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Career Competencies and Career Success: On the Roles of Employability Activities and Academic Satisfaction During the School-to-Work Transition

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Abstract

Building on the integrative career competencies framework, we examined the indirect association between career competencies, assessed at graduation, and subjective career success (SCS) via employability activities, both assessed six months after graduation, among a sample of 613 Italian graduates. We also examined the moderating role of three facets of academic satisfaction (i.e., vocational choice, educational goals, and occupational prospects). Our findings showed an indirect relation between career competencies and SCS through employability activities. Furthermore, academic satisfaction acted as a moderator. The results of this time-lagged study, that tapped into the actual transition into work process, have implications for (1) school-to-work transitions, providing insights into graduates' transition into the labor market, (2) employability, focusing on employability activities and providing additional knowledge on their antecedents and outcomes, and (3) career competencies, providing further empirical evidence that career competencies are an important resource that graduates can mobilize to during and after their school-to-work transition.

Keywords

school-to-work transition, career competencies, employability, subjective career success, academic satisfaction

In an era when long-term organizational careers are often no longer the norm, graduates continually strive to find suitable employment (Tomlinson, 2012). Matsumoto and Elder (2010) argued that

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"today's young generation are the most highly educated in world history. Nevertheless, many young men and women encounter difficulties in entering and remaining in the labour market" (p. 1). A problematic start on the labor market can negatively impact both early and long-term career success (Blossfeld, 2008; Burgess et al., 2003; Ng & Feldman, 2007). Furthermore, De Vos et al. (2019) argue that the process of entering the labor market has fundamentally changed from a one-off occupational choice to a more dynamic process of career crafting, posing additional challenges to today's graduates. Recent labor market statistics support this notion. For instance, European recent graduates' employment rate was 82.9% in 2016 against 86.1% in 2007 (Eurostat, 2018). Moreover, the unemployment rate among newcomers is typically considerably higher than among other kinds of job seekers (Eurostat, 2019).

Researching the school-to-work transition is particularly relevant now given the recent COVID-19 pandemic. The McKinsey Global Institute estimated that Europe's unemployment rate could almost double in the next months as a result of the pandemic (Chinn et al., 2020). These major economic effects may impact even more strongly on young adults entering the labor market, as research has shown that this group is especially vulnerable to labor market instabilities, also in light of the COVID-19 pandemic (Bell & Blanchflower, 2020). Indeed, Blustein et al. (2020) argued that youth were already a vulnerable group before the crisis and are at even greater risk of unemployment now, making it even more relevant to study factors that could facilitate their transition into work. Furthermore, Akkermans et al. (2020) argued that the pandemic will be a career shock for many people and, highlighting the importance of the dynamic interplay between individual and contextual factors, argued that some psychosocial resources, among which career competencies and employability, could make this career shock more manageable, thus helping young adults cope with the transition more effectively. These developments indicate that more scholarly, along with policy-level and educational, attention is needed to better understand and, as a result, increase graduates' labor market chances and early career success.

This study specifically zooms in on Italian graduates, as the transition into working life has been particularly challenging there in recent years. Since the 2008 economic crisis, welfare reforms have modified labor market regulations, which has affected young people's early careers. Furthermore, the expansion of higher education in Italy is not matched by an increasing demand for high and qualified human capital (Rostan & Stan, 2017). Consequently, new graduates feel that they have little chance to enter successfully into the labor market, and initiatives to enhance graduate employability may not impact their perception to be enough able to find a job. Indeed, Italian graduates' employment rate 1 year after graduation was 73.9% in 2016 against 80.5% in 2007 (Almalaurea, 2018). This context of low employment rates and poor employability prospects makes the Italian context especially relevant to study in light of early career success.

The school-to-work transition is the first major career transition in most peoples' lives, and it can be characterized as the period in which an individual transitions from their role as a student and takes on the role of a worker (cf. De Vos et al., 2019). During this transition process, young people need to socialize into the labor market and form their vocational identity. To assess whether they go through this transition effectively, it makes sense to gauge their early career success (González-Romá et al., 2018; Wendlandt & Rochlen, 2008), as this can be predictive of their long-term career success. Although it is known that high-quality education is reliably associated with career success, the effects are relatively small (Hogan et al., 2013). Consequently, graduates are becoming increasingly aware that academic credentials are not enough to find a suitable job (Buhl et al., 2018; Tomlinson, 2012): To achieve early career success in this turbulent labor market, they need to develop their career competencies (Akkermans et al., 2013; Kuijpers & Scheerens, 2006). Savickas and Porfeli (2012) argued that career competencies can support young individuals to make sense of their personal qualities and motivations and thus form strategies to adequately move toward sustainable employment. Moreover, career competencies can serve as a foundation for actively enhancing employability

(Rothwell et al., 2009), which can be an important starting point for achieving early career success (Akkermans & Tims, 2017). Indeed, employers look for employees who can adapt and act quickly in the ever-changing world of work. As such, career competencies and active investments in employability, which allow graduates to learn and be adaptable, become crucial for a successful transition to work (Kuijpers et al., 2006), which has been supported by prior empirical research (Akkermans & Tims, 2017; Blokker et al., 2019).

It is likely that the process of achieving early career success through career competence development and employability activities is influenced by the perceptions that young workers have about the usefulness and preparation that their studies offered in transitioning to the labor market. More specifically, high levels of satisfaction with one's vocational program and the occupational prospects that it offers represent the overall quality of a university degree and, as such, form an indication of how the educational context might impact how graduates can become employable and successful. Indeed, graduates' satisfaction with academic resources significantly predicts perceived employment preparation (Martin et al., 2000), suggesting that individual competencies and the educational program jointly impact a successful school-to-work transition.

In all, our study examines a moderated mediation model in which academic satisfaction moderates the indirect relationship between career competencies and career success via employability activities among Italian young graduates. In doing so, our study offers three contributions to the literature. First, while most studies either focus on the preparation for the transition or the phase after the transition, we evaluated the actual transition period, starting at graduation and up until 6 months after. This sheds more light on what occurs during this period of transition (Liu & Nguyen, 2011). Second, most recent employability studies have used either competence-based or perceived approaches (cf. Forrier et al., 2015; Vanhercke et al., 2014). We focused on the *activities* graduates enacted to enhance their employability. In that sense, it fits in recent contributions emphasizing the role of career crafting (cf. Akkermans & Tims, 2017) by examining the interaction between competencies and behavior as antecedents of school-to-work transitions. Third, we add to the literature on career competencies by examining their role during the school-to-work transition. Although there is research about the value of career competencies before (Akkermans et al., 2018) and after (Blokker et al., 2019) the school-to-work transition, much less is known about how these competencies may enable graduates to actively enhance their employability and achieve success. Moreover, studying the interaction between their educational background (here, satisfaction with one's educational program) and career competencies adds to our understanding of boundary conditions in the career competencies—career success relationship.

Career Competencies and Early Career Success

Today's rapidly changing economic environment pushes emerging adults to be prepared with psychosocial resources useful for adjusting to the changes in the world of work. Defining career goals, searching for a job, and discovering what is expected from them in their new professional role are just a few examples of the challenges graduates are confronted with to achieve career success during their transition to work (Mackenzie Davey & Arnold, 2000). Such less linear and less stable career paths—which are often the very case for graduates—push individuals to attach importance to other aspects such as values expression, work meaningfulness, and social responsibility (cf. Spurk et al., 2019). This has made subjective career success (hereafter, SCS) a particularly important construct (Colakoglu, 2011). In this study, we refer to SCS as an individual's evaluation of achieving personally meaningful career outcomes (Rothwell & Arnold, 2007).

Given this premise, the development of career competencies is believed to play a critical role in graduates' career success (cf. Akkermans & Tims, 2017). Individuals with extensive career competencies have a diverse and transferable set of career-relevant skills and job-related knowledge that can be applied to a variety of employment settings. As such, developing career competencies is an important

foundation for achieving early career success. In this study, we define career competencies as "knowledge, skills, and abilities central to career development, which can be influenced and developed by the individual" (Akkermans et al., 2013, p. 249). Career competencies consist of *reflective* (i.e., reflecting on motivation and skills), *communicative* (i.e., networking and self-profiling), and *behavioral* (i.e., exploration and control) elements. Following the framework of Akkermans et al., and in line with recent work on career crafting, which has argued that it is about proactive career reflection and career construction (Tims & Akkermans, 2020), we focus on these two elements in our study. That is, the reflective (i.e., cognitive) aspect of career competencies is represented by career self-efficacy and career insight and the construction (i.e., behavioral) aspect by career planning. For recent graduates, it is especially important that they are adept at reflecting on their career preferences and strengths (Dacre Pool & Sewell, 2007). Therefore, we look at career insight, which focuses on the awareness of the adequate interplay between one's career objectives and individual characteristics, and at career self-efficacy, which concerns the extent of confidence an individual can count on while pursuing career-related goals (cf. Day & Allen, 2004; Kossek et al., 1998). Furthermore, graduates need to be able to mobilize their goals and skills through deliberate planning, in the form of career planning, referring to the ability to successfully implement the necessary steps for achieving one's desired career objectives (cf. Gould, 1979).

Empirical research supports the idea that career competencies are positively related to early career success. For example, Akkermans and Tims (2017) showed that career competencies allowed young workers to more actively craft their jobs, which then positively related to career success. Furthermore, Blokker et al. (2019), in a sample of young professionals, showed that those who developed their career competencies reported higher levels of SCS. More specifically, higher levels of career self-efficacy have been shown to be positively related to job search behavior and employment outcomes among recent graduates (Pinquart et al., 2003), and career planning and career insight have been related positively to SCS (Kuijpers et al., 2006). Overall, the link between career competencies and career success is well established (Kuijpers et al., 2006), and there is also evidence for this relationship among graduates (Bridgstock, 2011) and young workers (Akkermans & Tims, 2017; Blokker et al., 2019).

Hypothesis 1: *Career competencies will be positively associated with SCS.*

The Mediating Role of Employability Activities

Employability refers to "an individual's chance of a job in the internal and/or external labour market" (Forrier & Sels, 2003; 106). As several scholars (e.g., Van der Heijde & Van der Heijden, 2006) have stressed, it depends on continuous learning, being adaptable to new job demands or shifts in expertise, and the ability to acquire skills through career moves in varied organizational contexts (Scholarios et al., 2008). The extent to which a graduate perceives themselves to be employable is derived from their self-perception as a future employee and the types of work-related competencies they are developing (Tomlinson, 2012). Hence, recent graduates with high levels of career competencies are also likely to actively invest in their employability enhancement.

Thus far, the predominant focus in employability research has been on employability perceptions and competencies (cf. Forrier et al., 2018; Vanhercke et al., 2014). However, the degree to which individuals actively engage in enhancing their employability—or employability activities—is underrepresented in most studies. Examples of employability activities are engaging in development actions and extending one's knowledge and experiences (van Dam, 2004). Importantly, career competencies and employability activities are different constructs. Whereas career competencies refer to possessing certain knowledge, skills, and abilities, employability activities tap into the actual behaviors that improve people's chances of employment.

Seen from this perspective, we argue that employability activities might be the linking pin between being career competent and being successful in one's career. In other words, we expect that graduates who have developed their career competencies—for example, they are more self-aware and have clearer career goals—are likely to invest more actively in their employability development. These activities will subsequently trigger them to feel more successful as a result of an improved labor market attractiveness. Some recent empirical studies are consistent with this argument. In terms of the career competencies–employability activities association, Akkermans et al. (2015) showed that an intervention aimed to strengthen career competencies enhanced young adults' employability for the intervention group but not for a control group who did not participate in the intervention. Akkermans and Tims (2017) also showed a positive relationship between career competencies and employability among young workers. In terms of employability activities as the mediating mechanism, De Vos and Soens (2008) found that individuals with a protean career orientation experienced greater career success through the development of employability activities, such as information-seeking or social networking. Similarly, De Vos et al. (2011) demonstrated in a sample of highly educated professionals that career competency development related positively to perceived employability, which then associated with higher levels of SCS. In the specific case of Italian workers, Ingusci et al. (2016) found that employability activities mediated the association between meaning of work (i.e., individual beliefs, values, and representations of work) and job search behaviors among unemployed. Similarly, Lo Presti et al. (2018) found that employability activities mediated the association between being self-directed in one's career and SCS among Italian freelancers. These studies do not represent the exact process that we propose, yet they do provide empirical support for the theoretical idea that career competencies might enhance SCS through the active development of employability.

Hypothesis 2: *Employability activities will mediate the association between career competencies and SCS.*

Does Academic Satisfaction Make a Difference?

The career competencies–employability activities–career success relationship is likely to be impacted by the preparation that graduates have had during their study program. Academic satisfaction, which can be characterized as the satisfaction with the accomplishment of academic goals or aspirations (Kumar & Dileep, 2006), has received attention in the empirical literature (see Tessema et al., 2012, for a review) because good quality education provides better future learning opportunities. In fact, academic satisfaction is considered to be a domain-specific satisfaction in which graduates make a perception of their study program as an environmental factor that can offer adequate resources to enable their vocational goal pursuit (Lent et al., 2009).

The literature about graduate career development emphasizes that the satisfaction about their educational program has an important impact on graduates' career preparation (Nauta, 2007). Accordingly, levels of students' satisfaction with the resources they received from their educational program strongly affect their success during the early career (Aldridge & Rowley, 1998). Furthermore, Suldo et al. (2006) found in their meta-analysis that feelings and attitudes of students toward school were positively associated with their future levels of subjective well-being and life satisfaction. Furthermore, Martin et al. (2000) found that graduates' satisfaction with academic resources, student support services, and the institution's development of competencies played an important role in quality of perceived employment preparation. In all, this implies that a high level of satisfaction with the study program might be an important facilitating factor during graduates' transition to work. In this study, the following three specific aspects of academic satisfaction were evaluated: satisfaction for (1) vocational choice, (2) educational goals, and (3) occupational prospects. We chose these three following aspects of academic satisfaction because they refer to the key aspects of any individual's academic

experience (Pesch et al., 2018): its early beginning (i.e., vocational choice), the match between educational expected objectives and attained goals (i.e., educational goals), and its conclusion and the expected transition to the labor market (i.e., occupational prospects).

First, in terms of vocational choice, several studies have highlighted its importance for the future career. For instance, Porter and Umbach (2006) stressed the salience of the congruence between interests and major choice, while Tracey and Hopkins (2001) showed that students enrolled in university curricula that fit with their professional interests had better career outcomes. Second, as for satisfaction with educational goals, many studies have shown that satisfaction with university instruction is among the main aspects of academic satisfaction (Broder & Dorfman, 1994; Finaly-Neumann, 1994) and that it underlined the role of the university context in promoting an adequate preparation for the future career (Crebert et al., 2004). Finally, in regard to satisfaction for occupational prospects, the idea that one's degree will facilitate the transition into the labor market is well established in the literature. For example, Borden and Rajecki (2000) showed that graduates who perceived lower preparedness for the transition also reported lower employment prospects.

In sum, we argue that satisfaction with one's university program, as an a posteriori evaluation of graduates about the resources that their educational program offered them, serves as a contextual boundary factor that may enhance the process in which graduates use their career competencies to become more employable and, subsequently, more successful. In particular, we argue that it is likely that being satisfied with one's vocational choice, the attainment of the educational goals, and the occupational prospects, could strengthen the direct and indirect relationships between career competencies and SCS. First, when graduates are satisfied with their vocational choice, the attainment of their educational goals, and their occupational prospects, they experience a stronger person-career fit, making them better able to effectively mobilize their career reflections and actions into early career success. Second, academic satisfaction can moderate the indirect relationship of career competencies and career success via employability activities as graduates who use their career competencies to engage in employability activities will especially feel successful if they are satisfied with their academic experience.

Hypothesis 3: *The positive association between career competencies and SCS will be stronger when satisfaction for (a) vocational choice, (b) educational goals, and (c) occupational prospects are higher*.

Hypothesis 4: *The mediated relationship between career competencies and SCS via employability activities will be stronger when satisfaction for (a) vocational choice, (b) educational goals, and (c) occupational prospects are higher*.

Figure 1 depicts our research model.

Method

Participants and Procedure

Six-hundred thirteen graduates were surveyed at the time of graduation within a time span of two weeks before or after graduation. Participants were recruited at the time of graduation by checking university websites for graduation ceremonies' announcements, which is an official and mandatory institutional communication for universities in Italy. Then, trained researchers attended those graduation ceremonies for inviting potential participants; if attendance at those ceremonies was not possible, graduates were recruited through social networks (e.g., Facebook, LinkedIn). Graduates were invited to fill out an online questionnaire connecting to a weblink associated with the Google Forms platform, which is an online application developed by Google that allows to develop online questionnaires and easily collect and organize data. Participation was voluntary, no incentives were distributed, and informed

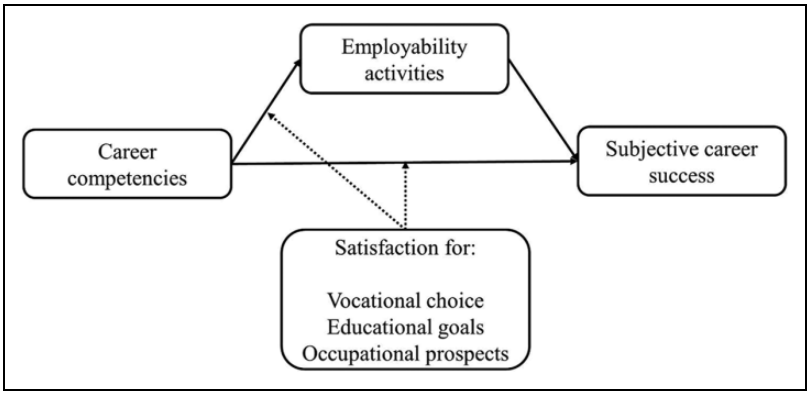

Figure 1. Research model. *Note.* Dotted lines are for moderated effects.

consent was obtained from all participants. All procedures followed were in accordance with the ethical standards and with the Helsinki Declaration of 1975, as revised in 2000. Participants had to provide their email address to be contacted again after six months; after that time, 350 participants filled out the second questionnaire (attrition rate = 42.90%), hence, subsequent analyses used this smaller sample (n = 350). At the time of graduation, mean age was 25.73 years (SD = 1.56). In regard to sex, 134 men (38.3%) and 216 women (61.7%) participated in the survey; 167 graduates (47.7%) had previous or current work experience. Missing data treatment was not necessary because responses to the questionnaires' items were all compulsory.

Measures

Career competencies (T1). A composite measure of 19 items evaluating career self-efficacy (Kossek et al., 1998; 10 items, e.g., "I avoid facing career difficulties"), career insight (Day & Allen, 2004; three items, e.g., "I have realistic career goals"), and career planning (Gould, 1979; six items, e.g., "I have a strategy for achieving my career goals") was used. Responses were given on a 5-point Likert-type scale (0 = *completely disagree*, 4 = *completely agree*). Cronbach's α was .90.

Academic satisfaction (T1). Three items were used for evaluating three following facets of academic satisfaction (Lodi et al., 2017): vocational choice (i.e., "I am satisfied for having chosen and attended this degree program"), educational goals (i.e., "I am satisfied because I think I achieved the educational/training goals that I set myself at the time of enrollment"), and occupational prospects (i.e., "I am satisfied because this degree program will have a positive effect on my future career"). Responses were given on a 5-point scale (0 = *not satisfied at all*, 4 = *completely satisfied*).

Employability activities (T2). The six-item scale by van Dam (2004), adapted for graduates, which evaluates the activities individuals undertake to improve and maintain their employability, such as extending their work experiences, and engaging in training activities (e.g., "I am actively trying to develop my knowledge and work experiences") was used. Responses were given on a 4-point Likert-type scale (1 = *completely disagree*, 4 = *completely agree*). Cronbach's α was .74.

SCS (T2). The eight-item scale by Rothwell and Arnold (2007) which evaluates the degree of satisfaction toward a wide array of career success aspects (e.g., "I am satisfied with the progress I have made toward meeting my goals for the development of new skills") was used. Responses were given on a 5-point Likert-type scale (1 = *completely disagree*, 5 = *completely agree*). Cronbach's α was .92.

Data Analysis

First, we controlled for indicators' asymmetry indexes. Then, to evaluate a measurement model concerning study variables, structural equation modeling analyses (Lisrel Version 9.3) using maximum likelihood estimation methods (along with the indicators' covariance matrix) were implemented. We relied on item parceling for estimating latent constructs because the sample size was too small for complying with the rule of at least 10 cases for each parameter to be estimated (Kline, 2015).[1] Item parceling has several advantages over item-level indicators, such as better model fit, more accurate parameter estimates, increased reliability, less biased estimates, and reduced levels of skewness and kurtosis (Bandalos, 2002; Little et al., 2002). Subsequently, a series of confirmatory factor analyses were estimated to evaluate the variables' distinctiveness.

We selected the fit indices that minimized the likelihood of Type I and Type II errors (Hu & Bentler, 1999). They are the χ^2, the comparative fit index (CFI), the nonnormed fit index (NNFI), the standardized root-mean-square residual (SRMR), and the root-mean-square error of approximation (RMSEA; with 95% confidence interval lower and upper limits, hereafter 95% CI [LL, UL]). A significant χ^2 can indicate a poor-fitting model, but as this test is affected by sample size, it is not reliable in larger ones. Typically, CFI and NNFI scores of $\geq$.90, and SRMR and RMSEA scores of $\leq$.10 are considered adequate, and scores of $\geq$.95 and $\leq$.08 good (Hu & Bentler, 1999).

The hypotheses were tested using maximum likelihood estimation and 1,000 bootstrap samples in Mplus Version 7.31 (Muthén & Muthén, 2015). First, we tested a model with career competencies as predictor, employability activities as mediator, and SCS as criterion variable, examining both direct and indirect effects. In the second step, we calculated a moderated mediation model to verify whether academic satisfaction moderated the direct and indirect relationships between career competencies and career success. The hypothesized moderated mediation model was estimated through latent moderated structural (LMS) equations method (Maslowsky et al., 2015). We established three baseline models derived from the mediation model by adding direct effects between high satisfaction and career success and between low satisfaction and career success. In this baseline model (M0), the interaction is not estimated and therefore assumed to be zero. Next, we added latent interactions to estimate the full LMS model. We obtained fit indices from the baseline model and compared the relative fit of the baseline model and the LMS model using a log-likelihood ratio test ($D = -2$[(log likelihood for Model 0) − (log likelihood for Model 1)]). The degrees of freedom (*df*) to determine the significance of D is calculated by subtracting the number of free parameters in Model 0 from the number of free parameters in Model 1 (Maslowsky et al., 2015).

Results

Descriptive Statistics and Factor Analyses

Parcels' asymmetry indexes were checked before estimating the measurement model. Asymmetry ranged between −.77 and .52, and kurtosis between −.87 and .78, showing that assumptions of normality were not violated (i.e., values were below the $\pm$1.96 cutoff as recommended by Schaufeli et al., 2006). A one-factor model ($\chi^2 = 962.09$, $df = 54$, RMSEA = .22, SRMR = .17, CFI = .62, NNFI = .53) was contrasted with a three-factor model with parcels loading on their respective latent variables ($\chi^2 = 123.06$, $df = 51$, RMSEA = .06, SRMR = .05, CFI = .97, NNFI = .96). The significant improvement from the one-factor to the three-factor model supports the distinctiveness between the three scales (i.e., career competencies, employability activities, and SCS).

Table 1 depicts descriptive statistics and zero-order correlations between study variables. Career competencies positively correlated with employability activities ($r = .17$, $p = .001$), and SCS ($r = .24$, $p < .001$). Employability activities positively correlated with satisfaction for educational goals ($r = .12$, $p = .023$), satisfaction for occupational prospects ($r = .11$, $p = .048$), and SCS ($r = .25$,

Table 1. Descriptive Statistics and Zero-Order Correlations.

	M (*SD*)	1	2	3	4	5
1. Career competencies	2.94 (0.60)	—				
2. Satisfaction for vocational choice	3.38 (0.93)	.37***	—			
3. Satisfaction for educational goals	3.36 (0.90)	.22***	.34***	—		
4. Satisfaction for occupational prospects	3 (1)	.40***	.58***	.42***	—	
5. Employability activities	3.04 (0.60)	.17**	.01	.12*	.11*	—
6. Subjective career success	2.54 (0.99)	.24***	.25***	.21***	.31***	.25***

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 2. Direct, Indirect, and Conditional Effects on Employability Activities and Subjective Career Success.

	Employability Activities	Subjective Career Success
	B	
Career competencies	.24**	.19**
Employability activities	—	.28**
R^2	.09**	.20***
Indirect effect		.12*
R^2	.05**	.10***
Conditional effects		
Career Competencies × Low Vocational Choice	.08	.12
Career Competencies × High Vocational Choice	.39**	.19*
Career Competencies × Low Educational Goals	.26*	.10
Career Competencies × High Educational Goals	.18	.23**
Career Competencies × Low Occupational Prospects	.20*	.06
Career Competencies × High Occupational Prospects	.16	.24*

*$p < .05$. **$p < .01$. ***$p < .001$.

$p < .001$). Finally, SCS positively correlated with satisfaction for vocational choice ($r = .25$, $p < .001$), educational goals ($r = .21$, $p < .001$), and occupational prospects ($r = .31$, $p < .001$).

Test of Hypotheses

We tested the hypothesized model including career competencies as a predictor, employability activities as a mediator, and SCS as a criterion variable. The final model (Table 2) showed an adequate fit to the data, $\chi^2(176) = 661.92$, $p = .00$, CFI = .97, TLI = .96, RMSEA = .06 [.04; .07], SRMR = .05, Akaike information criterion [AIC] = 7,693.14. SCS was positively predicted by career competencies ($B = .19$, $p < .001$) and employability activities ($B = .28$, $p = .044$). Moreover, an indirect effect of career competencies on SCS through employability activities was present ($B = .12$, $p = .03$; Browne–Cudeck Criterion = 0.004–0.008). Thus, Hypotheses 1 and 2 were supported. Career competencies and employability activities explained 20% of SCS ($p < .001$).

Subsequently, different models were computed to verify whether any of the three facets of academic satisfaction moderated the effects of career competencies on employability activities and SCS. We tested a base model (M0) for each of three facets of academic satisfaction. The Model 0 for satisfaction for vocational choice fitted the data very well, $\chi^2(120) = 221.193$, $p < .001$, CFI = .95, TLI = .94, RMSEA = .07 [.05; .08], SRMR = .08, AIC = 7,633.40. The relative fit of Model 1 versus Model 0 was determined via a log-likelihood ratio test, yielding a log-likelihood difference value of $D = 15.3$.

The difference in the number of free parameters between Model 0 (120) and Model 1 (118) was 2. Using a χ^2 distribution, this log-likelihood ratio test proved significant ($p = .02$), indicating that the null model (without the interaction effect) represents a significant loss in fit relative to the alternative model.

We tested Model 0 for satisfaction for educational goals. The fit index was adequate, $\chi^2(120) = 238.54$, $p < .001$, CFI = .94, TLI = .94, RMSEA = .07 [.06; .09], SRMR = .07, AIC = 7,690.91. Comparing the log-likelihood values of Model 0 and Model 1, the log-likelihood difference value of D was 14.3. Based on the number of free parameters of Model 0 (120) and Model 1 (117), the difference in free parameters = 3 ($p = .00$), which means that the full LMS model fitted the data very well.

Finally, we tested Model 0 for satisfaction for occupational prospects. The fit index was adequate, $\chi^2(120) = 224.505$, $p < .001$, CFI = .94, TLI = .94, RMSEA = .07 [.06; .08], SRMR = .06, AIC = 7,639.25. No indirect effect was significant. Comparing the log-likelihood values of Model 0 and Model 1, the log-likelihood difference value of D was 16.3. Based on the number of free parameters of Model 0 (120) and Model 1 (119), the difference in free parameters = 1 ($p < .001$).

As for conditional effects (see Table 2), the relationship between career competencies and employability activities was significant only at high levels of satisfaction for vocational choice ($B = .39$, $p = .01$). Contrary to what we assumed, the effect of career competencies on employability activities was significant only when satisfaction for educational goals ($B = .26$, $p = .01$) and satisfaction for occupational prospects ($B = .20$, $p = .04$) were low. Thus, Hypothesis 3b and 3c were not supported as the interaction was in a different direction than expected.

The effect of career competence on SCS was moderated by all the three facets of academic satisfaction: The effect of career competence on SCS was positive and significant only when satisfaction for vocational choice ($B = .19$, $p = .03$), satisfaction for educational goals ($B = .23$, $p = .01$), and satisfaction for occupational prospects ($B = .20$, $p = .04$) were high. These findings provide support for Hypotheses 4a, b, and c.

Discussion and Conclusions

In this study, we examined the indirect relationship between career competencies and career success via employability activities and the moderating role of academic satisfaction among a sample of Italian graduates. We argued that the school-to-work transition is a fundamental career stage during which the development of career competencies can support young individuals in making a smooth transition to the labor market through active employability development activities and, ultimately, career success. In addition, we hypothesized that satisfaction with the resources offered by one's educational program would strengthen this process. Our findings mostly supported our hypotheses: A mediation path was found between career competencies and SCS through employability activities, and all aspects of academic satisfaction moderated this indirect association. Surprisingly, we found that while the moderation effect of academic satisfaction on the career competency—career success relationship—was significant at high levels of satisfaction with vocational choice, it was only significant at low levels of satisfaction with goal achievement and occupational prospects.

Theoretical Implications

Our study has implications for research on (1) school-to-work transitions, (2) employability, and (3) career competencies. We elaborate on these implications below.

School-to-work transitions. Prior research has clearly established the importance of a smooth school-to-work transition for both early and long-term career outcomes (e.g., Blossfeld, 2008; Burgess et al., 2003). However, although this transition is typically divided into a pretransition (preparation) stage, a

transition stage, and posttransition (integration) stage, the vast majority of empirical studies has thus far focused on the pretransition and posttransition stages, not on the actual transition itself. Our study contributes to filling these lacunae in our knowledge by examining Italian graduates at the moment of graduation and then again 6 months later, thereby providing insights into their actual transition into the labor market. The findings indicate that a smooth transition—and thus, early career success—can be achieved if graduates actively craft their career in terms of building their career competencies and employability (cf. Akkermans & Tims, 2017). Furthermore, our study also shows that such career crafting can be especially effective when graduates perceive that their educational program provided them with a good career foundation. Specifically, when graduates were satisfied with their vocational choice, the attainment of their educational goals, and the occupational prospects that the program offered them, they were more likely to develop their employability and, ultimately, experience career success. In all, this underlines the importance of studying the interplay between graduates' career competencies and the educational context they were trained in.

Our findings also provide further support for the importance of building career competencies and engaging in career self-management during the school-to-work transition. Previous studies have shown that it is crucial for graduates to develop their career competencies early on (Akkermans et al., 2015) and be proactive in building their employability (Okay-Somerville & Scholarios, 2017); we add to this knowledge by introducing the role of academic satisfaction as a moderator in this process. More specifically, we show that, in the challenging period of transitioning from education into the labor market, graduates' satisfaction with their educational background is a driving force for their early career choices and success. Stated differently, satisfaction with one's preparation during education can be a powerful contextual resource that triggers young adults to actively craft their career (Tims & Akkermans, 2020).

Employability. Our study contributes to research on employability in several ways. First, whereas the dominant focus in employability research has been on competence-based employability (Van der Heijde & Van der Heijden, 2006) and perceived employability (Vanhercke et al., 2014), we assessed the actual activities that graduates engaged in to actively construct their employability. In line with our expectations, graduates' career competencies fed into these employability activities and actively building one's employability subsequently related to experiencing higher levels of early career success. These findings imply that actively investing in one's employability is an important behavioral mechanism that can mobilize people's competencies into actual success.

Although we found mostly support for the moderating role of academic satisfaction on the career competencies–employability activities–career success relationship, two surprising results deserve further discussion. We found that the association between career competencies and employability activities was only significant at low levels of satisfaction with achievement of educational goals and occupational prospects. Apparently, graduates with highly developed career competencies will especially start to develop their employability when they feel they have not reached their educational goals yet and when they are not satisfied with their prospects for a job. This implies that graduates might feel having a *deficit* in their employability because of the perceived unsatisfactory academic experiences they had in terms of educational goals and occupational prospects, which leads them to actively turn their career-related competencies into activities that can enhance their employability. In line with our expectations, satisfaction with vocational choice was a positive moderator, likely because making the "right" choice in your early career will make you even more enthusiastic to further develop your early career in that area.

We provide additional knowledge on antecedents and outcomes of employability (González-Roma et al., 2018). In particular, Forrier et al. (2018) argued that employability research has suffered from a blind spot of ignoring its contextual nature. In showing that the educational program that graduates

have completed is an important contextual resource that can enhance early career success, we contribute to knowledge of contextual influences on employability.

From a theoretical perspective, recent studies have theorized and tested that input-based forms of employability such as movement capital (Forrier et al., 2015) and employability capital (Peeters et al., 2019) will lead to output-based forms of employability such as perceived employability (Forrier et al., 2015). We add to this model of career mobility (Forrier et al., 2015) by showing that the actual activities that individuals engage in are also important to take into account. If we would speculate based on our findings, it would seem likely that employability activities might mediate between input-based and outcome-based forms of employability, such that people who have more movement capital (e.g., adaptability, expertise) will subsequently be able to actively construct their employability, and ultimately perceive their employability more favorably. Further research would be necessary to provide more clarity in this regard.

Our results also contribute to integrating two of the most dominant streams of employability literature: graduate employability and "general" employability, which have mostly been separated between disciplines thus far (Akkermans & Kubasch, 2017). In this study, we have incorporated elements of the graduate employability literature by taking into account the educational preparation that graduates had before entering the labor market. In addition, we included constructs that have predominantly been used in career and organizational behavior research by assessing graduates' career competencies and early career success. Not only did we use constructs from both areas of research, we also showed that their interplay matters during the school-to-work transition. The graduate employability literature has mostly focused on how higher education institutions can help students become employable for their transition into employment (Dacre Pool & Sewell, 2007), whereas the "general" employability literature has mostly focused on work-related and career-related antecedents and outcomes of employability (Forrier et al., 2018; Vanhercke et al., 2014). We show, in line with previous conceptual work in this area (Bridgstock, 2009), that the educational institution can be an important driving factor of career self-management behaviors among graduates, thereby stimulating their early career success.

Career competencies. Research has clearly established the importance of career competencies for achieving career success (Kuijpers et al., 2006), also among graduates and young workers (Akkermans & Tims, 2017; Blokker et al., 2019). Until now, though, a thorough understanding of *how* career competencies can contribute to a successful school-to-work transition was lacking. Our findings show that career competencies can act as a starting point for active employability development during this transition, ultimately leading to career success experiences among graduates. These findings are in line with those from Akkermans and Tims (2017) who found that career competencies could initiate job crafting behaviors. Our study extends their findings by showing that career competencies can also trigger active employability enhancing activities among young adults. Furthermore, our study shows that career competencies can interact with contextual resources—here, academic satisfaction—to enhance employee outcomes. This is in line with findings by Akkermans et al. (2013) who showed that career competencies and job-related resources could enhance work engagement among young workers, further emphasizing the importance of the interaction between personal and contextual resources.

Limitations and Suggestions for Future Research

Our study has a number of limitations that need to be discussed. First, all variables were self-reported, which may have caused common method bias. However, the correlations among the study variables differed in size, and the use of two-wave data mitigated this problem (Podsakoff & Organ, 1986). In addition, competencies and perceptions of employability are nearly impossible to measure with instruments other than self-reports. Nevertheless, future studies could use multisource data to probe employability activities and examine objective outcomes such as productivity and career progress

(De Vellis, 2003). Moreover, although the scales included in this study have been used in previous ones showing sound reliability and validity evidence (Lo Presti et al., 2017, 2018), future studies could try to replicate our findings using alternative measures of career competencies, such as the often used Career Competencies Questionnaire by Akkermans et al. (2013).

Second, the three facets of academic satisfaction were measured via three single items. Although scale measures would be preferable, we followed Dolbier et al. (2005) who argued in favor of the use of single-item measures when assessing satisfaction aspects (e.g., job satisfaction). We also need to note that the explained variance in the outcome variable was significant albeit not very high. This implies that there may be additional boundary conditions, and future research should thus include additional explanatory variables (e.g., economic stress, work volition).

Finally, even if the time lag of six months that we used for research design is a strong point of the study, additional survey data should be implemented to understand whether such a time lag is appropriate to capture the relationship between career competencies, employability activities, and career success during the school-to-work transition. The use of intrapersonal approaches, such as cluster analyses or latent growth models, might also be a fruitful way forward to further study the dynamics of employability and early career success during the school-to-work transition. Moreover, the future use of a full cross-lagged research design could provide more solid evidence about causal relationships between study variables than the time-lagged design used in this case.

Practical Implications

The economic crisis between 2008 and 2012 has had a strong impact on the Italian labor market, especially affecting young people (Rostan & Stan, 2017). This has made the school-to-work transition especially challenging for graduates, as evidenced by high unemployment rates and relatively many young people leaving Italy to work abroad. One possible solution for these problems is to equip these young workers with career competencies that can enhance their employability and contribute to early career success. The fact that we found these results among Italian graduates shows that even in challenging times, equipping them with career competencies when preparing them for the transition to work can help graduates succeed. This finding particularly resonates in the face of the COVID-19 pandemic, which has put graduates at even more risk of unemployment and long-term career disadvantages (Blustein et al., 2020). As Akkermans et al. (2020) suggested, equipping young adults with career competencies may make them more resilient in the face of this enormous career shock.

Our study also provides implications for higher education institutions and the way in which they prepare their students for the transition into the labor market. There is evidence that students appear to underestimate their competencies at the time of graduation (Baartman & Ruijs, 2011). It follows that academic programs should focus on enhancing student career competencies that, in turn, would improve their future employability and career success. Interventions aimed at helping young people construct their careers through the development of resources have shown that this can indeed help them become employable (Akkermans et al., 2015; Koen et al., 2012). Furthermore, our results showed that graduates' satisfaction with their educational program—specifically satisfaction with vocational choice, goal attainment, and occupational prospects—allowed graduates to mobilize their career competencies even more effectively with regard to their employability activities and early career success. This implies that higher education institutions need to ensure that they provide support for their students in terms of making deliberate career choices, helping them to attain their preset career goals, and to provide clear information about occupational opportunities.

Graduates' evaluations of competencies developed during their studies, degree satisfaction, and early career success can be seen as indicators of how successful the graduates have been in transitioning to working life (Tuononen et al., 2019). Since career-relevant skills are assumed to play a crucial role in employability activities, in line with recent studies (O'Leary, 2016), we suggest including

students in employability-related programs during undergraduate degrees. In this sense, university career counselors can play an increasingly supportive role (Wendlandt & Rochlen, 2008). For example, universities increasingly have career service teams that could work together with curriculum designers to help their students better understand and articulate the skills they have and create new competencies, as a foundation for their future employability.

Finally, employing organizations can benefit from our findings. Given that the graduates in our study reported higher levels of career success six months after graduation when they had developed their career competencies and actively improved their employability, it is important for employers to build on these competencies and activities to further enhance their young workers' success. For example, human resource policies and practices could focus on building career-related and transferable skills among recent graduates, and they could focus on development practices that allow them to enhance their employability. In other words, investing in employees' employability could be an important means of retaining the most talented workers.

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Supplemental Material

The supplemental material for this article is available online.

Note

1. Parcels were computed after an exploratory factor analysis. Parcels comprised two or more items aggregating those with the highest and lowest loadings.

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