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## **The Perceived Influence of Role Models and Early Career Development in Native and Migrant Youth**

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### Abstract

Role models provide youth with valuable information on how to pursue their career goals. However, whether the presence of role models is related to career development beyond social support has not been sufficiently addressed. We investigated how perceived role model influence and social support were related to goal engagement among 191 students and to work engagement among 500 apprentices, and whether these effects were mediated by occupational self-efficacy. We further examined differences between native and migrant youth. Data were analyzed using multi-group structural equation modeling. Our results suggested that engagement was related to role model influence beyond its relationship with social support among students and apprentices. However, this relationship was not found for migrant students. There were no significant indirect effects of role model influence on engagement via self-efficacy among students and apprentices. Our results suggest that role models should be acknowledged as a distinct facilitator of adolescents' work-related engagement.

*Keywords:* role models, engagement, social support, migrant youth

## **The Perceived Influence of Role Models and Early Career Development in Native and Migrant Youth**

Role models are a frequently mentioned source of inspiration for career choices. They can be defined as “individuals who provide an example of the kind of success that one may achieve, and often also provide a template of the behaviors that are needed to achieve such success” (Lockwood, 2006, p. 36).

Identification and social learning theories are the main theories that are used to explain why role models enhance career development (Gibson, 2004). Within identification theories, role models are individuals who are attractive because they show (occupational) attributes or behaviors that an individual wants to attain (Kagan, 1958). Consequently, the target individual will observe role models and be motivated to imitate their behaviors to increase their similarity with the role model and attain the same success (Lockwood, 2006). According to social learning theory (Bandura, 1997), role models can help an individual to learn new skills or tasks because they are a source of information for how to behave. Research has suggested that role models can enhance an individuals’ motivation (Gibson, 2004). Students who were presented with a scenario of a remarkably successful advanced student reported more positive career-related self-views (Lockwood & Kunda, 1997), higher identification with the role model, and stronger engagement in proactive career enhancement behaviors (Buunk, Peiro, & Griffioen, 2007). Role models have also been shown to be inspirational in more specific contexts. For example, they enhance entrepreneurial intentions (Austin & Nauta, 2016), and they can reduce the self-stereotyping of stigmatized groups (Lockwood, 2006; Rivera & Benitez, 2016). Role models are related to, but distinct from, social support, a widely-recognized resource for work and career outcomes (Ng & Sorensen, 2008). An individual who is perceived to be a role model might provide social support, but role models can also be people that are not personally known, and a role model does not need to know that he or she is viewed as a role model by a specific person (Gibson, 2004). In contrast, social support can only be provided by individuals who are in direct contact with the target person, and these individuals are not necessarily perceived as role models. Although previous research has suggested that role models are related to social support (e.g.; Nauta & Kokaly, 2001), it is not clear if role models facilitate career development beyond social support (Gibson & Cordova, 1999) or through which psychological mechanisms role models are connected to career development. We thus aim

to investigate the relationships of role models with career development indicators (i.e., work engagement) beyond social support. This will allow us to control for possible confounding relationships and to disentangle the true relationship of the effect of perceived role models on adolescents' career development. Based on social cognitive career theory (Lent & Brown, 2013), we expect self-efficacy to mediate the relationship between role models and career development. Lastly, research suggests that minority youth may often have role models who are not related to their career goals (Fouad & Kantamneni, 2013; Trankina, 1992), we thus investigate the proposed relationships for differences between native and migrant youth. In this study, we specifically focus on work-related engagement as an indicator of positive adolescent career development. In the next section, we will explain why we expect role models to affect the extent to which adolescents engage in pursuing their career goals and their degree of engagement at work.

### **Work-Related Engagement as an Indicator of Positive Career Development**

Engagement is a broad construct that, “connotes involvement, commitment, passion, enthusiasm, focused effort, and energy” (Macey & Schneider, 2008, p. 4). The present study investigates two different forms of engagement: We study *goal engagement for one's future career* in a sample of students one year before their transition to working life and *work engagement* in a sample that started vocational training one year prior to the data collection. We choose work-related engagement as a dependent variable related to perceived role model influence because it is a well-researched construct that pertains to motivation and is linked to the intention to invest and to actual investment in one's career.

Goal engagement related to one's career is indicated by investing effort and volitional focus on career goals (Haase, Heckhausen, & Koller, 2008). A study among adolescents in Germany showed that goal engagement was related to a higher probability of effectively attaining an apprenticeship position in the transition from school to work (Haase et al., 2008). Because having role models can increase motivation (Buunk et al., 2007; Lockwood & Kunda, 1997) through identification and social learning (Gibson, 2004), role model influence may also encourage individuals to exert more effort to attain career outcomes, which may lead to stronger goal engagement. Social support is instrumental to setting high aspirations (Kenny & Medvide, 2013), and demonstrating higher career engagement and decidedness (Hirschi, Niles, & Akos, 2011); social support should thus also be related to increased goal engagement. Because we assume that role model influence is beneficial for work-related

engagement beyond the positive association of social support, we propose the following for students that will soon finish compulsory school:

*Hypothesis 1: Perceived role model influence explains incremental variance of goal engagement for one's future career beyond the relation with perceived social support.*

Similar to goal engagement among students, we propose that among working adolescents work engagement is related to perceived role model influence and social support. Work engagement is defined as a “positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (Schaufeli, Bakker, & Salanova, 2006). Research showed that it is related to higher levels of career control, work exploration, and networking (Akkermans, Schaufeli, Brenninkmeijer, & Blonk, 2013). Role model influence may enhance work engagement through modeling (Bandura, 1997) and motivational (Lockwood & Kunda, 1997) influences because they provide individuals with an example of how to be engaged in one's work (Schaufeli & Salanova, 2008). Social support may enhance work engagement by fueling motivational processes (Bakker & Demerouti, 2008; Gagné & Deci, 2005) through facilitating learning (Ng & Sorensen, 2008) and internalizing values that favor work commitment (Gagné & Deci, 2005). Because social support for working adolescents can stem from non-work and work environments and social support at work has been shown to affect positive work attitudes (Ng & Sorensen, 2008), both environments are evaluated in our study.

*Hypothesis 2: Perceived role model influence explains incremental variance of work engagement beyond the relation with perceived work and non-work social support.*

### **Occupational Self-Efficacy as a Mediator**

Self-efficacy expectations are individuals' beliefs “about whether one can produce certain actions” (Bandura, 1997, p. 20). In the work environment, these beliefs are manifested as occupational self-efficacy, which is the conviction that work-related tasks can successfully be fulfilled (Rigotti, Schyns, & Mohr, 2008). In social cognitive career theory, Lent and Brown (2013) maintain that “contextual influences,” which include role model influence and social support, relate to positive career self-management directly and via self-efficacy beliefs.

Both, role model influence and social support, may increase self-efficacy. As role models do not necessarily interact with or know about a target individual, the effect of role model influence on self-efficacy is likely to occur via modeling (Schaufeli & Salanova, 2008).

Social support's relation with self-efficacy may be transmitted through encouragement and instrumental learning (Bandura, 1997). In turn, self-efficacy should be related to higher goal engagement because being convinced that a goal can be attained should lead to setting more challenging goals and greater efforts to achieve them (Bandura, 1997). Further, individuals with high self-efficacy beliefs are convinced that they can attain work-related goals, and thus show more effort and persistence in tasks (Bandura, 1997), in other words, more work engagement. Accordingly, researchers found that self-efficacy predicts work engagement (Llorens, Schaufeli, Bakker, & Salanova, 2007). Based on these assumptions and on Hypotheses 1 and 2, we expect that occupational self-efficacy partially transmits the relationships of role model influence and social support on work-related engagement.

*Hypothesis 3: Self-efficacy beliefs partially mediate the associations of (a) perceived role model influence and (b) perceived social support on goal engagement for one's future career.*

*Hypothesis 4: Self-efficacy beliefs partially mediate the associations of (a) perceived role model influence, (b) non-work social support, and (c) social support at work on work engagement.*

### **Migrant Youth's Career Entry**

Role models' positive relationship with career development might depend on youth's migration backgrounds. Research suggests that minority youth may often have role models who are not related to their career goals (Fouad & Kantamneni, 2013; Trankina, 1992), but more research is needed to understand if and how role models may contribute to our understanding of migrant youth's difficulties when entering working life. Migrant adolescents typically encounter more obstacles to successful entry into working life compared to native adolescents. In a study on Norwegian youth, Helland and Støren (2006) concluded that migrant youth must outperform their peers to obtain the same apprenticeship opportunities. In the Swiss educational environment, researchers reported that migrant adolescents are confronted with more difficulties during the transition from school to work than their native peers (Hupka-Brunner, Sacchi, & Stalder, 2010).

**Role model influence and social support in migrant youth.** Research suggests that minority adolescents do not differ from majority youth in the number or perceived influence of role models (Karunanayake & Nauta, 2004). Nevertheless, adolescents often choose role models among close people from their own social group (Karunanayake & Nauta, 2004).

Meta-analytical (Ghosh, 2014), experimental (Marx & Ko, 2012; Blanton, Crocker, & Miller, 2000), and survey research (e.g.; Lockwood, 2006) supports the notion that perceived similarity (e.g., in ethnic background) between role models and target individuals may be an important factor in order to attain the beneficial outcomes of role modeling. As it may prove more difficult to choose same-minority (i.e., similar) role models in one's aspired career or academic path, minority youth may face a disadvantage, as they would have difficulties to harvest the inspirational influence supplied by same-minority role models (Covarrubias & Fryberg, 2015; Zirkel, 2002). For example, the parents of migrant adolescents are less likely to have completed an education in the host country, which limits their familiarity with the local education system (Kristen, Reimer, & Kogan, 2008). This factor may diminish role models' social comparison function for migrant adolescents (Buunk et al., 2007; Gibson, 2004), thereby limiting their positive effects on engagement. Additionally, migrant youth may be more likely to observe their role models struggling with discrimination, which may negatively affect their self-efficacy beliefs (Heslin, Bell, & Fletcher, 2012). Consequentially, we propose the following:

*Hypothesis 5: Perceived role model influence is more strongly positively related to goal engagement for one's future career among native compared to migrant youth.*

*Hypothesis 6: Perceived role model influence is more strongly positively related to work engagement among native compared to migrant youth.*

Research on youth from diverse countries, including Norway (Oppedal & Røysamb, 2004) or Italy (Vieno, Santinello, Lenzi, Baldassari, & Mirandola, 2009), report higher perceived social support among native compared to migrant adolescents. Despite potential differences regarding the level of perceived social support, we have no reason to assume that perceived social support is differentially related to work-related engagement among native and migrant youth and thus do not propose specific hypotheses.

### **The Present Study**

We conducted a study with two samples of Swiss adolescents. Switzerland is well-suited to address our research aims because 24% of the Swiss population has a foreign nationality, mainly from other European countries (Swiss Federal Statistical Office, 2014). Additionally, Swiss youths' work-related engagement is important because approximately 70% of youth enroll in two- to four-year Vocational Education and Training (VET) programs after completing secondary school. These adolescents work as apprentices in a company

three or four days per week and take classes in professional schools one or two days per week. Our first sample (the student sample) was comprised of students at the end of eighth grade in school. They needed to obtain an apprenticeship by the end of ninth grade, thus; we focused on goal engagement for one's future career as an indicator of work-related engagement. Our second sample (the apprentice sample) consisted of apprentices at the end of their first year of VET. Thus, we used work engagement as an indicator of work-related engagement.

## Methods

### Participants

**Student sample.** We recruited students through their compulsory schools. Nine of the 27 schools in German-speaking Switzerland that were contacted agreed to participate. This approach resulted in 310 students completing the questionnaire. We excluded students who were not planning to pursue a VET after the end of compulsory school (24%), had both Swiss and a foreign nationality (i.e., double citizenship, 14%) or who did not state their nationality (1%). The final sample consisted of 191 (61%) students. Of these, 113 (59%) were native Swiss and 78 (41%) indicated one or more foreign nationalities. As family and social networks from the country of origin are important for second generation migrants (Levitt, 2009), we included 33 students who had been naturalized as Swiss citizens in the migrant group, as their social environment may be mainly comprised of individuals socialized abroad. The median age was 15 years ( $M = 15.04$ ,  $SD = 0.63$ ) and 47% were female.

**Apprentice sample.** We recruited apprentices through VET schools in German-speaking Switzerland. Nine of the 18 contacted schools agreed to participate. Participants were 590 apprentices who were in their first year of VET. We excluded apprentices who had both Swiss and foreign nationalities (11%) or who did not indicate their nationality (5%). The final sample size was 500 (85%) apprentices. Of these, 296 (59%) were native Swiss and 204 (41%) indicated one or more foreign nationalities. The 204 migrants included 61 apprentices who had been naturalized as Swiss citizens. Participants were training in nine different vocations: sale clerks (30%), office clerks (15%); housekeeping professionals (15%); plasterers (12%); nurses (10%); construction draftsmen (7%); machine mechanics (5%); electricians (4%); and IT specialists (2%). The median age was 17 ( $M = 18.16$ ,  $SD = 2.92$ ) and 57% were female. In both samples, the proportion of migrant versus native background youth as well as



the samples' composition of cultural origin is similar to what can be encountered in the Swiss teenage population (Swiss Federal Statistical Office, 2014).

### **Procedure**

For both samples, data collection occurred during class hours and was supervised by teachers. Participants were informed about the aims of the data collection and were free to decline participation. All participants had an opportunity to enter a drawing for 21 gift vouchers that were worth approximately 1600 USD in total.

### **Measures**

Tables 1 and 2 present means, standard deviations, Cronbach alphas, bivariate correlations, and t-test comparisons between native and migrant youth in the student and apprentice samples.

**Perceived role model influence (both samples).** Role model influence was assessed with three items from Nauta and Kokaly's (2001) scale for assessing role models' inspiration and modeling influence ("In the academic or career path I am pursuing, there is someone I admire", "I know of someone who has a career that I would like to pursue", and "There is someone I am trying to be like in my academic or career pursuits"). The original scale consists of seven items. The three chosen items were positively worded and specifically referred to role models. The items were translated to German by the authors independently. We then agreed upon a final version for each item in a reconciliation meeting. This procedure is particularly useful for ensuring the connotation, naturalness, and comprehensibility of items, which are often compromised by employing a translation-back-translation approach (Van de Vijver & Leung, 1997). Answers were given on a five-point scale that ranged from 1 (*does not apply at all*) to 5 (*fully applies*). This scale was positively related to vocational identity and negatively to career indecision in a sample of American university students (Nauta & Kokaly, 2001).

**Social support (both samples).** We assessed social support with the German version of the University of California Los Angeles social support inventory (Schwarzer, 1991). We excluded four items that asked about support from groups and organizations. We adapted the instructions to reflect the career context by specifically asking about support related to career choice and development in the prior six months. An example item stem is, "How often did the following persons encourage you and re-establish your self-esteem?" Participants rated support received from a) "your relatives", b) "your friends", or c) "your teachers."

Overall, the scale contained 12 items and answers were recorded on a 5-point scale that ranged from 1 (*never*) to 5 (*very often*). This measure has been shown to have positive relationships with career adaptability and general life satisfaction in a sample of Swiss students (Hirschi, 2009).

**Social support at work (the apprentice sample only).** This construct was assessed by four items of the German version of the work design questionnaire (Stegmann et al., 2010). A sample item is “People I work with take a personal interest in me” Answers were given on a five-point scale that ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The original scale had six items; however, we only included four items that assessed social support from work colleagues. We excluded one item that referred to the general workplace and one that referred to interactions with one’s supervisor. In studies with German employees, social support at work was related to job satisfaction, intrinsic motivation, and greater organizational identification (Stegmann et al., 2010).

**Occupational self-efficacy (both samples).** We employed Rigotti and colleagues’ occupational self-efficacy scale (Rigotti et al., 2008). A sample item is “I feel prepared for most of the demands in my job” Participants responded on a six-point scale that ranged from 1 (*not true at all*) to 6 (*completely true*). Participants in the student sample were instructed to answer the six items envisioning their future apprenticeship or job. Research found that students’ occupational self-efficacy expectations are related to higher subjective career success, status, and salary in working life (Abele & Spurk, 2009). Thus, we can assume that occupational self-efficacy can be validly measured even when individuals are not yet working. This scale was strongly related to proactive career behaviors and career decidedness among German students (Hirschi, Lee, Porfeli, & Vondracek, 2013).

**Goal engagement (the student sample only).** Goal engagement was assessed with four items assessing investment in behavioral effort for a successful career start (e.g., “I invest all my energy in order to get a suitable apprenticeship”) by Haase and colleagues (Haase et al., 2008). Answers were given on a five-point scale that ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). We obtained the German language items from the scale authors. This scale was related to positive affect and school achievement in a sample of German students (Haase et al., 2008).

**Work engagement (the apprentice sample only).** We assessed work engagement using the German version of the nine item Utrecht work engagement scale (Schaufeli &

Bakker, 2004). Participants reported the frequency with which they had specific experiences at work (e.g., “In my job, I feel bursting with energy”). Answer choices ranged from 0 (*never*) to 6 (*always – every day*). Work engagement was related to self-efficacy, calling, and person-job fit in a sample of German employees (Hirschi, 2012).

### **Analytical Procedure**

We analyzed the data using MPlus 7.3 (Muthén & Muthén, 2012) and used confirmatory factor analyses (CFA) to test the measurement models and structural equation modeling to test the models depicted in Figure 1. We estimated missing data using the full information maximum likelihood (FIML) method. This procedure yields appropriate estimates and counteracts the biasing effects of other procedures for missing data estimation (Graham, 2009). Indirect effects were assessed applying 5,000 bootstrapped samples (Preacher & Hayes, 2004). Latent variables were created using the scale items with one exception: The social support scale assessed support from parents, friends, and teachers, and differentiated between four types of support. Therefore, we used a domain representative sampling technique and created three parcels that contained items from several support sources and types. This procedure respects all facets from the broad social support construct (Little, Rhemtulla, Gibson, & Schoemann, 2013). We assessed model fit using chi-square statistics, comparative fit index (CFI), Tucker-Lewis index (TLI), root-mean-square error of approximation (RMSEA), and standardized root mean square residual (SRMR). Good fit was indicated by CFI and TLI values close to or higher than .95, RMSEA values close to or lower than .08, and SRMR values close to or lower than .09 if in combination with TLI and CFI values close to or above .95 (Hu & Bentler, 1999). Nested models were compared using chi-square tests.

## **Results**

### **Measurement Models**

We established the quality of our measurement models by conducting confirmatory factor analyses. The model fit was good in both the student and apprentice samples. We used multi-group comparisons to establish measurement invariance across the native and migrant adolescents. As we intended to assess the relationships between several latent variables, our data needed to attain metric invariance (Steenkamp & Baumgartner, 1998). The native and migrant youth subgroups reached configural and metric invariance in both samples, which confirmed that the measures reflected the same latent constructs in both

groups and that group comparisons were permissible. Detailed information on measurement models and invariance can be requested from the first author.

### **Student Sample Results**

We inserted paths from role model influence and social support to self-efficacy and from role model influence, social support, and self-efficacy to goal engagement. The model fit was good (cf. upper portion of Figure 1). A model in which all structural paths were constrained to be equal across the native/migrant groups showed a poorer fit to the data, which confirmed our assumption that the study variables were differently related within the two groups. We constrained one structural path after another to detect the relationships that significantly differed between groups. This procedure revealed that native and migrant youth only differed on the path from role model influence to goal engagement. Role model influence was related to goal engagement for native but not for migrant youth (consistent with Hypothesis 5). Consequently, because the association of role model influence was significant while controlling for social support, there was an incremental relation of role model influence on goal engagement beyond social support among native youth (Hypothesis 1). Social support was related to goal engagement for both native and migrant youth. Figure 1 (upper portion) shows the standardized coefficients for both groups. Neither role model influence nor social support were significantly related to occupational self-efficacy in either group. Because non-significant direct associations do not necessarily preclude the presence of indirect effects (Preacher & Hayes, 2004), we tested for indirect effects of the relational variables on goal engagement via self-efficacy. The analysis (Table 3) revealed a significant negative indirect effect from social support to goal engagement via self-efficacy in the native subsample. This finding was unexpected, as we assumed that there would be a positive indirect effect. In the migrant group, the indirect effect was not significant, and neither were the indirect effects from role model influence to goal engagement via self-efficacy for either group. Thus, Hypotheses 3a and 3b were not supported.

### **Apprentice Sample Results**

Native and migrant apprentices had different mean levels of role model influence and self-efficacy, with the migrant subsample reporting higher values (Table 2). However, with all structural paths for the two groups constrained to be equal, the model fit the data as well as a model that distinguished between native and migrant youth. This finding suggests that the groups did not differ on any of the assessed paths (rejecting Hypothesis 6), thus, we did not

continue to differentiate between native and migrant youth. The lower portion of Figure 1 illustrates our tested model, which had good fit. There were significant paths from role model influence, social support at work, and self-efficacy to work engagement, but no significant path from non-work social support. The significant relationship between both role model influence and social support at work on work engagement confirms the proposed incremental relationship of role model influence beyond social support (Hypothesis 2). The path between social support at work and self-efficacy was significant, but the paths from role model influence and non-work social support to self-efficacy were not. Tests of indirect effects from the relational variables on work engagement via self-efficacy (Table 3), showed a significant positive indirect effect from social support at work on work engagement via occupational self-efficacy – but not from role model influence or non-work social support. Therefore, Hypothesis 4c was supported, while we found no evidence for Hypotheses 4a and 4b.

### Discussion

This paper investigated the beneficial role of role model influence and social support on career development among native and migrant youth. Our results suggest that role model influence has an incremental association beyond social support on goal and work engagement and that some associations differ between native and migrant youth.

#### **Role Model Influence and Social Support as Facilitators of Work-Related Engagement**

Perceived role model influence and obtaining social support showed small to moderate correlations in both samples. This finding supports the assumption that role model influence and social support are distinct relational variables and the notion that adolescents can experience the influence of role models with simultaneously low social support or vice versa. However, the relationships reported in this study show that in some cases the perception of role model influence is related to social support (Gibson & Cordova, 1999), likely because role models may often also be individuals who offer social support. It is a strength of our study that we studied both constructs simultaneously, allowing us to show that role models contribute to facilitating career development beyond social support.

In more general terms, however, role model influence, social support, and self-efficacy were all three positively related to work-related engagement. These findings are consistent with the idea that relational resources (like social support and role model influence) exert a major influence on shaping careers and should be addressed in career

counseling (Blustein, 2011). Further, this is in line with the central tenet of social cognitive career theory, which posits that both, relational (e.g., role models and social support) and cognitive (e.g., self-efficacy) resources enhance career development (Lent & Brown, 2013).

In the apprentice sample, we found partial support for social cognitive career theory's assumption (Lent & Brown, 2013) that self-efficacy can mediate the relation between contextual influences and career outcomes. The results showed that social support at work was indirectly and positively related to work engagement via self-efficacy beliefs.

Unexpectedly, the indirect effect from social support to goal engagement was negative among the native youth in the student sample. A possible explanation is that overly far-reaching social support may reduce an individual's opportunities for competency development. This may result in lower levels of self-efficacy (e.g.; Tucker & Johnson, 1989). On the other hand, this result may merely indicate that individuals with low perceived self-efficacy, but relatively high goal engagement, may be more likely to be seen as needing help and consequently offered more social support. It is puzzling that this indirect effect did only occur among native students. Possibly, while migrant adolescents would generally be awarded support (cf. higher mean levels of social support in Table 1), native students would be given support only if their self-efficacy is perceived as low. This explanation is nonetheless speculative and should be evaluated in future research using a longitudinal design. In sum, self-efficacy was not a consistent mediator across the two samples. Moreover, we could not confirm mediation from role model influence to engagement via self-efficacy. It is also noteworthy that in the apprentice sample, social support at work was the relational variable that was most strongly related to occupational self-efficacy. This finding may be explained by the domain-specificity of social support at work, which is often specifically targeted at developing skills, supporting task fulfillment, and enhancing performance. Conversely, role models, as well as non-work social support, are less directly related to daily work experiences.

### **Native and Migrant Youth Comparisons**

In the student sample, role model influence was significantly and positively related to goal engagement for native but not migrant youth. This finding supports the assumption that migrant youth may not be able to capitalize on their role models for work-related engagement in the same way as native adolescents. One explanation could be that migrant youth may often have role models who are less related to socially valued education and

career paths (e.g.; Trankina, 1992). Our participants pursued career goals through an apprenticeship, which in many countries is an educational model that is less common than in Switzerland, is often school (rather than work)-based, and usually begins at the postsecondary instead of the upper-secondary grade levels. If, as we argued, migrant youth are less likely to have role models who have obtained a similar education, their role models may provide less information on how to find and behave in an apprenticeship. Therefore, these role models should have lower or no benefits for career development. This reasoning is consistent with research that found that role models have a motivational effect only when they are related to one's educational or career prospects (Buunk et al., 2007; Lockwood & Kunda, 1997).

The transition from school to the work environment provides new sources for social support and role modeling. This benefit may explain the lack of differences between native and migrant participants for the relationship between role model influence and work engagement in our apprentice sample. New, domain-specific role models become available for both native and migrant youth after they enter an apprenticeship. For migrant youth, this may provide an opportunity to choose role models who are more relevant to their aspirations.

### **Limitations**

Alternative causal relationships to those we have proposed are conceivable. For example, in some research self-efficacy was proposed as a moderator explaining whether role model influence would lead to positive motivational outcomes (e.g.; Hoyt, 2013). With our cross-sectional design causation can only be argued theoretically (Kline, 2015). Despite this, theoretical (e.g.; Gibson, 2004; Lent & Brown, 2013) and empirical (e.g.; Kracke, 2002) accounts support the causal directions suggested in our study. A further limitation is the assessment of the role model construct. We assessed the extent to which participants indicated they knew of people that they considered as role models regarding their academic or career paths. We did not assess who the role models were, how many role models a participant had, or the relationship between the participant and the role model(s). This information would have allowed us to examine the relationship between role models and engagement in more detail. Moreover, future research should differentiate role models more accurately from related constructs such as mentoring or coaching, by not only focusing on the constructs themselves, but also on the different mechanisms they may operate through.

In addition, future role model research may explore whether different types of role models (e.g., personally known role models versus celebrity role models) are differently related to indicators of career development. Finally, due to sample size constraints, we could not differentiate migrant subsamples based on their geographical and cultural backgrounds.

### **Implications**

Our results support the notion that it is important for youth to have career role models. Teachers, parents, counselors, or supervisors at work should support students and young employees in selecting suitable role models. They should be encouraged to think about who their role models are and whether they are relevant in view of their career aspirations. This is especially important for adolescents with a migrant background. Employers may facilitate young employees' choice of role models by matching them to supervisors with whom they can identify and who are models of positive work-related behavior. Our research proposes that such interventions may enhance the engagement (and general career development) of young employees and therefore lead to greater motivation and performance at work.



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Table 1

*Descriptive Statistics and Bivariate Correlations for the Student Sample*

	Native youth		Migrant youth		T-test		$\alpha$	1	2	3	4
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t(d)</i>	<i>p</i>					
1. Role models	3.03	0.92	3.11	0.62	-.55(185)	.58	.64	–	.09	-.05	-.09
2. Social support	3.77	0.57	3.94	0.58	-2.09(187)	.04	.81	.32**	–	.09	.27*
3. Self-efficacy	4.49	0.60	4.43	0.56	.59(182)	.55	.77	.20*	-.06	–	.47***
4. Goal engagement	4.32	0.61	4.32	0.93	.02(187)	.99	.82	.34***	.32***	.25**	–

*Note.* Coefficients above the diagonal are for migrant students. Those below the diagonal are for native students. *N* = 191 for total sample. *n* = 113 for the native youth, *n* = 78 for the migrant youth. Responses ranged from 1-5 with the exception of self-efficacy (1-6).

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

Table 2

*Descriptive Statistics and Bivariate Correlations for the Apprentice Sample*

	Native youth		Migrant youth		T-Tests		$\alpha$	1	2	3	4	5
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>T(d)</i>	<i>p</i>						
1. Role models	2.92	0.90	3.15	1.04	-2.22(333)	.03	.66	–	.27***	.31***	.13	.23***
2. Non-work social support	3.63	0.60	3.60	0.70	-.47(333)	.64	.83	.29***	–	.37***	.31***	.41***
3. Social support at work	3.84	0.74	3.79	0.74	-.66(334)	.51	.71	.07	.23***	–	.32***	.49***
4. Occup. self-efficacy	4.31	0.55	4.42	0.64	-2.13(392.77)	.03	.75	.04	.04	.24***	–	.47***
5. Work engagement	4.49	1.15	4.56	1.21	-.68(496)	.50	.92	.22***	.16**	.38***	.41***	–

*Note.* Coefficients above the diagonal are for migrant apprentices. Those below the diagonal are for native apprentices. *N* = 500 for the total sample. *n* = 296 for the native youth, *n* = 204 for the migrant youth. Responses ranged from 1-5 with the exception of self-efficacy (1-6), and work engagement (0-6).

\* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001.



Table 3

*Indirect Effects from Role Models and Social Support to Work-Related Engagement via Occupational Self-Efficacy*

	Point estimate	SE	Bootstrapping BC 95% CI	
			Lower	Upper
<i>Student Sample – Native</i>				
Role models → OccSE → Goal engagement	.06	.04	-.02	.15
Soc. support → OccSE → Goal engagement	-.05**	.02	-.07	-.02†
<i>Student Sample – Migrant</i>				
Role models → OccSE → Goal engagement	-.04	.06	-.33	.25
Soc. support → OccSE → Goal engagement	.03	.08	-.15	.21
<i>Apprentice Sample</i>				
Role models → OccSE → Work engagement	.03	.03	-.03	.09
Soc. support → OccSE → Work engagement	.02	.04	-.07	.10
Support at work → OccSE → Work engagement	.14***	.04	.07	.20†

*Note.*  $N = 113$  for the native student sample;  $N = 78$  for the migrant student sample;  $N = 500$  for the apprentice sample. The apprentice sample was not subdivided because there were non-significant differences between native and migrant individuals. BC = Bias-corrected; CI = Confidence-interval; Soc. support = Social support; OccSE = Occupational self-efficacy; Support at work = Social support at work. Standardized indirect effects. Confidence intervals obtained with 5000 bootstrapped samples. † = 95%-CI does not include zero.

\*\* =  $p < .01$ , \*\*\* =  $p < .001$ .

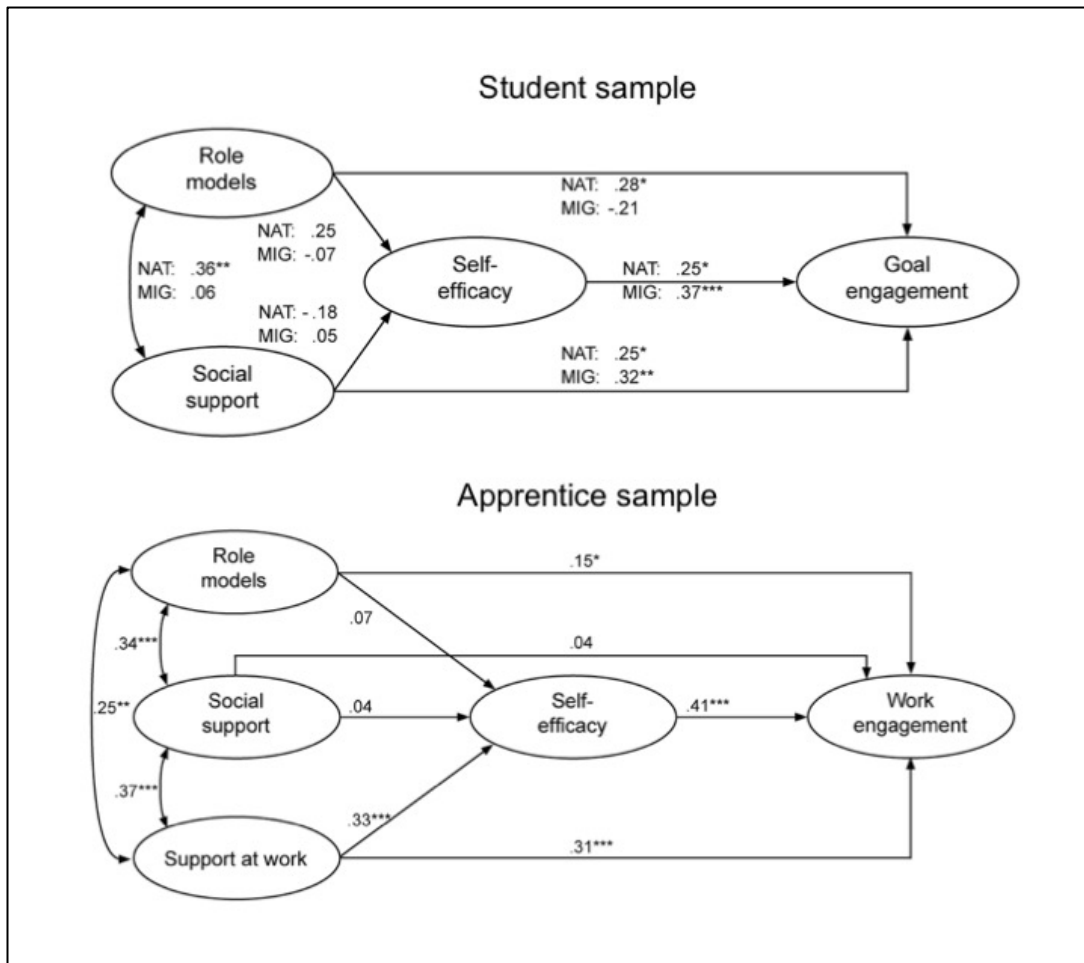


Figure 1. Student sample.  $N = 191$ . Structural model of the hypothesized relations in the student sample. NAT: Native youth ( $n = 78$ ), MIG: Migrant youth ( $n = 113$ ). Item and factor loadings are not depicted. The Figure shows standardized coefficients. Model fit:  $\chi^2 = 254.87$ ,  $df = 212$ ,  $p = .02$ , CFI = .96, TLI = .95, RMSEA = .05, SRMR = .09. The native and migrant subsamples only significantly differed in the path between role models and goal engagement:  $\Delta\chi = 5.98$ ,  $df = 1$ ,  $p = .01$ ; all other  $p > .11$ . \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Apprentice sample.  $N = 500$ . Structural model of the hypothesized relations for the apprentice sample. Item and factor loadings are not depicted. Social support = Non-work social support. Support at work = Social support at work. The figure shows standardized coefficients. Model fit :  $\chi^2 = 468.77$ ,  $df = 265$ ,  $p < .001$ , CFI = .96, TLI = .95, RMSEA = .04, SRMR = .05. The native and migrant subsample did not differ significantly in any of the structural paths:  $\Delta\chi = 12.93$ ,  $df = 10$ ,  $p = .23$ . \*  $p < .05$ , \*\*\*  $p < .001$