Higher Education Policy*, Vol.34, No.1, pp.132-154.
- Tomlinson, M. (2023), "Conceptualising transitions from higher education to employment: Navigating liminal spaces", *Journal of Youth Studies*, pp.1-18.
- Tomlinson, M., McCafferty, H., Port, A., Maguire, N., Zabelski, A.E., Butnaru, A., ... and Kirby, S. (2022), "Developing graduate employability for a challenging labour market: the validation of the graduate capital scale", *Journal of Applied Research in Higher Education*, Vol.14, No.3, pp.1193-1209.
- Tomlinson, M., and Jackson, D. (2021). "Professional identity formation in contemporary higher education students". *Studies in Higher Education*, Vol.46, No.4, pp.885-900.

- 1
2
3 Trede, F., Macklin, R., and Bridges, D. (2012), "Professional identity development: A review of the
4 higher education literature", *Studies in Higher Education*, Vol.37, No.3, pp.365-384.
5 Trevor-Roberts, E. (2006), "Are you sure? The role of uncertainty in career", *Bulletin of Employment
6 Counseling*, Vol.43, No.3, pp.98-116.
7 Tschannen-Moran, M. (2004), *Trust Matters: Leadership for Successful Schools*, Jossey-Bass, San
8 Francisco.
9 Weidman, J.C., DeAngelo, L., and Bethea, K.A. (2014), "Understanding student identity from a
10 socialization perspective", *New Directions for Higher Education*, Vol.166, pp.43-51.
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60