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Evidence from a Natural Field Experiment

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Abstract

Recent evidence suggests that self-regulation plays an important role for labor market success. We conducted a randomized natural field experiment embedded in an existing labor market reactivation program to examine the effect of a self-regulation training on long-term unemployed individuals. First, we find a positive treatment effect on the quality of submitted CVs. Second, there is no overall treatment effect on (short-term) labor market reintegration, but heterogeneous effects with respect to participants' Locus of Control that are consistent with psychological theory. The low costs of our intervention suggest high individual and social rates of return from a roll-out to other programs.

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1 Introduction

Unemployment can have severe adverse effects both on the economy and society in general as well as on the unemployed individuals in particular. Therefore, a tremendous amount of public resources is devoted to reducing unemployment in many countries around the world. A particular focus is set on *long-term* unemployment: Nearly half of all unemployed individuals in the European Union and almost one third of all unemployed individuals in the US have been unemployed for twelve months or longer during the last years. The total number of long-term unemployed individuals has strongly increased in the OECD countries in the last decade (see, e.g., Bivens and Shierholz 2014, Duell et al. 2016, OECD 2015). Fighting long-term unemployment requires considerable resources because it is particularly hard to resolve: many long-term unemployed individuals are difficult to place even in a favorable labor market context as they tend to have particularly low human capital including unfavorable non-cognitive skills such as low self-regulation skills (Kokko et al. 2003).

One widespread approach to reducing long-term unemployment is active labor market policy. In most cases, active labor market policies are designed to readjust economic incentives or improve certain aspects of human capital (such as computer skills, self-presentation and writing skills, job search competencies, and personal health). Unfortunately, however, the overall success of active labor market policies—often evaluated based on observational or quasi-experimental micro-data—tends to be modest or even negative (see, e.g., Card et al. 2010, 2015, Kluve 2010, Stephan and Pahnke 2011, Crépon et al. 2013).[1]

One reason for this lacking success could be that active labor market policies do not sufficiently address so-called non-cognitive factors.[2] These factors, however, are key determinants for labor market success (cf., e.g., Caliendo et al. 2015, Cebi 2007, Dohmen et al. 2009, Heck-

[1]There exist other studies concluding that certain active labor market programs can have positive (long-term) effects under special conditions: in times of higher unemployment rates (Lechner and Wunsch 2009), for programs targeted at participants' specific needs (Sarvimäki and Hämäläinen 2016, in this case for immigrants), or for low-cost short-term training schemes (Osikominu 2013). In contrast to the latter study, two earlier studies—using administrative data as well as field experimental evidence—emphasize that long-term oriented programs yield larger gains in the long run compared to short-term programs (Dyke et al. 2006, Hotz et al. 2006). The studies of Altmann et al. (2015) and Belot et al. (2015) constitute further methodological innovations as they apply field experiments in the labor market context. The intervention of Altmann et al. (2015) consists of providing job seekers with information about consequences of unemployment as well as job search strategies. The authors find that the intervention has mostly insignificant effects in the overall sample but positive effects in a subsample of unemployed persons who are at risk for long-term unemployment. Belot et al. (2015) find that providing job seekers with suggestions for occupations leads the job seekers to receive significantly more invitations for job interviews.

[2]The term "non-cognitive skills" is used in a large part of the related literature (see, e.g., Cunha and Heckman 2007, 2008) and refers to a broad range of abilities and personality traits; it is contrasted to pure cognitive ability usually measured by IQ tests. We are aware that most of the so-called non-cognitive skills do actually have a cognitive component. Alternative terms include "soft skills", "socio-emotional skills", or "character skills" (see, e.g., Heckman and Kautz 2012, Kautz et al. 2014, Koch et al. 2015).

man and Rubinstein 2001, Heckman et al. 2006, Heckman and Kautz 2012, Heineck and Anger 2010). Moreover, the psychological and physiological distress associated with being unemployed for a long time may exacerbate the relevance of these factors in particular for the reintegration success of long-term unemployed (e.g., Wanberg 2012).

One key factor among non-cognitive skills is self-control or self-regulation ability—defined as the ability to set and commit to goals and to regulate behavior, emotions, and attention to effectively strive for these goals.[3] Self-regulation skills have been found to be associated with higher labor market success in general and lower unemployment duration in particular (Brown et al. 2006, Daly et al. 2015, Kokko et al. 2003, Prussia et al. 2001, Sverko et al. 2008, Turban et al. 2009, Van Hoye and Saks 2008). Specifically, job search is an activity for which self-regulation skills play a crucial role (Kanfer et al. 2001) because job seekers have to self-organize and manage autonomously their search as they decide on the search intensity, diversity and persistence. Discouragement and frustration due to rejections as well as uncertainty about job finding opportunities might further corroborate the role of self-regulation skills. Kanfer et al. (2001) conclude from their meta-analysis that job seekers with higher levels of conscientiousness—a trait related to self-control—display higher job search intensity and shorter unemployment durations.[4] Moreover, DellaVigna and Paserman (2005) report a negative correlation between impatience and job search effort as well as unemployment exit rates. They conclude that a new channel for active labor market policies is likely to be beneficial, namely "direct assistance that forces the worker to go through the most unpleasant steps of the search process" (DellaVigna and Paserman 2005, p. 570). Baay et al. (2014) even found that self-control is a significantly stronger predictor of job search behavior than work motivation; the authors propose that interventions should focus on improving self-control skills. Providing a self-regulation training to unemployed individuals could thus improve job search intensity (cf. Wanberg et al. 2012) and reemployment rates.

This paper is motivated by the idea that human capital investments by standard active labor market programs—e.g., investments into computer, writing, and self-presentation skills—might be less effective unless complemented by improved self-regulatory skills: the extent to which people modulate their emotions and efforts to commit to and strive for a goal is an important precondition for putting their other skills to work. In this paper, we investigate the incremental effect of a low-cost self-regulation training within a labor market reactivation program on

[3]See, for example, de Ridder et al. (2012) for a discussion of self-control definitions as well as its behavioral correlates. Here, we use the terms "self-control" and "self-regulation skills" synonymously.

[4]The meta-analysis also suggests that job search intensity is positively related to the number of job offers received and to reemployment speed.

reactivation success. We analyze micro-data from a large-scale natural field experiment[5] embedded in an existing labor market reactivation program for long-term unemployed individuals in Germany. The treatment group in our experiment was taught "mental contrasting with implementation intentions" (MCII), a self-regulation strategy developed by psychologists (see, e.g., Oettingen and Gollwitzer 2010) and adapted specifically to our target group. MCII is usually implemented in a very compact and time-efficient manner and can thus be added to the protocol of a labor market reactivation program without considerable expenses. While MCII has not yet been adapted to the labor market context, it has been shown to help people achieve goals in a wide range of contexts such as health and education (see Section 2). We expected the self-regulatory training to promote behavior that facilitates the labor market reactivation of unemployed individuals, especially for participants with certain individual characteristics (see below).

MCII is a self-regulatory strategy that improves goal setting, goal commitment, and goal striving. While there is a large literature on goals and their relevance for self-regulation in psychology (for reviews, see, e.g., Locke et al. 1981, Locke and Latham 2002, 2006), the influence of goals as a key element of the human motivational system has played a rather limited role in the traditional economic approach of modeling individual behavior and decision-making. Rather recently, empirical and theoretical contributions in economics have addressed the question of how goals and implementation intentions can serve as self-regulatory strategies and thus affect decision-making in various contexts. Beshears et al. (2016) try to explain from an economic perspective why setting goals ("personal plans") can help them to follow through on their intentions. They point out that, on the one hand, people desire to be internally consistent and, on the other hand, goals can be perceived as reference points which people avoid to fall short of due to loss aversion. The models developed by Bénabou and Tirole (2004), Koch and Nafziger (2011), Koch et al. (2014), and Hsiaw (2013) provide insights into the relationship between goal setting and self-control. They thus illustrate the important role of self-regulatory strategies for individual decision-making in economic contexts. Setting personal plans or goals might be considered as an internal commitment mechanism (Bénabou and Tirole 2004). In contrast, external commitment mechanisms include, for example, making promises to other parties (Carrillo and Dewatripont 2008) and buying commitment-savings products (Ashraf et al. 2006, Thaler and Benartzi 2004). The growing literature in behavioral economics on the theory and empirical application of commitment devices emphasizes the importance of strategies that help to overcome self-control problems.[6]

[5]We refer to our experiment as a natural field experiment because our participants were not aware that they are participating in an experiment (Harrison and List 2004).

[6]For an overview over the literature on commitment devices, see, for example, Brocas et al. (2004), Bryan et al. (2010), Laibson (2015).

The idea of this paper is to teach a strategy that helps to overcome self-control problems and to investigate whether teaching this strategy facilitates reemployment success of unemployed individuals. The successful use of a self-regulatory strategy heavily depends on individual characteristics of the person applying it. Most important, recent socio-psychological findings point to the fact that self-regulation as a goal-directed behavior is highly dependent on the belief that own actions lead to desired consequences (Cobb-Clark 2015). A person applies self-control skills only if she believes that own behavior does have an influence on outcomes (Rosenbaum 1980). Thus, we can expect the effectiveness of a self-regulation training to depend on whether or not the trained person believes that her actions lead to the desired consequences, which is often referred to as a person's Locus of Control (LOC).[7] People who do not believe that their own effort affects the probability of success (i.e., people with an external Locus of Control)[8] are unlikely to adopt a strategy that helps them to increase own effort. They most likely do not see the meaning of learning a (new) self-regulation strategy. In contrast, people who believe that their own effort is crucial for success (i.e., people with an internal Locus of Control) are likely to be keen on learning a new strategy that helps them to regulate own behavior and emotions in order to improve goal-directed effort. Locus of Control has also been found to matter directly for labor market outcomes: people with an internal Locus of Control tend to achieve higher wages (Cebi 2007, Heineck and Anger 2010, Piatek and Pinger 2016) and search for jobs more intensively—believing that investments in job search have a higher payoff in terms of reemployment probabilities (Caliendo et al. 2015, McGee 2015).

To the best of our knowledge, this is the first study to investigate the impact of teaching unemployed individuals a self-regulation strategy. Our study links a broad and long-standing literature in labor economics evaluating the effect of active labor market instruments on individual behavior[9] with (i) the economic literature on goals and self-control as well as (ii) the literature in social psychology on the effectiveness of teaching a self-regulation strategy. [10]. While we do not find an overall treatment effect of our intervention on (short-term) labor market reintegration success, we find (a) a positive treatment effect on an intermediate outcome, namely the quality of the CV document that unemployed individuals submitted to the program, and (b) participants with an internal Locus of Control benefiting more from the self-regulation training than participants with an external Locus of Control. Overall, as our intervention comes

[7]The Locus of Control is a concept of an individual difference measure that captures "generalized belief for internal versus external control of reinforcement" (Rotter 1966, p. 1). It is a measure of the degree to which an individual perceives that success or failure in life follows from his own behavior or attributes (internal) rather than being controlled by outside forces such as chance or general circumstances (external). Gottschalk (2005) translates the psychological concept of Locus of Control into terms more familiar to economists by describing Locus of Control as a belief about the constraints a person faces.

[8]There is also a close relationship between an internal Locus of Control and high self-efficacy beliefs (see Ajzen 2002, Judge et al. 2002).

[9]For a recent review of this literature, see, e.g., Card et al. (2015).

[10]The latter literature is briefly reviewed in the following section)

at a very low cost, we argue that the self-regulation training could be a cost-efficient ingredient for reactivation programs addressing long-term unemployment.

The paper is organized as follows: Section 2 provides details on the self-regulation training applied in the treatment group. Section 3 explains our experimental design. Section 4 presents and discusses the results. Section 5 concludes.

2 The Self-Regulation Training: Background Information

Finding a new job when unemployed is a difficult and monotonous task which demands high self-regulatory skills. Successful self-regulation comprises *setting* oneself goals, *committing* to them, and then effectively *striving* for these goals (by successfully regulating behavior, emotions, and attention to tackle critical challenges such as getting started and staying on track). Strong self-regulatory skills help to sustain job search activities over time (see Wanberg 2012); this is in particular crucial for long-term unemployed individuals who experience repeated setbacks that often result in frustration and discouragement (Wanberg et al. 2012). To address these challenges, we teach the unemployed participants a self-regulatory strategy: mental contrasting with implementation intentions.

Mental contrasting with implementation intentions is a self-regulatory strategy that helps people to improve their goal setting, goal commitment, goal striving and thus goal achievement (for an overview see Bargh et al. 2010). MCII is a combination of two complementary techniques, mental contrasting (MC) and implementation intentions (II), which we both describe in turn.

Mental contrasting addresses goal *setting* and goal *commitment* by letting people formulate their specific goal (e.g., finding a job), identifying the most positive outcomes of reaching this goal (e.g., social recognition by friends or the family), and elaborating on the most critical obstacle of achieving the goal (e.g., watching TV instead of searching for job announcements and writing applications). People applying MC thus contrast the desired future to the current reality (see Oettingen 2000, Oettingen et al. 2000, 2001). Mental contrasting helps people become conscious of their specific goals and to scrutinize their feasibility (expected success). This encourages commitment to feasible goals and effort for goal-directed behavior (e.g., Oettingen and Gollwitzer 2010).

The technique of implementation intentions promotes goal *striving* by helping overcome the difficulties of, for example, getting started, staying on track, and not overextending oneself.

It promotes goal achievement by forming so-called "if-then-rules". This technique requires to first "identify a future goal-relevant situational cue (i.e., the if-component) and a related planned response to that cue (i.e., the then-component)" (Gollwitzer et al. 2010, p. 280) in order to then formulate if-then plans in the form of *"If I encounter situation X, I will react with behavior Y"* (Gollwitzer 1999). An example in the job-search context would be "When I feel like watching TV, I first spend half an hour searching for a job". In a meta-analysis, Gollwitzer and Sheeran (2006) demonstrate that implementation intentions can substantially improve goal achievement. For example, Milkman et al. (2011) show that reminder emails which include implementation intention prompts significantly increase vaccination rates relative to a control group which receives a reminder without an implementation intention prompt. Both techniques, mental contrasting and implementation intentions, are combined to MCII because mental contrasting improves goal commitment and the technique of implementation intentions has been found to be particularly effective for goals people are highly committed to (see, e.g., Sheeran et al. 2005).

There is broad evidence in the psychological literature that the MCII strategy effectively improves goal attainment for various target groups, across different time horizons, and in different areas such as nutrition (Adriaanse et al. 2010, Stadler et al. 2010, Loy et al. 2016), academic performance (Duckworth et al. 2011, 2013), physical activity (Stadler et al. 2009), health related domains (Christiansen et al. 2010, Milkman et al. 2011), integrative bargaining (Kirk et al. 2013), personal relationships (Houssais et al. 2012), and time management (Oettingen et al. 2015). However, the MCII technique has not yet been applied in the labor market context. We expect the strategy to be particularly promising in mitigating long-term unemployment as the technique has often proven to be especially effective when tailored to goals of high personal importance (Adriaanse et al. 2010, 2009, Koestner et al. 2002)—as we assume is finding work for long-term unemployed individuals.[11]

As discussed in the previous section, the successful use of a self-regulatory strategy depends on individual characteristics, in particular Locus of Control. This also applies to the MCII strategy. So far, empirical studies using the MCII strategy did not find any heterogeneous effects with respect to age or gender of participants. To the best of our knowledge, no study investigated the influence of personal characteristics such as Locus of Control. Nevertheless, we expect the effect of our MCII training to differ in terms of participants' Locus of Control for two reasons: Firstly, participants with an external Locus of Control will presumably display a lower expectation of success when reflecting on their goal of finding a new job (as mentioned

[11] We asked participants in our study how important it was for them personally to find a job within the next six months. We found that less than 3% answered that it is "rather not important or "not important at all, while more than 80% answered that it is "important" or "very important" to them (17% answer that it is "partly important").

before, Locus of Control is also closely linked with self-efficacy beliefs). The application of mental contrasting, in turn, is known to yield high goal commitment dependent on expectation of success, i.e., with high expectation of success mental contrasting leads to formation of high goal commitment and strong intentions (Oettingen 2000, Oettingen et al. 2000, 2001, Oettingen 2012). With low expectation of success for achieving a particular goal, individuals practicing mental contrasting do not commit themselves to attaining that goal (Kappes et al. 2012). Secondly, when prompted to list critical obstacles or barriers for goal achievement, participants with an external Locus of Control could be more likely to name obstacles that are out of their control (e.g., "bad situation on the labor market" or "incapable politicians").[12] In this case, participants are unlikely to benefit from learning the MCII strategy as they cannot continue with reasonable implementation intentions promoting their goal striving. Therefore, we can expect that participants with an external Locus of Control (i) on average form a lower goal commitment (and, thus, might rather refrain from the goal of finding a new job) and (ii) will more often name barriers to goal achievement that are out of their control. Both aspects contribute to our expectation that the benefits of our MCII training will differ with regard to participants' Locus of Control.

Summing up, in the context of our field experiment, we teach long-term unemployed people a self-regulatory strategy—MCII—that has been successfully applied in various contexts; we evaluate whether teaching this strategy in the context of a labor market reactivation program increases reintegration probabilities. In the following section, we provide (among others) details on how we implemented the self-regulation training in the active labor market program.

3 The Field Experiment

3.1 Procedures

Field Partner. We conducted our study together with an long-standing German labor market service provider (henceforth "field partner"). Our field partner has been running various programs in the areas of vocational education, further education and training, health education, and reintegration of unemployed individuals. Since 2005, the service provider has operated a training program for the reintegration of long-term unemployed elderly individuals into the labor market. The program has been operated in two different cities that are located close to each other and henceforth denoted as location A and B. At both locations, several labor market coaches (henceforth denoted as "coaches") conducted the program (more details about the

[12]Though we explicitly instructed participants to look for *personal* obstacles they themselves could influence or work around, we could not fully prevent them from naming external obstacles.

coaches are provided below). It is important to emphasize that our field partner generally had to apply for funding on a year-to-year basis and, therefore, had to recurrently prove success in terms of high rates of integration of participants into full-time employment. As this kind of service industry is a very competitive market in Germany, the fact that our partner has been running this program successfully since 2005 not only speaks for the high quality of our partner's training concept and implementation but also challenges further improvements to the program.

The Existing Reactivation Program. The setup of the training program established by our field partner in the past decade generally resembled other German reactivation programs. For each unemployed participant it lasted for a maximum of six months and employed several strategies to facilitate reemployment: First, a relationship between participant and coach was established. Second, skills relevant for the process of job search were trained and optimized, e.g., search strategies, application strategies, computer skills, etc. Third, in addition to these job search related activities, participants' general activity level was promoted with health-related activities (e.g., opportunities to exercise). Finally, program participants were recommended to potential employers and equipped with suitable job advertisements and advice where relevant jobs in the region can be found. All unemployed persons completed the same six month program; they left the program earlier only if they found a job before the end of the program.

Participants. The federal funding line[13] by which our field partner ran this program, focused on elderly long-term unemployed individuals, i.e., individuals aged 50 years and above who have been unemployed for more than 12 months. The *Jobcenter* (public employment service center) assigned unemployed persons in groups of around 17 (std. dev. 4) participants to our field partner's program. Our field partner then assigned every incoming group to one coach who accompanied this group throughout the duration of the program. Groups started during the course of the year, for the most part between January and July (about 75%). Groups starting after July all finished by the end of the year (for organizational reasons) and, thus, received a shorter program. Treatment and control groups were balanced in starting time over the year.

Coaches. During the time of our field experiment, seven different coaches managed the program. These coaches held most of the workshops and individual meetings with their groups. Coaches number 1, 5, 6, and 7 trained several groups within both the treatment and control condition. Coaches 2 to 4 trained only one group, respectively.[14]

Timeline. In 2011, we set up our collaboration with the field partner and designed the field experiment and the materials used in the treatment. We decided not to run the intervention

[13] "Perspektive 50+", see http://www.perspektive50plus.de

[14] In a robustness test we exclude the participants trained by coaches 2 to 4; our findings from the analyses do not change.

ourselves but to adopt a "train-the-trainer" approach suitable for roll-out to many other programs. Thus, in early January 2012, we conducted a training session with all coaches and the administrative staff of our field partner and introduced them to the self-regulatory strategy, the documents and materials used during our intervention and all organizational procedures of the study. The intervention started in January 2012 and was initially planned to last for two years. However, due to the good economic development and a constant decrease in the unemployment rate in Germany, much fewer participants than expected were assigned to our field partner's program. Therefore, we decided to prolong the study for another year until the end of 2014. Thus, our analysis is based on data covering unemployed individuals assigned to our field partner's labor market program from 2012 to 2014.

3.2 Treatment

All participants, i.e., participants in treatment and control conditions, went through the exact same reactivation program which lasted for a maximum of six months. Treatment and control participants only differed with respect to the two training modules described below, each lasting for about 30 minutes. We assigned entire groups formed by the Jobcenter to either treatment or control conditions. At the very beginning of each year, we communicated to our field partner the sequence in which incoming groups should be labeled treatment or control; thus, incoming groups sent by the Jobcenter were assigned to their condition before actually "arriving" at the activation program. This ensured that the treatment assignment was realized without any knowledge about the groups' or the participants' characteristics. Individuals were not allowed to change groups during their program participation. Hence any issues regarding self-selection were ruled out by design. The treatment was embedded in the flow of the reactivation program by including self-regulation training modules in two existing workshops: one workshop on application strategies, the other on goal setting. Importantly, participants neither knew that different treatment conditions existed nor that an experiment was being conducted; hence they were not aware of which experimental condition they were assigned to. Furthermore, different groups met at different days and different times. Exchange between groups was reduced to a minimum which makes potential spillovers unlikely.

First Self-Regulation Training Module. The first self-regulation training module addressed very specific goals and was part of an application workshop in week 3 or 4 of the program. The existing workshop was designed to train general application activities such as reading job advertisements, writing cover letters, designing and optimizing one's CV, as well as obtaining an overview of the job market and its development within the respective region. The workshop lasted for about four hours. At the end of the workshop, participants in the treatment as well as

the control condition filled out a form that encouraged them to think of the importance of a well prepared CV and required submission of a revised CV to the field partner's office on a specific date.

A differential between the treatment and control individuals was then made by introducing the MCII strategy solely to participants in the treatment condition. In order to keep instructions as simple as possible, the strategy was taught as a four-step technique: (1) "Imagine your goal" (Why do I want to achieve this goal? How good would I feel after achieving it? Etc.), (2) "Potential obstacles" (What hinders goal attainment? What are reasons for not having reached the goal so far? Etc.), (3) "Overcoming obstacles" (How to overcome barriers? How to prevent them from appearing? Etc.), and (4) "My if-then-rule" (in the form of "If critical situation X emerges, I will react with behavior Y!"). Participants in the treatment condition were then requested to fill out a form applying the four steps to the goal of submitting the revised CV document. They also received a sticker note listing the four steps in order to be put on the door of their fridge—this was meant to serve as a constant reminder about the self-regulation strategy.[15] Participants in the control condition, in contrast, did not learn the MCII strategy but were also requested to fill out a form which, however, only reminded them of the importance of a well prepared CV document and committed them to hand in a revised CV on a specific date. Hence, while participants in the treatment group applied the MCII strategy by contrasting the desired future to the current reality and formulating specific implementation intentions, participants in the control condition were only encouraged to think about the future and to formulate goal intentions.

In this first self-regulation training module, a specific goal was fixed for all participants, as all participants were required to submit a revised CV by a specific date. The advantages of prescribing the same goal for all participants (as compared to allowing for individualized goals) are, first, that the MCII strategy can more easily be taught using a common goal; second, the prescribed goal is very specific and the MCII strategy has been shown to work better for specific goals (as compared to "do-your-best" goals, cf. Locke and Latham 2002, 2006); third, prescribing the same goal for all participants allows us to measure goal achievement more easily. Yet, setting the same goal for all participants also carries the disadvantage that participants might be differentially committed to that predefined goal.

Second Self-Regulation Training Module. The second self-regulation training module aimed at fully utilizing the benefits of setting individualized goals. The module was embedded in an existing workshop on goal setting that lasted for two hours and took place in week 5 or 6 of

[15] Due to the large number of native Russian speakers among the participants, all exercise sheets and the sticker notes were also translated into Russian.

the six month reactivation program. During this workshop, coaches explained to participants why goal setting is important and introduced them to the idea of SMART goals—setting specific (S), measurable (M), appropriate (A) and realistic (R) goals within a specified time frame (T) (Doran 1981). This topic was not introduced by us but rather already part of the existing program. Thus, our field partner already covered some of the problems which we hypothesized as being crucial for the job finding process. In addition to the common workshop content, participants in the treatment condition then received another short tutorial on the MCII technique and learned to apply the aforementioned four-step technique to their individual goals. Finally, all participants (in treatment and control conditions) were requested to fill out an exercise sheet where they specified their goals and obstacles. Coaches emphasized that all participants should look for their individual goals and their very own obstacles or habits that hinder them from goal attainment. In the exercise sheet, participants in the treatment condition were additionally requested to apply the four steps of the MCII strategy (see above) to their individual goal, while participants in the control condition were only requested to list some positive aspects of attaining their goal, obstacles that had to be overcome, and resources needed. Both groups started the exercise in class and took it home to finish it until the following week.

Note that both self-regulation training modules only lasted for about 30 minutes each and were fully integrated into the existing program. Importantly, coaches did not spend more time with participants in the treatment condition than with participants in the control condition; additional lessons for the treatment groups were "squeezed" into the given time frame for the respective session without skipping any of the previously existing topics. All groups covered the same topics, learned the same job search strategies, and were encouraged to think of the same aspects of goal setting. The only difference between treatment and control groups consisted of the additional teaching and application of the MCII technique for the treatment groups—in the first module for a very specific goal, in the second module for an individualized goal.

3.3 Data Collection

In order to evaluate the impact of our treatment, we collected information on the quality of the submitted CV documents (interpreted as an intermediate success measure) and integrations into full-time positions (interpreted as our main success measure) as well as a number of individual characteristics such as gender, age, and education (after having received participants' written consent on using the data for scientific purposes).

Quality of the CV Document. As described in Section 3.2, participants learned in the application workshop that a professional CV document is a key component of a successful ap-

plication and is very important for finding a new job. After the workshop, treatment as well as control groups committed to revise their CVs and hand in the improved document to their coaches on a specific date. Once the CV was submitted, it was first rated and then revised by the administrative staff. Participants were neither aware of the rating nor of the revision of their CV document in advance. Also, ratings were not communicated to participants. The ratings of the CVs ranged from 1 ("poor") to 4 ("very good").[16] The rating process was usually conducted in the following way: a staff member of our field partner would take a large stack of CVs, sometimes mixed between groups, then rate and revise them one by one. In location A, one of the two staff members responsible for this procedure also conducted some application workshops. In case this staff member were to recognize the current name from the pile of CVs and remember which treatment condition was implemented during the respective workshop, his ratings might not remain blind to treatment. However, given the large number of participants and the cognitively demanding process, this was unlikely. Nevertheless, we report a robustness test below in which we include only participants from location B, where the rating staff was completely blind to treatment conditions. The effect of our treatment on CV quality proofs to be robust even in this much smaller sample (see Section 4 and table A3 for details).[17]

Labor Market Integration. Information on whether a participant found a full-time job subject to social insurance contribution was almost exclusively collected during the six months of the participation in the program. Usually, no information was collected after participants left the program. In very rare cases, the Jobcenter communicated a success to our partner *after* the six month program (e.g., when the Jobcenter inferred a strong effect of participation in the program on job finding). However, as the Jobcenter was blind to treatment, these cases do not bias our results.

Locus of Control. Our measure of Locus of Control is based on six items surveyed in a questionnaire containing questions on a number of background characteristics as well as personality traits. The questionnaire was distributed to participants in a workshop prior to the workshop on job applications. The Locus of Control items are comparable to those surveyed in the National Education Longitudinal Study of 1988 (used, e.g., by Coleman and DeLeire 2003) and are answered on a 5-point Likert scale (1 "disagree completely" to 5 "agree completely"). Our cardinal Locus of Control score is the standardized mean of all item answer-scores for those participants who answered at least four out of six items.[18] The higher the Locus of Control

[16] Scores correspond to: 1=Complete revision of the document needed, 2=Big changes needed, 3=Small changes needed, 4=No changes needed.

[17] Unfortunately, the effect of CV quality on integration success could not be evaluated in our study because all CVs were revised to a similar level of quality by our field partner before use in real job applications.

[18] Table A1 in the appendix provides the exact wording of the items as well as the results of a factor analysis suggesting that all six items load on one single factor.

score, the more a participant believes to have internal control over life events. We also construct a binary Locus of Control variable taking on the value 1 if the person has a cardinal Locus of Control score above the median (i.e., rated internal) and taking on the value 0 if the person has a cardinal Locus of Control score below the median (i.e., rated external).

Control Variables. Additional information on participants' socio-demographic characteristics—gender, age, migration background, work experience, education, etc.—was either provided by our field partner or surveyed by the questionnaire mentioned above. As described in Section 3.3, participants left the program either upon being integrated into the labor market or after six months when the program ended. It was not possible to collect any information of the participants after they had left the program.

3.4 Variables and Descriptive Statistics

Our final sample consist of 616 participants assigned to 45 groups;[19] 363 participants were assigned to the treatment condition (59%) and 253 to the control condition.[20] Table 1 provides summary statistics for all variables used. For the intermediate outcome "CV score" we only have 391 observations because not all participants submitted a CV and not all submitted CVs were rated due to administrative reasons.[21] The distribution of the CV scores is shown in figure 1. It is skewed to the left, mean CV score is 1.7, 47% have the lowest (worst) score. For our main outcome variable "labor market integration" data on all participants is available. In total, 88 participants (14%) were actually integrated in the labor market within the observed time horizon. One fourth of the participants were located in location B, mean group size is 16.6., 48% of the participants were female, mean age was 55 years, 48% have a migration background, 92% have some labor market experience,[22] 34% had no professional degree, 54%

[19] In 2012, an additional 57 participants were assigned to only the first treatment module (i.e., that within the application workshop, see Section 3.2) and an additional 76 participants were assigned to only the second treatment module (i.e., that within the goal setting workshop). The reason was that we initially planned to assess the effects of the two treatment modules separately. However, due to the upcoming business cycle, a decreasing number of unemployed individuals entered the program such that the number of observations no longer sufficed to continue separate assessments. Therefore, we decided to assign participants in 2013 and 2014 either to both modules or to none of the modules (control group) and discarded the 133 participants assigned to only one module from our sample.

[20] The number of participants assigned to treatment and control condition is not perfectly balanced because our field partner did not exactly follow the plan for assigning treatment and control groups (see Section 3.1) and in location B in 2013 mistakenly assigned two more incoming groups to the treatment condition than initially planned. Yet, as this occurred without prior knowledge of the characteristics of the participants, selection issues do not compromise the randomization procedure. However, we include location, coach, and year fixed effects as covariates in our final estimations to account for imbalances with respect to those variables.

[21] There is no difference between treatment and control group with respect to the probability of submitting a CV, see Section 4.

[22] Here we count only jobs that are subject to social insurance contributions.

Table 1: Summary Statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
Treatment	0.589	0.492	0	1	616
CV score	1.691	0.743	1	4	391
High CV score (binary)	0.532	0.5	0	1	391
Labor market integration	0.143	0.35	0	1	616
Year 2012	0.195	0.396	0	1	616
Year 2013	0.484	0.5	0	1	616
Year 2014	0.321	0.467	0	1	616
Coach 1	0.159	0.366	0	1	616
Coach 2	0.015	0.12	0	1	616
Coach 3	0.023	0.149	0	1	616
Coach 4	0.019	0.138	0	1	616
Coach 5	0.49	0.5	0	1	616
Coach 6	0.071	0.258	0	1	616
Coach 7	0.222	0.416	0	1	616
Rural location	0.245	0.431	0	1	616
Urban location	0.755	0.431	0	1	616
Group size	16.584	4.407	5	26	616
Female	0.476	0.5	0	1	616
Age	54.755	3.548	50	65	616
Migration background	0.48	0.5	0	1	590
Work experience	0.92	0.271	0	1	528
No professional degree	0.342	0.475	0	1	549
Vocational degree	0.537	0.499	0	1	547
University degree	0.119	0.324	0	1	547
Cardinal LOC	0	1	-3.444	2.266	509
Internal LOC (binary)	0.55	0.498	0	1	509

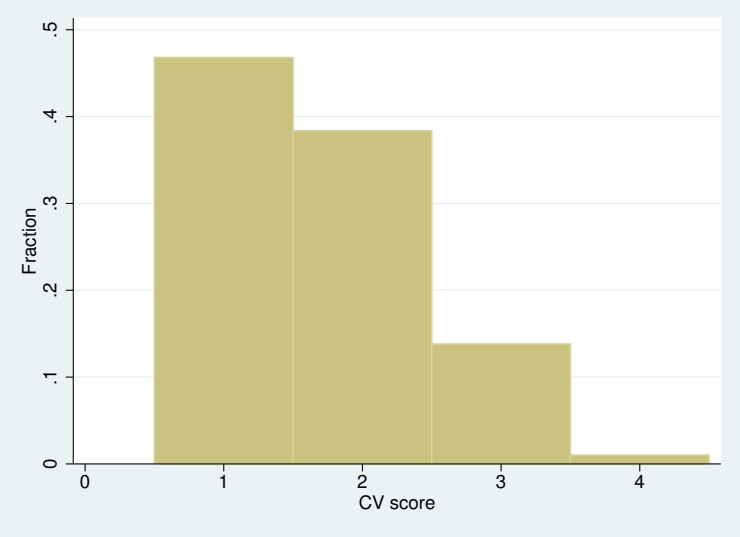
High CV score is a binary variable that takes on the value 1 if CV score was rated 2, 3, or 4 and the value 0 if CV score was rated 1 (=lowest quality). Cardinal Locus of Control (LOC) is the standardized average of the six LOC items given in table A1 in the appendix. Internal LOC is a binary variable that takes on the value 1 if cardinal LOC is above its median (i.e., rather internal) and the value 0 if cardinal LOC is below its median (i.e., rather external).

had a vocational degree, 12% had a university degree.

3.5 Randomization Test

In order to test successful randomization into treatment and control conditions, we estimate the treatment indicator as a function of various program-related and socio-demographic characteristics based on a linear probability model (see table 2).[23] None of the socio-demographic variables—i.e., gender, age, age squared, migration background, work experience, and education—

[23]We also validated successful randomization with Probit specifications, results do not change.



Note: N = 391. CV score is a variable ranging from 1 (“poor”) to 4 (“very good”).

Figure 1: Distribution of CV Score

is significantly linked to treatment assignment; moreover, these variables are jointly insignificant (p=0.64). When we look at pairwise correlations instead of multiple regression, we also find that none of the socio-demographic variables is significantly correlated with treatment status. This suggests adequate randomization with respect to individual characteristics. In contrast, the program-related characteristics—i.e., year fixed effects, location, and group size—are jointly significant (p<0.01) in the estimation in table 2. Therefore we decided to proceed as follows: in Section 4 below, we always report three versions of our main estimation results: (1) without further control variables, (2) including program-related characteristics, and (3) including program-related as well as socio-demographic characteristics. Our main results change only marginally depending on the set of control variables included.

4 Results

First, we consider the treatment effect on our measure of intermediate success, the quality of the CV document submitted by participants to our field partner. Results based on least squares regressions with standard errors clustered on the group level are reported in table 3. In columns (1) to (3) the dependent variable is CV score on the scale 1 to 4 (4 is best). Column (1) is estimated without further control variables, column (2) includes program-related characteristics (year fixed effects, coach fixed effects, and group size), and column (3) includes both program-related and socio-demographic characteristics (gender, age, age squared, migration background, work experience, and education). The treatment effect is always positive and significant. It appears that participants in the treatment condition obtain a CV score that is 0.205 to 0.245 points

Table 2: Randomization Test: Estimation of Treatment Indicator

	Treatment
Year 2013	0.207***
	(0.058)
Year 2014	0.039
	(0.065)
Location A	-0.126**
	(0.050)
Group size	0.034***
	(0.004)
Female	0.038
	(0.042)
Age	-0.218
	(0.186)
Age^2	0.002
	(0.002)
Migration background	-0.030
	(0.046)
Work experience	-0.074
	(0.074)
Vocational degree	-0.017
	(0.048)
University degree	0.021
	(0.071)
Constant	6.005
	(5.161)
N	508
R squared	0.132

The estimation is based on a linear probability model. Reference category for year is 2012; reference category for education is no professional degree. Standard errors are in parentheses. * p<0.10, ** p<0.05, *** p<0.01.

higher than participants in the control condition (columns (1) - (3)); this corresponds to 28-33% of a standard deviation. To provide a more concise estimation of the treatment effect on CV score, we also estimate a model with the binary CV variable "high CV score", assigned the value 1 for CV scores rated 2, 3, or 4 and assigned the value 0 for CV scores rated 1. The results based on linear probability models are reported in columns (4) to (6) of table 3, again, without control variables (column (4)), including program-related characteristics (column (5)), and including both program-related and socio-demographic characteristics (column (6)).[24] The interpretation is as follows: participants in the treatment condition have a 14.6 to 17.1 percentage point higher probability of obtaining a high CV score. Given that we have only 391 CVs scored (from the initial 616 participants), it is also possible that treated participants have a different probability of submitting their CV documents to our field partner. However, testing whether submitting one's CV is a function of treatment assignment did not reveal any influence. As described in Section 3.3 not all CVs in location A were rated by staff members fully blind to the treatment. As a robustness check, we thus estimate the treatment effect on CV score for participants in location B only. The results are given in table A3 in the appendix. It seems that—despite the small remaining sample size—our results are robust in two of three model specifications (i.e., columns (2) and (3)) and in this subsample they appear even larger in size than for the overall sample.

Table 3: Treatment Effect on Quality of Submitted CV Document

	CV Score			High CV Score (binary)		
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	0.247***	0.205**	0.245***	0.171***	0.146**	0.167***
	(0.088)	(0.091)	(0.087)	(0.056)	(0.057)	(0.061)
Program-related char.	No	Yes	Yes	No	Yes	Yes
Socio-demographic char.	No	No	Yes	No	No	Yes
N	391	391	341	391	391	341
R squared	0.027	0.065	0.189	0.029	0.073	0.187
Adjusted R squared	0.025	0.040	0.146	0.027	0.048	0.145

Columns 1-3 give the results of OLS estimations of CV score rated on a scale from 1 "poor" to 4 "very good" with different sets of controls. Columns 4-6 give the results of linear probability estimations of a binary CV score variable that takes on the value 0 if the CV score was rated 1 and the value 1 if the CV score was rated 2, 3, or 4. Program-related characteristics include year fixed effects, coach fixed effects, and group size. Socio-demographic characteristics include gender, age, age squared, migration background, labor market experience, and education. Standard errors given in parentheses are clustered on the group level. * p<0.10, ** p<0.05, *** p<0.01.

Second, we consider the treatment effect on labor market integration. Results based on a linear probability model with standard errors clustered on the group level are reported in table

[24] As a robustness test we estimate the binary CV score by a probit model instead of a linear probability model. The results do not change much as can be seen from table A2 in the appendix.

4.[25] Columns (1) to (3) show that we do not find a main treatment effect on the probability of finding a job, regardless of whether or not further control variables are included. One reason for this zero result could be that we observe labor market integration only in the very short-term, i.e., within the six months interval that the reactivation program runs. Another recent field experiment on labor market reintegration suggests that treatment effects might rather appear in the long-term (see Altmann et al. 2015); unfortunately, we are unable to evaluate the treatment effect on a longer term because we could not follow-up participants after the end of the program.

Next, as we have outlined based on psychological theory (see Section 2), we investigate how an internal Locus of Control moderates the effect of our self-regulation treatment on reemployment probabilities. To do so, we include Locus of Control (a dummy for internal LOC) as a covariate as well as an interaction term between Locus of Control and the treatment indicator in the regression. As columns (4) to (6) of table 4 show, we find no main treatment effect but we do find a positive and significant interaction effect with internal Locus of Control.[26] Thus, we conclude that Locus of Control moderates the effect of our treatment.[27] As we have noted in Section 2, this is well in line with psychological theory suggesting that only people with an internal Locus of Control believe that their own effort can influence the probability of finding a job and, hence, only those people commit to this goal and are susceptible to learning a self-regulatory strategy which helps them to improve goal striving.

We test a number of concerns that could challenge our findings: First, the heterogeneous treatment effect with respect to Locus of Control could reflect a heterogeneous treatment effect with respect to motivation (see Cobb-Clark 2015). We have two different measures of motivation. First we asked participants, how important it is for them to find a job within the next six months, and, second, how disappointed they would be if they did not find a job within the next six months. We carry out robustness tests including motivation as well as interaction terms between treatment and motivation in our regression. Our main results are robust: we find no main treatment effect on reintegration probability but a heterogeneous effect with respect to Locus of Control. Motivation neither moderates nor mediates these effects.

Second, we acknowledge that the Locus of Control variable may have picked up age effects and that the Locus of Control effects would in fact be heterogeneous effects with respect to age (evidence regarding this relationship, however, is still ambiguous; see Cobb-Clark and Schurer

[25] As a robustness test we estimate a probit model instead of a linear probability model. The results are very similar as can be seen from table A4 in the appendix.

[26] In an alternative specification we include Locus of Control as a cardinal variable instead of a binary variable, see table A5 in the appendix. The results are consistent with our main results reported in table 4, only the interpretation of the interaction effect with the cardinal variable is less intuitive.

[27] When we reduce the sample to only those participants with an internal Locus of Control, we find the treatment effect to be 0.06 (p=0.25), 0.07 (p=0.15), and 0.11 (p=0.02) for the three specifications, respectively.

Table 4: Treatment Effect on Probability of Labor Market Integration—Main Effect and Heterogeneous Treatment Effect by Locus of Control

	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	-0.006	-0.013	0.009	-0.076	-0.084	-0.061
	(0.036)	(0.034)	(0.029)	(0.059)	(0.059)	(0.051)
Internal LOC (binary)				-0.031	-0.031	-0.024
				(0.045)	(0.045)	(0.041)
Treatment × internal LOC				0.134**	0.139**	0.142**
				(0.064)	(0.064)	(0.069)
Program-related char.	No	Yes	Yes	No	Yes	Yes
Socio-demographic char.	No	No	Yes	No	No	Yes
N	616	616	508	509	509	440
R squared	0.000	0.013	0.095	0.014	0.034	0.112
Adjusted R squared	-0.002	-0.004	0.064	0.008	0.011	0.072

Estimations are based on a linear probability model with different sets of control variables. Internal Locus of Control (LOC) is a binary variable taking on the value 1 if the cardinal Locus of Control measure is above its median and the value 0 if the cardinal Locus of Control is below its median. Cardinal Locus of Control is the standardized average of the six items given in table A1 in the appendix. Program-related characteristics include year fixed effects, coach fixed effects, and group size. Socio-demographic characteristics include gender, age, age squared, migration background, labor market experience, and education. Standard errors given in parentheses are clustered on the group level. * p<0.10, ** p<0.05, *** p<0.01.

2013, Specht et al. 2013). Therefore, we carry out a robustness test including age and an interaction term between treatment and age in different specifications using metric and categorical variables. Our main results remain robust and no heterogeneous effects with respect to age appear to be relevant.

Third, the participants might be heterogeneous with respect to their language proficiency or their comprehension of the lessons about the MCII strategy. Those who did not understand the lesson in which the self-regulation strategy was taught are unlikely to benefit from it. Hence, we tested heterogeneity of the treatment effect with respect to migration background, but did not find an effect. Also, we tested heterogeneity of the treatment effect with respect to education (which is also known to be linked with Locus of Control, see Piatek and Pinger 2016) but neither found significant differences.

For our intermediate success measure, the quality of the submitted CV, we do not find that Locus of Control moderates the treatment effect (see table A6 in the appendix), but instead we find a positive treatment effect on CV quality irrespective of Locus of Control. The lack of a heterogeneous treatment effect for CV quality is plausible for the following reason: The MCII strategy can be expected to be particularly effective when applied to very specific goals (Gollwitzer and Brandstätter 1997) and submitting an improved CV document is a very specific goal. We speculate that even people with an otherwise very external Locus of Control believe that they

can influence the quality of their CV document by committing some effort revising it; they are thus likely to appreciate the MCII strategy to improve their effort on the revision—similar to those people with a more internal Locus of control. However, the improvement in the CV cannot be directly translated into a higher reintegration probability because the administrative staff of our field partner had revised all submitted CVs (cf. Section 3.3). In contrast to the goal of improving one's CV document, the goal of finding a job is much more difficult to reach and it is less clear which steps must be completed to reach it. Participants might be much more heterogeneous in their belief about which factors influence this outcome. In particular, participants with an external Locus of Control might be less convinced that they can influence the probability of finding a job. Therefore, they are less likely to apply the newly learned self-regulation strategy to improve their job search. This could explain our positive interaction effect of treatment with internal Locus of Control for the probability of labor market reintegration but not for CV quality.

We finally want to outline some cost-benefit considerations for our intervention. As previously mentioned, our intervention is (i) designed in a way that it is easily scalable (train-the-trainer approach, minimally invasive for existing reactivation program schedules) and (ii) it comes at very low cost (virtually no material cost and very little time consumption of around 60 minutes for participants—if we even assume that additional time is required, other than our intervention design suggests where the intervention was squeezed into existing workshops). Conservatively estimating per-participant-costs (i.e., giving an upper bound for the cost of the training), we assume the train-the-trainer session for the coaches to last for a maximum of five hours, resulting in costs of max. 500 EUR (including opportunity costs for the trained coaches as well as the trainer). By estimating that 10 groups with 10 participants per group are supervised by one coach this results in 5 EUR per participant. Material costs per participant amount to a maximum of 5 EUR. Adding opportunity costs of time of 80 EUR for coaches for the 60 minute MCII training sessions (i.e., about 8 EUR per participant if there are 10 participants per group) and opportunity costs of time of 40 EUR, we end up with a total cost per participant of about 58 EUR. Despite this very conservative calculation, even a very small positive effect of the intervention on the labor market integration rate would result in a large rate of return. Benefits from reduced unemployment include an increase in well-being as well as an improvement of the financial situation of the previously unemployed persons; the society as a whole benefits from cost-savings, increased tax returns, and improved utilization of its productive capacity in terms of human capital. Participants might even apply the MCII strategy outside the labor market domain to improve their goal achievement, which in turn might result in improvements in well-being and other life outcomes. We conclude that this potentially high individual and social rate of return warrants the application of our low-cost self-regulation training in the context of labor market reactivation programs.

5 Conclusion

A broad literature in labor economics uses quasi-experimental techniques to evaluate the success of active labor market programs. While this literature mostly examines the overall success of these programs, there is little knowledge about its active components. In this paper, we explored the extent to which a specific self-regulation training as part of an active labor market program affects reintegration probability. To do so, we embedded a randomized-controlled field experiment in an existing labor market reactivation program and used this experimental setting to investigate whether teaching mental contrasting with implementation intentions (MCII)—an easy-to-learn self-regulatory strategy—can improve the success of the program.

First, we find a positive treatment effect on the quality of participants' submitted CVs—an intermediate measure of success. Second, we do not find an overall treatment effect on the (short-term) labor market reintegration probability. Third, we find that participants with an internal Locus of Control benefit more from the treatment than participants with an external Locus of Control. This is consistent with the theory of Locus of Control: Individuals who believe that they can influence success in life to a high degree (i.e., those with an internal Locus of Control) are more likely to adopt new strategies that help them to exert effort. In contrast, individuals who believe to a high degree that factors outside their control influence their success in life (i.e., those with an external Locus of Control) are less likely to exert effort; in consequence, they are less likely to adopt new strategies that might help them to exert effort.

Since we find a strongly positive treatment effect of our self-regulation training on our intermediate measure of success—the quality of the submitted CV document—, we conclude that the training can potentially improve the success of similar activation programs. Our finding also empirically confirms the relevance of goal setting and self-control for economic decision making and behavior (cf., for example, Bénabou and Tirole 2004, Koch and Nafziger 2011, Beshears et al. 2016). However, in our study, we did not find an overall treatment effect on the reintegration probability into the labor market. One reason for this could be that we have data on reintegration only in a very short term (within six months after starting the reactivation program). As other recent work on labor market measures suggests (see Altmann et al. 2015), it is likely that effects occur in the longer run. Furthermore, the participants in our experiment are elderly unemployed (aged between 50 and 65 years), and one could speculate younger unemployed to benefit more from the self-regulation training because the goal of finding a job is more important when the time span of being in working age is longer. If the goal is more important for younger people, they are likely to be more open to learning a new strategy which helps them to increase own effort. Moreover, it has been shown that the internal Locus of Control declines between 35 and 55 years of age (see Specht et al. 2013), indicating that our treatment

might have considerably stronger effects for younger individuals. Also, when evaluating the results of our minimally invasive intervention one needs to keep in mind that active labor market programs are a huge, professional and highly competitive industry in Germany. Only the comparably high success of our field partner's training program enabled this program to survive for more than 10 years in this industry (cf. section 3.1). Accordingly, a further improvement of the program's integration rate can be considered challenging. Finally, we point out that we used an inexpensive train-the-trainer approach which could easily be transferred to other programs. As outlined above, potential positive effects on reintegration probabilities would yield considerable individual and social returns.

To conclude, the use of targeted interventions that address socio-psychological and self-regulatory barriers to labor market integration seems a worthwhile approach to pursue. However, more research is needed, in particular evaluating long-run effects to further advance our understanding of the key obstacles to reintegration, how to best train unemployed individuals to overcome them, and which subgroups benefit strongest from which sort of training.

Appendix

Table A1: Factor Analysis of Locus of Control Items

	Eigenvalue
Factor1	1.479171
Factor2	.2474783
Factor3	-.033859
Factor4	-.1097859
Factor5	-.1788588
Factor6	-.2125986

	Factor 1	Factor 2
In my life, good luck is more important than hard work for success. (reversed)	.3824006	.3001255
Every time I try to get ahead, something or somebody stops me. (reversed)	.6338363	-.0750392
Making plans makes me unhappy, especially because my plans hardly ever work out. (reversed)	.6303498	-.1588733
When I make plans, I am almost certain I can make them work.	.2970989	-.1755022
Chance and luck are very important for what happens in my life. (reversed)	.4306176	.2976461
I do not have enough control over the direction my life is taking. (reversed)	.5100511	-.0844817

Factor analysis based on the method of principal factors. To survey the items participants were asked, "To what extent do you personally agree with the following statements?" and can answer on a Likert scale from 1 "fully disagree" to 5 "fully agree".

Table A2: Probit Estimation of Treatment Effect on Binary CV Score

	(1)	(2)	(3)
Treatment	0.168***	0.141***	0.164***
	(0.053)	(0.054)	(0.056)
Program-related char.	No	Yes	Yes
Socio-demographic char.	No	No	Yes
N	391	391	341
Pseudo R squared	0.021	0.054	0.147

Marginal effects based on probit estimations of a binary CV score variable that takes on the value 0 if the CV scores was rated 1 and that takes on the value 1 if the CV score was rated 2, 3, or 4. Program-related characteristics include year fixed effects, coach fixed effects, and group size. Socio-demographic characteristics include gender, age, age squared, migration background, labor market experience, and education. Standard errors given in parentheses are clustered on the group level. * p<0.10, ** p<0.05, *** p<0.01.

Table A3: Treatment Effect on Quality of Submitted CV Document — Only Location B

	(1)	(2)	(3)
Treatment	0.048	0.322**	0.453***
	(0.145)	(0.123)	(0.091)
Program-related char.	No	Yes	Yes
Socio-demographic char.	No	No	Yes
N	130	130	106
R squared	0.001	0.045	0.171
Adjusted R squared	-0.007	0.006	0.064

OLS estimations of CV score rated on a scale from 1 "poor" to 4 "very good" with different sets of controls, only for the sample of participants in location B. Program-related characteristics include year fixed effects, coach fixed effects, and group size. Socio-demographic characteristics include gender, age, age squared, migration background, labor market experience, and education. Standard errors given in parentheses are clustered on the group level. * p<0.10, ** p<0.05, *** p<0.01.

Table A4: Probit Estimation of Treatment Effect on Probability of Labor Market Integration

	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	-0.006	-0.014	0.013	-0.085	-0.097	-0.078
	(0.035)	(0.033)	(0.030)	(0.065)	(0.064)	(0.058)
Internal LOC (binary)				-0.030	-0.032	-0.038
				(0.042)	(0.042)	(0.043)
Treatment × internal LOC				0.134**	0.143**	0.164**
				(0.064)	(0.071)	(0.086)
Program-related char.	No	Yes	Yes	No	Yes	Yes
Socio-demographic char.	No	No	Yes	No	No	Yes
N	616	616	466	509	499	395
Pseudo R squared	0.000	0.015	0.114	0.018	0.039	0.147

Marginal effects based on probit estimations with different sets of controls. The interaction effect "treatment × internal LOC" is calculated based on Ai and Norton (2003). Internal Locus of Control (LOC) is a binary variable taking on the value 1 if cardinal Locus of Control is above its median and the value 0 if cardinal Locus of Control is below its median. Cardinal Locus of Control is the standardized average of the six items given in table A1 in the appendix. Program-related characteristics include year fixed effects, coach fixed effects, and group size. Socio-demographic characteristics include gender, age, age squared, migration background, labor market experience, and education. Standard errors given in parentheses are clustered on the group level. * p<0.10, ** p<0.05, *** p<0.01.

Table A5: Treatment Effect on Probability of Labor Market Integration—Heterogeneous Effect by Cardinal Locus of Control

	(1)	(2)	(3)
Treatment	-0.002	-0.010	0.014
	(0.044)	(0.043)	(0.034)
Cardinal LOC	-0.032	-0.034	-0.037
	(0.028)	(0.029)	(0.024)
Treatment × cardinal LOC	0.082**	0.087**	0.087**
	(0.037)	(0.037)	(0.035)
Program-related char.	No	Yes	Yes
Socio-demographic char.	No	No	Yes
N	509	509	440
R squared	0.016	0.037	0.113
Adjusted R squared	0.010	0.014	0.072

Estimations are based on a linear probability model with different sets of controls. Cardinal Locus of Control (LOC) is the standardized average of the six LOC items given in table A1 in the appendix. Program-related characteristics include year fixed effects, coach fixed effects, and group size. Socio-demographic characteristics include gender, age, age squared, migration background, labor market experience, and education. Standard errors given in parentheses are clustered on the group level. * p<0.10, ** p<0.05, *** p<0.01.

Table A6: Treatment Effect on Quality of Submitted CV Document—Heterogeneous Effect by Locus of Control

	(1)	(2)	(3)
Treatment	0.239*	0.202	0.207*
	(0.125)	(0.135)	(0.121)
Internal LOC (binary)	0.119	0.089	0.021
	(0.094)	(0.099)	(0.108)
Treatment × internal LOC	-0.001	-0.005	0.008
	(0.142)	(0.150)	(0.150)
Program-related char.	No	Yes	Yes
Socio-demographic char.	No	No	Yes
N	333	333	300
R squared	0.030	0.067	0.210
Adjusted R squared	0.021	0.032	0.157

Results are based on OLS estimations of CV score rated on a scale from 1 "poor" to 4 "very good" with different sets of controls. Internal Locus of Control (LOC) is a binary variable taking on the value 1 if cardinal Locus of Control is above its median and the value 0 if cardinal Locus of Control is below its median. Cardinal locus of control is the standardized average of the six LOC items given in table A1 in the appendix. Program-related characteristics include year fixed effects, coach fixed effects, and group size. Socio-demographic characteristics include gender, age, age squared, migration background, labor market experience, and education. Standard errors given in parentheses are clustered on the group level. * p<0.10, ** p<0.05, *** p<0.01.

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