



Providing Freshmen with a Good “Starting-Block”

Two Brief Social-Psychological Interventions to Promote Early Adjustment to the First Year at University

Mikaël De Clercq^{ID}, Charlotte Michel, Sophie Remy, and Benoît Galand

Faculty of Psychology and Education, Université catholique de Louvain, Belgium

Abstract: Grounded in social-psychological literature, this experimental study assessed the effects of two so-called “wise” interventions implemented in a student study program. The interventions took place during the very first week at university, a presumed pivotal phase of transition. A group of 375 freshmen in psychology were randomly assigned to three conditions: control, social belonging, and self-affirmation. Following the intervention, students in the social-belonging condition expressed less social apprehension, a higher social integration, and a stronger intention to persist one month later than the other participants. They also relied more on peers as a source of support when confronted with a study task. Students in the self-affirmation condition felt more self-affirmed at the end of the intervention but didn’t benefit from other lasting effects. The results suggest that some well-timed and well-targeted “wise” interventions could provide lasting positive consequences for student adjustment. The respective merits of social-belonging and self-affirmation interventions are also discussed.

Keywords: college transition, academic adjustment, self-integrity, self-efficacy beliefs, academic achievement

Introduction

The transition from secondary to higher education is a challenging experience for many freshmen. They have to deal with a new and complex environment: a new social network, heightened academic demands, autonomous learning, and unfamiliar administrative tasks (Perry, Hladkyj, Pekrun, & Pelletier, 2001). Many freshmen struggle with this transition, and 31% of students from OECD countries drop out of higher education before graduation (OECD, 2016), which generates both psychological and financial burdens.

Over the last 20 years, educational research has accumulated a vast body of knowledge to understand freshmen success at university (Fong et al., 2017; Richardson, Abraham, & Bond, 2012; Robbins et al., 2004). Robbins and colleagues identified more than 7,000 articles tackling this issue. This extensive literature shows that student beliefs, needs, and feelings about university stood out as significant psychosocial predictors of engagement and success (Richardson et al., 2012; Robbins et al., 2004). More precisely, the importance of feeling confident (Boekaerts & Rozendaal, 2010) and a sense of belonging (Morrow & Ackermann, 2012) were substantiated both theoretically and empirically.

Interventions based in social psychology and motivation theory also demonstrated the important benefits of acting on student perceptions and feelings (for a review, see Harackiewicz & Priniski, 2018). Among them so-called “wise” interventions were demonstrated to be particularly efficient. Wise intervention can be defined as brief exercises that primary target a change in a specific psychological process (Walton & Wilson, 2018). The review by Yeager and Walton (2011, p. 267) asserts that “brief exercises that target student’s feelings and beliefs in and about school can lead to large gains in student achievement . . . even months and years later.” To induce such significant impacts on student adjustment, this research approach insists on considering the temporal anchoring of intervention (Walton & Wilson, 2018). Wise interventions need to be both well-timed and well-targeted if they are change the trajectory of student experience (Yeager & Walton, 2011).

Along this line, the very first weeks of a transition constitutes an effective timing for intervention to buffer participants against perceived initial threats of the new context and to trigger a recursive virtuous circle with long-term benefits (Walton & Cohen, 2011). This assumption agrees with research on academic transition, which asserts the importance of the first weeks at university when the

freshman is "settling in" the context (Harris, 2014). Flexible initial beliefs quickly turn into more stable impressions about the academic context that, in turn, influence the way students actually tackle their first year.

Some wise interventions targeted the fundamental motive of *belonging*. These interventions are expected to remove threats, to leverage motivations to form and maintain social relationships, and to avoid maladaptive behaviors generated by worries about belonging (Walton & Wilson, 2018). More precisely, Walton and Cohen (2011) highlighted the benefits of buttressing the social belonging of freshmen for racially minority students, who as a socially marginalized group are considered particularly sensitive to threats about belonging in the university context. The intervention consisted of reading testimonies of social integration in order to lessen the perceived social adversity in the academic world. The authors reported long-standing effects on retention, grade-point average, health, and well-being. Another major minority group in the university context is represented by students with low socioeconomic status (Cummins, 2015). According to Harackiewicz and colleagues (2014), these students must deal with difficulties and threats about belonging in university programs similar to those faced by racially minority students.

Wise interventions also addressed student self-integrity motives. These interventions help people to place threats in a broader context, to respond less defensively, and to reduce anxiety (Walton & Wilson, 2018). Napper, Harris, and Epton (2009) manipulated self-affirmation by asking students to complete a questionnaire focusing their attention on positive and valued self-aspects. Results showed positive effects on self-confidence, academic adjustment, and well-being.

This study assesses the relative merits of two wise interventions implemented in a European educational program during the very first week at university. Grounded in social-psychological literature, these interventions focused on promoting the two motives cited above. The first intervention sought to hinder initial apprehension about integration by framing social adversity as transitory and common (Walton & Cohen, 2011). The second intervention served to reinforce the feeling of competence by having students focus on their personal strengths and values (Napper et al., 2009).

Some studies have questioned the global benefits of wise interventions and asked for more investigation on their conditions for effectiveness (e.g., Sisk, Burgoyne, Sun, Butler, & Macnamara, 2018). Implementing these two interventions at the same time in a "real-life" context offers a good opportunity to compare their effects. Focusing on the first weeks can also constitute a step toward more consideration for the time-course of first-year experience, which is often disregarded in educational psychology (Wasylikiw, 2016).

Considering that the participants were in a pivotal phase of adjustment, we assumed that a subtle change in their perception would have significant impact on their adjustment later in the year.

Based on Walton and Cohen (2011), we formulated four main hypotheses regarding the manipulation of social belonging. This condition is presumed to have a positive short-term effect on social expectations (H1). The participants were also expected to demonstrate higher social integration, well-being, and retention (H2). When confronted with a study task, participants were expected to obtain better performance than the other students and to rely more on their social network to support them in the task (H3). Moreover, the manipulation is presumed to have a stronger impact on marginalized social groups (H4). In our educational context, this group is represented by students from low socioeconomic background. According to Stephens, Hamedani, and Destin (2014), these students experience a cultural shock upon entering university. They need to compensate their low social capital by creating supportive relationships in the academic context.

Based on Napper and colleagues (2009), we formulated three main assumptions regarding the manipulation of self-affirmation. First, students in this condition were presumed to feel more self-affirmed in the short run (H5). The participants were presumed to have higher scores on self-efficacy beliefs, well-being, and academic adjustment than controls (H6). In a study task, the participants were presumed to demonstrate higher study time and deep-processing strategies, considered here as task-specific indicators of adjustment (H7).

Method

Participants and Procedure

A group of 375 freshmen from the Department of Psychology at a Belgian university took part in the interventions (mean age = 18.9 years). 76% of the sample was female, 65% had completed secondary education with an average achievement score of 80% or higher, and 37.5% had at least one parent holding a university degree. This sample consisted of all freshmen registered in the Psychology Department at this university who attended the mandatory introduction session.

During this introductory session to the psychology program (the first day of the academic year), these students were randomly assigned to one of the three conditions: control ($n = 129$), social-belonging ($n = 123$), and self-affirmation condition ($n = 123$). At the end of the session, each freshman randomly received a card containing his or her specific assignment to a working group with a specific

schedule for participating in the mandatory “welcoming workshop.”

In the control condition, student attended the usual 11/2 hour welcoming workshop. This workshop was administrated in groups of around 25 students. The workshop briefed freshmen about their faculty, the university layout, and some important administrative and practical information. The aim was to provide students with the information needed to understand the organization of the psychology program.

In the social-belonging condition, testimonies from older students were added at the end of the traditional welcoming workshop. These testimonies all had the same message: Social integration may seem challenging at the beginning of the first year, but this is just a transient and common aspect of college adjustment experienced by all new students. Students were asked to read a testimony and to write a short essay describing how this testimony echoed their own experiences and concerns. In order to foster the internalization of this message, a last step used the “saying-is-believing effect” (Higgins & Rholes, 1978): Students were asked to present their essay out loud in front of the other students of the working group. The intervention lasted around 30 minutes, so that the entire workshop lasted 2 hours.

In the self-affirmation condition, completion of a self-reported questionnaire was added at the end of the traditional welcoming workshop. From the questionnaire provided (The Value in Action Strengths scale; Peterson & Seligman, 2004), students had to identify their most valued and important self-aspects. They were then asked to write a short essay on these and to present it to the other students of the working group. The intervention also lasted around 30 minutes, so that the entire workshop lasted 2 hours.

Measures

Self-reported questionnaires were administrated at four different times. Measures of background variables were taken before the workshop to assess the equivalence of conditions (T1). Socioeconomic status was one of the background variables measured through a composite score consisting of three indicators: parents’ highest educational level (ranging from 1: “*primary education*” to 5: “*university education*”) and subjective social status scale (ranging from 1 “*lowest level of social hierarchy*” to 10 “*highest level of social hierarchy*”). Exploratory factor analysis revealed a single factor (eigenvalue higher than 1) that explained more than 56% of the variance and with factor loadings ranging from .60 to .83. A standardized factor score was extracted to create an overall SES indicator.

Social expectations and self-affirmation were measured at the end of the workshop (T2). Self-efficacy beliefs, social

integration, intention to persist, and well-being were assessed 1 month after the intervention (T3). Performance on a study task (first mandatory test for all psychology freshmen in biology), study behaviors, and strategies were gathered 2 months after the intervention (T4). Detailed information about the scales can be found in Table 1.

Results

Randomization Check

MANOVA results showed that the participants did not differ on background and baseline variables such as age, sex, past performance, socioeconomic status, initial self-efficacy beliefs, and initial social integration. This analysis allowed us to consider participants in the three conditions as equivalent and substantiated the procedure of random assignment. Background variables were included as covariates in subsequent analyses in order to control for their effects.

Short-Term Effects of the Manipulations

Following the recommendations of Judd, McClelland, and Ryan (2011), we performed planned orthogonal contrasts testing the effect of experimental conditions. More precisely, in the first contrast, social belonging and self-affirmation condition (respectively coded -0.33) were compared to control condition (coded 0.66). In the second contrast, social belonging condition (coded 0.5) was compared to self-affirmation condition (coded -0.5), with control group coded 0 . The MANCOVA omnibus test yielded significant differences on social expectations ($F(2, 372) = 4.044; p < .018; \eta_p^2 = .042$) and self-affirmation ($F(2, 372) = 14.770; p < .001; \eta_p^2 = .080$) across the conditions. A priori contrasts showed that, at the end of the workshop, students in the social-belonging condition expressed less concern about their integration than did students in the other two conditions ($MD = -0.292; p < .001$). At the same moment, students in the self-affirmation condition reported higher self-affirmation than students in the other conditions ($MD = -0.605; p < .001$).

Medium-Term Effects of the Manipulations

The MANCOVA omnibus test indicated significant effects of conditions on social integration ($F(2, 299) = 4.066; p = .029; \eta_p^2 = .024$) and intention to persist ($F(2, 299) = 3.645; p = .045; \eta_p^2 = .026$) 1 month after the interventions. Contrasts showed that freshmen from the social-belonging condition reported feeling more socially

Table 1. Summary of the scales used in the study

	Sample of items
Before the workshop – T1	
Background variables	Age, sex, socioeconomic status, past performance
Initial social integration	"How many friends do you already have at the university?"
Initial self-efficacy beliefs ($\alpha = .76$; 10 items)	"I feel confident in my ability to cope with academic demands"
Just after the workshop – T2	
Social expectations ($\alpha = .79$; 5 items)	"I expect to easily make friends"
Self-affirmation ($\alpha = .84$; 5 items)	"I identified important self-values during the workshop "
One month after the workshop – T3	
Social integration ($\alpha = .84$; 7 items)	"I feel lonely at the university " R
Intention to persist ($\alpha = .79$; 6 items)	"I have already thought about leaving higher education" R
Well-being ($\alpha = .72$; 8 items)	"I feel happy at the university"
Self-efficacy beliefs ($\alpha = .77$; 10 items)	"I am able to cope with academic demands"
Academic adjustment ($\alpha = .75$; 5 items)	"I feel overwhelmed by the academic demands" R
Two months later (regarding a test) – T4	
Study time ($\alpha = .64$; 2 items)	"To prepare for this test, I studied during ..."
Deep processing ($\alpha = .62$; 5 items)	"I have combined and related the different chapters of the course"
Social studying ($\alpha = .82$; 3 items)	"When I experienced difficulties in studying this test, I asked my friends for help"
Performance on the test	Open-ended test composed of 5 questions and noted out of 5 points.

Note. R = reverse scoring.

integrated ($MD = -.212$; $p = .049$) and having stronger intention to persist in the program ($MD = -0.167$; $p = .041$) than students from the two other conditions. However, no significant differences appeared for well-being ($F(2, 299) = 0.102$; $p = .405$), self-efficacy beliefs ($F(2, 247) = 0.124$; $p = .724$), or academic adjustment ($F(2, 247) = 0.983$; $p = .406$).

Effects of the Manipulations with Regard to a Study Task

Two months after the interventions, a significant difference was found for social studying ($F(2, 247) = 3.995$; $p = .021$; $\eta_p^2 = .029$). Students from the social-belonging condition reported being more prone to rely on their social group as a source of support when confronted with a study task ($MD = -.253$; $p = .030$). No differences were found on test performance ($F(2, 247) = 0.105$; $p = .901$), deep processing ($F(2, 247) = 0.801$; $p = .450$), or studytime ($F(2, 247) = 1.340$; $p = .264$).

Socioeconomic Status (SES) as a Moderator

Two-step hierarchical regressions (Baron & Kenny, 1986) were used to investigate the interaction effect of SES and social-belonging manipulation on the outcome variables. At the first step, the main effect of the two contrasts (control

vs. self-affirmation & social-belonging; self-affirmation vs. social belonging) and SES composite score were entered in the model. At the second step, the interaction effects of the two contrasts with SES were added to the model.

Results revealed significant main effects of SES on social expectations ($\beta = 0.11$; $p = .049$), social integration ($\beta = 0.19$; $p = .003$), social studying ($\beta = 0.15$; $p = .032$), and test performance ($\beta = 0.22$; $p < .001$). No interaction term was significant, except for social integration, which displayed a marginally significant interaction effect ($\beta = 0.12$; $p = .063$) between SES and contrast 2, as illustrated in Figure 1.

Discussion

This study tested the effects of brief interventions on freshmen adjustment in the very first weeks at university. Results partially replicated findings from social-psychology experiments in the United States in an applied European educational context and showed that two interventions from different theoretical frameworks produced different effects.

The Merits of a Social Belonging Intervention

Findings from the intervention on social-belonging indicated significant short- and medium-term effects on social

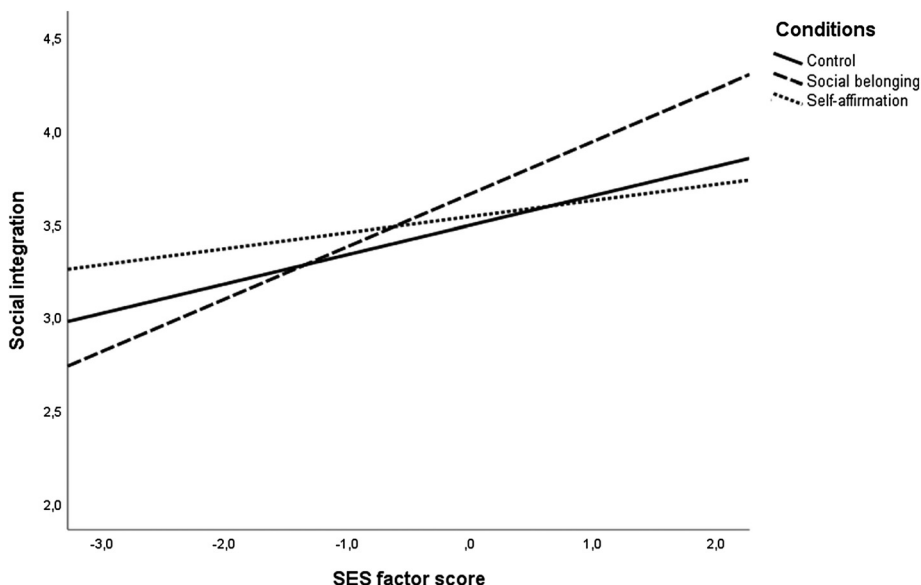


Figure 1. Interaction effect of socioeconomic status on social integration across the three conditions.

outcomes, supporting H1 and partially supporting H2 and H3. Significant differences in favor of this condition were found on social expectations, social integration, and social studying. In accordance with Walton and Wilson (2018), the intervention can be conceived as a buffer against threats about belonging and a means of forming and maintaining social relationships in a new context.

Moreover, this intervention was found to affect intention to persist. This result is consistent with Walton and Cohen's (2011) findings about retention and is also consistent with the association usually found in higher education between belonging and persistence (Morrow & Ackermann, 2012). Yet, this study failed to replicate the effects on well-being and performance previously observed by Walton and Cohen (2011). However, our findings are consistent with the weak relationship between social belonging and these variables observed in many studies in higher education (Freeman, Anderman, & Jensen, 2007). Also, significant effects in Walton and Cohen's (2011) study were visible mainly among minority students, whereas our study was carried out mostly among “traditional” students. We can therefore assume that the effect of the manipulation was not strong enough to have an effect on those distal variables among most students.

Reducing the Social-Class Adjustment Gap?

The postulated interaction effects of the social-belonging condition with SES (H4) were mainly invalidated. This result can be linked to the nature of the minority group under investigation (Schwartz, Cheng, Salehi, & Wieman, 2016). Yeager and Walton (2011) initially worked with

African-American students, a social group with a long history of discrimination and marginalization. Such students may therefore experience a much stronger social threat compared to students in Belgium of low socioeconomic background. Social belonging may not be the first choice to manipulate in order to reduce social-class adjustment gap. Some scholars found stronger positive benefits with interventions targeting student growth mindsets (Sisk et al., 2018), making social-class salient (Stephens et al., 2014), or promoting mastery-oriented assessment (Smeding, Darnon, Souchal, Toczek-Capelle, & Butera, 2013).

Despite the few interaction effects, several main effects of SES were identified regarding social outcomes and performance. These results agree with the extensive literature linking SES to performance (for a review, see Sirin, 2005) and support the assertion of Stephens and colleagues (2014) that low-SES background threatens student integration. It is worth noting that the only (marginal) interaction effect of the study appeared with regard to social integration. Further investigations are needed to check whether manipulation of social belonging could be an effective buffer against social threat experienced by low-SES students.

The Merits of a Self-Affirmation Intervention

Regarding the self-affirmation intervention, results indicated a short-term effect on self-affirmation but failed to identify any medium-term effects. The short-term effect substantiated the manipulation impacts on the right process (H5). Yet, the absence of a medium-term effect,

refuting hypotheses 6 and 7, is more questionable. One plausible explanation may lie in the nature of the manipulation check: While the social-belonging intervention exposed students to a context-specific material, self-affirmation acted on the general perception of important self-aspects. When implemented in the student program, such a global manipulation may fail to place the actual threat in a broader context and to reduce defensive responses and anxiety. This explanation is consistent with studies showing that feelings of competence are largely domain-dependent, and that only domain-specific measures are related to academic adjustment (Zimmerman, 2000).

The Relative Merits of the Two Conditions

Comparing the two experimental conditions, the social-belonging manipulation seems to have a stronger long-standing effect than self-affirmation condition. Such intervention seems to be able to initiate a kind of positive recursive circle expected by wise interventions (Yeager & Walton, 2011), whereas the self-affirmation condition rather supports the mixed results of wise interventions documented in recent meta-analyses (e.g., Sisk et al., 2018).

This finding could be related to the different processes and motives targeted by these two interventions. On the one hand, the social belonging condition aimed at reducing social threat, which is a vivid concern for all students since the very first day at university. They are therefore particularly sensitive to this threat and responsive to any intervention that can reduce it. On the other hand, the self-affirmation condition targeted the self-integrity motive, which could not have already been threatened at the beginning of the year. If the first intervention was well-timed, the second may have been implemented too soon to lead to long-standing gains. Such interventions could have shown a stronger effect in a strong self-integrity threat moment such as first examination session. This finding showed the importance of comparing interventions to better understand differentiated effects determined by the underlying processes being manipulated.

Limitations and Future Perspectives

Two limitations are noteworthy. The first is linked to the nature of the implementation itself. Although implementation in a "real-life" pre-existing workshop increases ecological validity, it also enhances the number of uncontrollable factors that could interfere with the manipulations. Yeager and Walton (2011, p. 289) suggest proceeding with caution when adapting brief interventions: "Even when interventions are delivered with an effort to reproduce theoretically essential components, research finds that they can

sometimes be derailed by seemingly small changes in how the intervention is delivered." Several characteristics of the workshop could have negatively interfered with the manipulation and blurred its impact, such as the content of the usual workshop, variations in the schedule of the workshop throughout the week, or different group dynamics. A replication controlling for these variations would therefore constitute an interesting future perspective. Another future perspective could be broadening the assessment of the interventions to further motivational factors such as growth mindsets, attributions, or interest (for a review, see Lazowski & Hulleman, 2016).

A second limitation relates to the measures of the impact of the interventions. This experiment only assessed short- and medium-term effects. However, an analysis of the long-term effects would have added an interesting value. Considering the recursive nature of the process presumably induced by the interventions, we can postulate that the impact on more distal factors (performance, well-being, retention) would appear only over the long run. Therefore, it could be interesting to replicate this kind of study with long-term measures of retention and success as in the Walton and Cohen (2011) experiment.

Implications

From a theoretical point of view, the results call for more research about wise interventions in higher education (Gehlbach, 2010) to determine to what extent and under which circumstances (timing, profile) they can be efficient (Schwartz et al., 2016; Sisk et al., 2018). Yeager and Walton (2011) insist on the major importance of timing and target in the implementation of wise interventions. However, it is still difficult today to determine these elements.

From a practical point of view, the results suggest that it is possible to obtain some lasting positive consequences on student social adjustment process with small- and low-cost 30-minutes interventions.

More broadly speaking, the findings underline the malleability of student beliefs about university life in their first weeks there. It suggests that, during this stage, university staff should particularly pay attention to their interactions with freshmen. Because a positive experience could lead to a recursive virtuous circle, a negative message (such as emphasizing the competitive and selective nature of university life) may have long-term opposite effects.

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History

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ORCID

Mikaël De Clercq

 <https://orcid.org/0000-0003-2667-9165>

Mikaël De Clercq

Faculty of Psychology and Education
Université catholique de Louvain
Place du Cardinal Mercier, 10, bte L3.05.01
1348 Louvain-La-Neuve
Belgium
mikael.declercq@uclouvain.be