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Challenging or conserving your beliefs: A person-centered approach of pre-service teachers’ educational identity

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Abstract

Emerging adulthood is a challenging period in terms of identity development, especially in the education and career domains. In the present paper we employed a person-centered approach of identity processes to identify pre-service teachers’ educational identity statuses. As beliefs about teaching influence teachers’ engagement in professional development tasks, we explored connections between their beliefs about teaching ability (innate versus learned) and educational identity status. Results indicated that most pre-service teachers in our sample were characterized by identity achievement, followed by searching moratorium, diffusion, and foreclosure. Searching moratorium pre-service teachers scored higher than the foreclosed ones on both teaching ability beliefs.

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Keywords: educational identity, career, pre-service teachers, beliefs about teaching ability

1. Introduction

Emerging adulthood encompasses intense career exploration and career-related decisions, such as choosing specific educational programs or occupational paths (Arnett, 2000; Negru, Pop, Damian, & Moraru, 2011). The purpose of the present study was to investigate educational identity processes and beliefs about teaching in Romanian emerging adults enrolled in a pre-service teaching program.

Identity development is a process characterized by repeated cycles of commitment, in–depth exploration, and reconsideration of commitment (Crocetti, Rubini, & Meeus, 2008a). These processes capture the manner in which

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people adhere to chosen career alternatives (i.e., commitment), how they gather information about their choices by consulting with others (i.e., in-depth exploration), or how they relinquish no longer viable choices (i.e., reconsideration of commitment). Person-centered approaches on identity can offer a better glimpse on the interplay between these processes, as they coexist in the same individual, for the same identity domain (Crocetti & Meeus, in press). In the process model developed by Meeus, Crocetti at al. (Crocetti, Rubini, Luyckx, & Meeus, 2008b), five identity statuses were identified: achievement (i.e., high levels of commitment and in-depth exploration, and low levels of reconsideration of commitment), moratorium (i.e., low levels of commitment, moderate levels of in-depth exploration, and high levels of reconsideration of commitment), searching moratorium (i.e., high levels of commitment, in-depth exploration, and reconsideration of commitment), diffusion (i.e., low levels of commitment, in-depth exploration, and reconsideration of commitment), and foreclosure (i.e., high levels of commitment, moderate levels of in-depth exploration, and low levels of reconsideration of commitment).

Pre-service teachers’ educational identity statuses are partially shaped by their implicit or explicit theories about teaching, which partly refer to the nature of one’s teaching ability. Expanding Dweck’s theory about ability conceptions (entity versus incremental theories of intelligence, 2002) to the teaching domain, Fives and Buehl (2008) described two types of beliefs about teaching ability: the belief that the ability to teach is innate and the belief that the ability to teach is learned. Those who consider that the teaching ability is innate will be more outcome-oriented, focusing on measuring and validating their ability to teach. Those who consider that their teaching ability is learned will be more process-oriented, concentrating on the effort and strategies they use when they approach teaching tasks. Thus, when they deal with difficult teaching tasks and fail, pre-service teachers who believe in the innate nature of their teaching ability tend to invest less effort or avoid future similar tasks, considering that their performance is out of their control, while those who believe in the learned nature of teaching ability tend to invest more time and effort in similar tasks, considering that they are able to change their own performance. Based on previous data, we expected that the beliefs in the innate and learned nature of teaching beliefs coexist (Fives & Buehl, 2008). We also assumed that the beliefs about teaching ability are incorporated in pre-service teachers’ general belief system and that they systematically guide behavior in academic context (Dweck, 2002; Fives & Buehl, 2012).

Since there is no empirical evidence regarding the links between teaching ability beliefs and identity statuses, we examined the following hypotheses: (a) pre-service teachers with high levels of in-depth exploration and commitment (i.e., achievement, searching moratorium) will predominantly display beliefs about teaching as a learned ability compared to those with low levels of in-depth exploration and high levels of reconsideration of commitment (i.e., diffusion, moratorium); (b) pre-service teachers with high levels of commitment and low levels of in-depth exploration (i.e., foreclosure) will score significantly lower on both teaching ability beliefs than those with high levels of both commitment and in-depth exploration (i.e., achievement, searching moratorium).

2. Method

2.1. Participants and procedure

A total of 302 students enrolled in the first level of a teacher training program at five different faculties in North-West Romania participated in the present study. In the Romanian educational system teacher training consists of a compulsory two-level pedagogical module that students attend during their undergraduate and postgraduate studies. For the present analyses, 6 participants were excluded from the study (univariate and multivariate outliers). Thus, the final sample comprised 294 students (75.5% females), aged between 18 and 30 years (Mean age = 19.94 years, SD age = 1.28).

2.2 Instruments

Identity processes. We used the Romanian version (Negru & Crocetti, 2010) of The Utrecht-Management of Identity Commitments Scale (U-MICS; Crocetti et al., 2008a) to assess the three identity processes in the educational domain: commitment, exploration in-depth, and reconsideration of commitment. The instrument consisted of 13 items scored on a 5-point Likert-type rating scale, ranging from 1 (does not apply to me at all) to 5.
(applies to me very well). Sample items include: “My education gives me certainty in life” (commitment; 5 items; \( \alpha = .85 \)), “I think a lot about my education” (exploration in-depth; 5 items; \( \alpha = .72 \)), and “I often think it would be better to try to find a different education” (reconsideration of commitment; 3 items; \( \alpha = .88 \)).

**Teaching ability beliefs.** We measured the perceived nature of teaching abilities through two subscales from the Teaching Ability Belief Scale (TABS; Fives & Buehl, 2008). The first subscale captures beliefs about teaching as an innate ability (11 items; \( \alpha = .88 \); e.g., “Teaching is a calling”). The second subscale captures beliefs about teaching as a learned ability (7 items; \( \alpha = .79 \); e.g., “Teaching is a skill that is developed with training and expertise”). Participants responded to all items on a scale from 1 (strongly disagree) to 5 (strongly agree). Both subscales were translated into Romanian following standard back-translation procedures as recommended by Brislin (1986).

### 3. Results

First, we used the expectation maximization algorithm to impute missing data (Graham, 2009). Only 1.51% of all item responses were missing and were estimated by averaging answers across items, enabling us to perform the analyses on the full sample. Second, we removed the univariate (z-scores > 3.29, \( p < .001 \) two-tailed) and multivariate outliers (scores with a Mahalanobis distance larger than the critical value of \( \chi^2(5) = 20.51, p < .001 \)) which can severely distort the results of correlation and cluster analysis. Third, we examined the descriptive data and the correlations among all the study variables. As displayed in Table 1, participants scored higher on educational commitment and on beliefs about teaching as a learned ability, and lower on reconsideration of commitment and beliefs about teaching as an innate ability. Moreover, commitment was positively related to exploration in-depth and beliefs about teaching as innate ability, and negatively to reconsideration of commitment. Educational exploration in-depth and reconsideration of commitment were positively associated with both types of beliefs about one’s teaching ability. We found a negative but not significant correlation between beliefs about teaching as innate ability and beliefs about teaching as learned ability.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M (SD)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Commitment</td>
<td>4.40 (0.58)</td>
<td>-</td>
<td>.19**</td>
<td>-.17**</td>
<td>.13*</td>
<td>.10</td>
</tr>
<tr>
<td>2. Exploration in-depth</td>
<td>3.77 (0.62)</td>
<td>-</td>
<td>.24**</td>
<td>.21**</td>
<td>.25**</td>
<td></td>
</tr>
<tr>
<td>3. Reconsideration of commitment</td>
<td>2.38 (1.13)</td>
<td>-</td>
<td>.17**</td>
<td>.12*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Teaching as innate ability</td>
<td>3.14 (0.75)</td>
<td>-</td>
<td>-</td>
<td>-.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Teaching as learned ability</td>
<td>3.69 (0.61)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. M = Mean; SD = Standard Deviation; *\( p < .05 \), **\( p < .01 \)*

Cluster analysis on the identity processes was conducted using a two-step procedure (Gore, 2000). First, a hierarchical cluster analysis using Ward’s method with squared Euclidean distances was carried out. Second, we used the obtained initial cluster centers as non-random starting points in an iterative \( k \)-means clustering procedure. In line with prior studies (Crocetti et al., 2008b; Crocetti, Fermani, Pojaghi, & Meeus, 2011; Crocetti, Jahromi, & Meeus, 2012; Klimstra, Crocetti, Hale, Kolman, Fortanier, & Meeus, 2011), several cluster solutions were evaluated in terms of substantive interpretability, parsimony, and explanatory power (i.e., the cluster solution had to explain approximately 50% of the variance in each of the processes).

A total of five clusters were retained. This cluster solution explained between 53% and 67% of the variance in the identity processes. Figure 1 presents the final five-cluster solution; the Y-axis represents z-scores. Similarly to Cohen’s \( d \) (1988), we considered that 0.2 \( SD \) is a small effect, 0.5 \( SD \) is a moderate effect, and 0.8 \( SD \) is a large effect. The achievement cluster \( (n = 76; 25.9\%) \) scored high on commitment and exploration in-depth, and low on reconsideration of commitment. The foreclosure cluster \( (n = 53; 18\%) \) scored moderately high on commitment, very
low on exploration in-depth, and low on reconsideration of commitment. The moratorium cluster \((n = 41; 13.9\%)\) scored very low on commitment, moderately low on exploration in-depth, and very high on reconsideration of commitment. The searching moratorium cluster \((n = 67, 22.8\%)\) scored moderately high to high on all three identity processes. The diffusion cluster \((n = 57; 19.4\%)\) scored very low on commitment, low on exploration in-depth, and moderately low on reconsideration of commitment. The five-cluster solution we obtained replicated the solution found in the previous studies (Crocetti et al., 2008b; Crocetti et al., 2011; Crocetti et al., 2012; Klimstra et al., 2011).

In order to analyze the effects of cluster membership on teaching ability beliefs, a multivariate analysis of variance (MANOVA) was conducted, with cluster membership as independent variable and teaching ability beliefs as dependent variables. Based upon Wilk’s Lambda \((\text{Wilk’s } \lambda = .88)\), a significant multivariate effect was found \((F(4, 289) = 4.57, \ p < .001, \ \eta^2 = .06)\). Follow-up analyses using Tukey’s Honestly Significant Difference test are presented in Table 2. We found significant differences \((p < .05)\) only between the searching moratorium and foreclosure pre-service teachers. Searching moratorium pre-service teachers scored higher than foreclosure pre-service teachers on both teaching ability beliefs.

Table 2. Univariate ANOVA’s and Post-hoc Cluster Comparisons for the Five Identity Statuses (N = 294)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Educational identity statuses</th>
<th>F-value</th>
<th>(\eta^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Achievement</td>
<td>Foreclosure</td>
<td>Moratorium</td>
</tr>
<tr>
<td>1. Teaching as innate ability</td>
<td>3.19(0.80)</td>
<td>2.89(0.79)</td>
<td>3.03(0.71)</td>
</tr>
<tr>
<td>2. Teaching as learned ability</td>
<td>3.69(0.68)</td>
<td>3.47(0.63)</td>
<td>3.65(0.57)</td>
</tr>
</tbody>
</table>

Notes. The cluster means are significantly different \((p < .05)\) if they have different superscripts. Standard deviations are in parentheses. \(* p < .05, ** p < .01, *** p \leq .001\)

4. Conclusion

The present study set out to analyze educational identity statuses in pre-service teachers from a person-centered approach and explored the effect of derived identity statutes (i.e., achievement, moratorium, searching moratorium, foreclosure, diffusion) on teaching ability beliefs (i.e., teaching as innate ability versus teaching as learned ability).
In terms of identity statuses, the results of the cluster analysis indicated that most of the pre-service teachers in our sample were characterized by identity achievement (25.9%), followed by searching moratorium (22.8%). Considering that these emerging adults were at the beginning of their preparation for becoming teachers, the two dominant statuses indicated that while some were actively committed to their educational choice (i.e., achievement status), others still actively searched, questioned, and possibly reconsidered their present choices (i.e., searching moratorium status). As diffusion (19.4%) and foreclosure (18%) were also well represented statuses, it seems that some of the pre-service teachers were rather “clueless” about their educational choices, expressing little commitment but also no reconsideration of commitment about them (i.e., foreclosure status). As for the foreclosed pre-service teachers, their strong educational commitment was not supported by in-depth exploration of their present choice, making them vulnerable to negative effects of unexpected changes in their career paths.

In our sample, pre-service teachers in searching moratorium and achievement statuses scored higher on both types of teaching ability beliefs than those in moratorium, diffusion, and foreclosure statuses. However, only the differences between searching moratorium and foreclosure statuses were statistically significant. This means that, compared to those who made uninformed educational choices and did not explore them (i.e., foreclosure status), those who assumed firm educational choices and continued to reflect on them (i.e. searching moratorium) engaged in diverse educational experiences in order to verify their beliefs about teaching and to evaluate how adequate these choices were for them. As foreclosed pre-service teachers uncritically adhered to others’ beliefs about their teaching ability, they avoided educational experiences that invalidated their beliefs (i.e., difficult teaching tasks in which failure was likely). These results highlight the fact that in this stage of preparation for a teaching career the exploration of current educational choices is a very important process. Avoidance of early exploration and evaluation of educational choices could later lead to difficulties in facing teaching challenges. Future research should focus on longitudinal associations between identity statuses and teaching ability beliefs in order to capture how they change as pre-service teachers acquire more teaching experience. The present study findings could serve as guidelines for the designing of effective training programs addressed to pre-service teachers.

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References


