An exploratory examination of students' pre-existing beliefs about leadership

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Abstract:

Preparing future leaders is a long-standing priority in higher education, but doubts have been raised about whether this goal is being achieved. Pedagogical research suggests that leadership development can be improved by taking account of students' pre-existing beliefs about leadership; however, little is currently known about those beliefs. To learn more, we conducted exploratory factor analyses of responses from the Multi-Institutional Study of Leadership. In a random sample of 1465 undergraduate students with no prior leadership education, we found that their beliefs about leadership had a four-factor structure: students felt that leaders needed to *serve their community*, *be open-minded*, *honour their values*, and *be comfortable with change*. As evidence of these factors' importance, we found that students' factor scores predicted several leadership outcomes, including leadership self-efficacy, social change behaviour, and perspective-taking. These findings suggest the value of better understanding students' pre-existing beliefs about leadership.

Keywords: leadership | leadership development | social change | undergraduate education

Article:

Introduction

Crisis of leadership education

It seems that it would be hard to overstate the importance of leadership education. Contemporary society calls almost all individuals to lead in some context (Northouse 2009), and concerns about the availability of effective leadership (Burns 1978) have persisted for decades (Rosenthal et al. 2007; Schwab 2007; Ashford and DeRue 2012). In apparent response to the need to develop better leaders, many universities offer leadership education, and more begin to do so each year (DeRue, Sitkin and Podolny 2011). Indeed, the mission statements of most institutions include

the goal of preparing future leaders for positions of influence in a variety of domains (Brookfield 2012).

Despite this institutional embrace of leadership education, concerns have been raised about the success of current efforts, as there seems to be little change in students' observable behaviour (Yukl 2010) or attitudes (Lord and Hall 2005). For example, one study showed that university students continue to believe that leadership is limited to select individuals who have special, rare qualities (Schertzer and Schuh 2004). Students do not seem to recognise the substantial evidence that leadership is not innate, but can be developed (Avolio 2010), despite the fact that this recognition dominates in higher education (Kezar, Carducci and Contreras-McGavin 2006; Kouzes and Posner 2008; Komives and Wagner 2009). Given the gap between educational intent and student attitudes, it is not surprising that there have been many calls for institutions to re-think how they educate future leaders (Zimmerman-Oster and Burkhardt 1999; A.W. Astin and Astin 2000; DeRue, Sitkin and Podolny 2011).

In this paper, our aim is to assist educators by raising the possibility of having leadership development explicitly take account of the beliefs that students bring with them. Based on our findings and recent developments in adult learning research, we suggest that designing programs to incorporate students' pre-existing beliefs about leadership could make leadership education more effective. Teaching creates more lasting change when it is cognisant of students' experiences, backgrounds and interests (Haggis 2009; Ambrose et al. 2010). Therefore, in support of designing more effective programs, this paper presents preliminary empirical evidence on students' beliefs about leadership. We also show that these beliefs predict student leadership outcomes, suggesting their importance. If the goal of leadership education is to get students from 'here to there' in their approach to leadership, then we need to clearly define not only *there* (the desired way of thinking about leadership), but also *here* (their pre-existing beliefs). Our paper highlights the importance of knowing undergraduate students' pre-existing beliefs about leadership and provides some preliminary evidence about the content and importance of those beliefs.

Social Change Model of Leadership Development

Our analysis used the Social Change Model of Leadership Development (SCM) as a framework (Higher Education Research Institute 1996). The SCM is the theoretical model of the Multi-Institutional Study of Leadership (MSL; www.leadershipstudy.net), which is an international research study of factors influencing university students' capacity for effective leadership. The MSL includes over 100 higher education institutions and more than 100,000 students. The SCM has also been used to examine differences in leadership capacity between men and women (Dugan 2006), across race and sexual orientation (Dugan, Komives and Segar 2009), and in assessing which aspects of the university environment influence students' leadership practice (Dugan and Komives 2007, 2010). In sum, the empirical evidence suggests that the SCM is potentially a very useful model for student leaders to adopt in their leadership thinking. Moreover, a recent survey of American, Canadian and Mexican higher education institutions revealed that over 80% of them utilised the SCM as their dominant theoretical model for teaching leadership (Owen 2012). Given the utility and ubiquity of the SCM, we felt it was an appropriate framework for this study.

The SCM was created by a group of leadership educators to teach students the competencies they would need to lead in contemporary society and was specifically intended to be appropriate for undergraduate students (H.S. Astin 1996). The SCM describes effective leadership as being based in collective action, shared power, a commitment to social justice, and the idea that everyone has the potential to become a leader (Higher Education Research Institute 1996). The model has eight core capacities in which students should be competent. These capacities are summarised in Table 1.

Table 1. The eight capacities within the Social Change Model.

Capacity	Description
Consciousness of self	One's awareness of the beliefs, values, attitudes, and emotions that motivate action.
Congruence	One's ability to think, feel, and behave with consistency.
Commitment	The psychic energy that motivates one to serve, even during challenging times.
Collaboration	The capacity to work with others in a group effort.
Common purpose	The capacity to construct shared aims and values with others.
Controversy with civility	One's ability to recognize that differences in viewpoint are inevitable, and then to navigate respectful solutions to those differences.
Citizenship	The capacity to become responsibly connected to one's community.
Change	One's capacity for positive impact on a group and the larger society.

Note: Adapted from Higher Education Research Institute (1996)

Importance of students' pre-existing beliefs

The SCM, like other leadership models (Ciulla 2011), was developed as a prescriptive theory about what leaders should do to be effective. While research evidence supports the SCM's ability to predict effective leadership (Humphreys 2007; Gerhardt 2008; Owen 2008; Durham Hynes 2009), little is known about how well this model fits with students' thinking about leadership. In other words, while the SCM states how students *should think* about leadership, we do not know how accurately it reflects what students *do think* about leadership. However, preliminary evidence suggests that undergraduate students do not think about leadership in terms of the eight SCM capacities: one study found that the model did not fit students' view of leadership (Rosch and Caza 2012) and another found students' explicit support of the model to vary (Ricketts and Bruce 2008). Moreover, a study directly investigating the views of students found that even those with leadership experience typically viewed leadership in ways that were not consistent with the SCM (Schertzer and Schuh 2004).

This potential discrepancy between the SCM and students' thinking is important from a developmental perspective. Efforts to improve students' SCM capacities will be far less effective if those efforts ignore students' initial beliefs about leadership (Ambrose et al. 2010). Research has shown that how well students learn depends not only on what they are taught, but also on the pre-existing knowledge they use to make sense of that new information (Gick and Holyoak 1980; Bransford, Brown and Cocking 2000). While the prevalence of gaps between instructor goals and student learning was highlighted a generation ago (File 1984; Entwistle 1987), the reasons behind these gaps are only now being revealed (Vermunt and Minnaert 2003). Current evidence suggests that a likely explanation for the gap is that most studies focus on deficiencies in students or their study habits, rather than on the lack of connection between the curriculum and students'

current knowledge and beliefs (Haggis 2009). This lack may be particularly problematic in the field of leadership education, since most everyone has vivid personal experiences with leadership, either as leaders themselves or through observing others. These personal experiences shape students' beliefs about leadership in ways that will influence the results of educational efforts. In fact, research has shown that beliefs about leadership predict many important outcomes (Chan and Drasgow 2001) and leadership training that focuses on changing beliefs produces greater effects than programs that only try to change behaviour (Reichard and Avolio 2005). Logic and evidence thus suggest that efforts to develop leaders will be best served by taking account of students' pre-existing beliefs about leadership. Since the available data suggest that the SCM and other leadership models do not reflect students' pre-existing beliefs, it could be that the challenges faced by higher education's efforts to train future leaders stem from the failure to consider the beliefs that students bring with them to their leadership training.

Knowledge of students' pre-existing beliefs

At present, little is known about what typical students believe concerning leadership (Komives et al. 2005). While a body of research has examined differences in students' general conceptions of leadership by gender and race (Arminio et al. 2000; Kezar and Moriarty 2000; Dugan, Komives and Segar 2009; Ostick and Wall 2011), relatively little of that research examined the specific beliefs that students hold about leadership practice. For example, while the idea of women being more relational in their leadership style than men (Eagly and Carli 2003) has been supported in studies of university students (Kezar and Moriarty 2000; Dugan, Komives and Segar 2009), the research did not assess students' actual thinking about leadership. As a result, it is not clear whether the observed gender differences in leadership style reflect fundamentally different beliefs about leadership or simply socialised attitudes about which parts of leadership are appropriate for each gender to engage in. Moreover, most of the research that has examined students' thinking about leadership has focused on atypical students who were highly involved on campus or had already participated in leadership development programs (Arminio et al. 2000; Cress et al. 2001; DiPaolo 2004; Schertzer and Schuh 2004; Komives et al. 2005). As a result, little is known about the pre-existing beliefs of typical individuals who are representative of general student populations.

There are, however, two noteworthy exceptions in studies by Haber (2011) and Wielkiewicz (2000). Both found that samples of representative students perceived leadership as a hierarchical expression of power limited to those in positions of authority. While Wielkiewicz (2000) examined students' perceptions using a specific framework of leadership that contrasted hierarchical leadership with a systemic view, Haber's (2011) research utilised grounded theory and found similar results in students' definitions of leadership. In both studies, there was little evidence that students' pre-existing beliefs matched with the SCM. Consistent with these findings, a study that attempted to find the eight SCM capacities in the thinking of a representative group of students was unable to do so (Rosch and Caza 2012). Those authors administered a measure of the SCM to a group of students and found that the students' mental models did not correspond to the SCM. In sum, what evidence is available suggests that students' pre-existing beliefs about leadership may be significantly different from the SCM. It is important to stress that this discrepancy does not make the SCM wrong or inappropriate for undergraduate students. Rather, it highlights that students may need a significant change in their thinking before

the SCM is fully comprehensible to them. Pedagogy will be more effective if it accounts for these changes, and so there is a clear need to better understand students' beliefs.

The study presented here begins to address this need. Using survey data from a representative random sample collected as part of the Multi-Institutional Study of Leadership, we investigated undergraduates' pre-existing beliefs about leadership. Specifically, we examined the factor structure of response patterns among different groups to describe the beliefs that students bring with them to leadership training. Our data also showed the ability of these pre-existing beliefs to predict a variety of other leadership-related beliefs and attitudes, suggesting those factors' importance in student leadership.

Methods and results

Participants

This analysis used data collected in the 2009 and 2010 samples of the MSL at one institution – a large, research-extensive public university in the Midwestern United States. Invitations were sent to a random sample of 4000 undergraduate students each year, and a total of 2316 unique students participated (overall response rate 29.0%). Slightly less than half (48.3%) of the respondents identified as male. Of those respondents who reported their ethnicity, the majority (65.2%) identified as Caucasian; the remaining respondents identified as Asian-American (18.8%), African-American (5.0%), Latino/Hispanic (4.1%), multi-racial (6.0%), or some other ethnicity (0.9%). Respondents were spread relatively evenly across class standings: 21.9% first year; 22.5% second year; 27.8% third year; and 27.8% fourth year. The respondents were traditional undergraduate students (ages 18–22) and represented all majors. The sample's demographics were consistent with those of the overall undergraduate student population at the school.

Measures

The eight capacities of the SCM were assessed with the Socially Responsible Leadership Scale (SRLS), which is a 71-item survey using a five-point Likert-scale of agreement (e.g. 'I am comfortable initiating new ways of looking at things' is one item measuring the *change* capacity). In addition to the SRLS, the survey included scales measuring *leadership self-efficacy*, which assessed students' belief in their own ability to successfully lead others (Paglis and Green 2002; four items, including 'I can organise a group's tasks to accomplish a goal'), *social change behaviours*, which measured students' participation in social movements designed to enhance the common good (Page 2010; 10 items, including 'I have acted to raise awareness about a campus, community, or global problem'), and *perspective-taking behaviours*, defined as the ability to take another person's point of view and infer the thoughts of others (Gehlbach 2004; eight items, including 'I sometimes try to understand my friends better by imagining how things look from their perspective'). All scales had good reliability (Cronbach's alpha from .82 to .88). The survey also asked questions about students' demographic characteristics and previous leadership training.

Analysis

More than one-third (36.7%) of respondents indicated that they had participated in some form of leadership education during university, and analysis of variance revealed that these students had significantly different ($p < .001$) mean scores on 62 of the 71 SRLS items, relative to other students. Because our interest was in the pre-existing beliefs of students, we limited our analysis to those 1465 students who reported having had no leadership education during university.

To examine the structure of these students' beliefs about leadership, we conducted exploratory factor analyses of their SRLS responses. Following Conway and Huffcutt's (2003) recommendations, we used maximum likelihood estimation and Promax rotation. Based on findings summarised by Hayton, Allen and Scarpello (2004), we made factor retention decisions using a combination of visual inspection (Cattell 1966) and parallel analysis (Horn 1965).

Observed factor structure

Consistent with previous reports (Rosch and Caza 2012), we were unable to retrieve the SCM's eight-factor structure from the data. An unconstrained factor analysis did not suggest an eight-factor solution, and an analysis constrained to have eight factors did not yield the predicted structure (i.e. items did not load on the predicted factors). Given these results, we proceeded with exploratory analysis to determine what structures were appropriate for the respondents' answers. Factor analysis is based on the assumption that individuals have underlying cognitive structures (beliefs about the world) that are reflected in the patterns of their answers on survey items (Neter et al. 1996), and so exploratory factor analysis provided the means to learn how the respondents thought about leadership.

We conducted a series of sub-group analyses, comparing factor structures by gender and by years of study. Based on guidelines from Hair and colleagues (2005), we adopted moderate criteria for factor loading: an item was retained if it loaded above .6 on its primary factor and had cross-loadings below .4. These criteria assured that items were strongly associated with one and only one factor in the model. The results revealed that all student groups shared a similar four-factor structure, which is shown in Table 2. We interpreted the factor patterns to indicate the belief that leaders must *serve their community*, *be open-minded*, *honour their values*, and *be comfortable with change*. In other words, the response patterns suggested that typical undergraduate students believe that effective leadership involves working for one's community, being open to new and different views, acting consistent with one's values, and adapting to change.

Table 2. Factor structure of undergraduate students' beliefs about leadership.

Item	Factor 1: serve community	Factor 2: be open-minded	Factor 3: honour values	Factor 4: be comfortable with change
I believe I have responsibilities to my community	0.67			
I work with others to make my communities better places	0.77			
I value opportunities that allow me to contribute to my community	0.64			

Item	Factor 1: serve community	Factor 2: be open-minded	Factor 3: honour values	Factor 4: be comfortable with change
It is important to me that I play an active role in my communities	0.83			
I volunteer my time to the community	0.79			
I believe my work has a greater purpose for the larger community	0.69			
I am open to others' ideas		0.81		
I value differences in others		0.64		
Hearing differences in opinions enriches my thinking		0.73		
I respect opinions other than my own		0.67		
I am open to new ideas		0.72		
My behaviours are congruent with my beliefs			0.88	
My actions are consistent with my values			0.81	
My behaviours reflect my beliefs			0.84	
Transition makes me uncomfortable				0.86
Change makes me uncomfortable				0.88

Predictive power of the four factors

As a test of the relevance of these four factors, we examined whether students' pre-existing beliefs would predict outcomes related to the practice of leadership. Specifically, we calculated scores for each student on each factor, and then used those scores in ordinary least-squares regressions to predict three different leadership outcomes. As the results in Table 3 show, the belief factors were significantly related to the outcomes, and in fashions that made interpretive sense.

Table 3. Regression models using beliefs about leadership to predict outcomes ($N = 1465$, except model 3, where $N = 724$). Standard errors are in parentheses.

	Model 1: leadership self-efficacy	Model 2: social change behaviour	Model 3: perspective taking[#]
Intercept	.35 (.13)*	.37 (.13) *	.63 (.17) *
Serve community	.24 (.03) *	.50 (.03) *	.21 (.03) *
Be open-minded	.12 (.03) *	−.06 (.03)	.53 (.04) *
Honour values	.22 (.03) *	−.03 (.03)	.02 (.03)
Be comfortable with change	.12 (.02) *	.01 (.02)	.01 (.02)
R^2	.25 ($F_{4,1460} = 124.6$)	.24 ($F_{4,1460} = 113.0$)	.35 ($F_{4,719} = 94.9$)

[#]Only half of respondents completed the perspective taking scale.
* $p < .05$.

All four factors were positively related to leadership self-efficacy (Model 1), which indicates that students who felt they personally scored high on these factors also felt they were more effective leaders. In other words, the students believed that good leaders had all four of the qualities defined by the factors. In contrast, only commitment to serve a community was related to social change behaviours (Model 2), which is appropriate, as the social change scale concerns actions

taken to benefit one's community: those who felt most committed to serving their communities were also most active in them. Finally, the results showed that students' commitment to their community and their open-mindedness predicted the extent of their perspective taking, while honouring values and comfort with change did not (Model 3). The appropriateness of all the regression relationships suggests that students' beliefs, as defined by the four factors, were systematically influencing their leadership attitudes and behaviours. The four factors appear to offer important insight about how undergraduate students think about leadership.

Discussion

We reported an empirical investigation of students' pre-existing beliefs about leadership, on the grounds that these beliefs should be taken into account when designing leadership education. Prior research revealed little about the leadership beliefs of typical undergraduate students, so we adopted an exploratory approach. Using a representative random sample of university students who had no prior leadership education, we compared factor structures across gender and class-standing groups. We found similar results in all groups, suggesting that undergraduate students' pre-existing beliefs about leadership have four components. Specifically, it appears that students believe effective leaders must (1) serve their community, (2) be open-minded, (3) honour their values, and (4) be comfortable with change. We further found that students' scores on these four factors were useful predictors of other leadership-related attitudes and behaviours.

The finding that the same factor structure emerged from exploratory analysis of different gender and class-standing groups suggests the generality of these four factors. Our data showed that pre-existing beliefs about leadership were relatively similar across the undergraduate student population, at least at the institution where data were collected. It is a limitation of our study that we did not have data from other institutions, and while the school in question is a large one with a diverse student population, it remains to be seen whether other schools and populations have similar beliefs. Investigating possible differences may be particularly interesting with regard to generations (e.g. mature students) and cultures (e.g. Asian or South American students). However, pending these investigations, we advance the tentative hypothesis that typical undergraduate students' beliefs about leadership include the four factors we found: Students believe that leaders should serve their community; be open-minded and value hearing differences of opinion; align their actions with their values; and be flexible enough to adapt to transition and change.

Although these four beliefs do not correspond exactly with any specific model, they are nonetheless consistent with views and capacities espoused in modern leadership theories (Kezar, Carducci and Contreras-McGavin 2006; Kouzes and Posner 2008). With regard to the SCM in particular, there were evident affinities between the students' beliefs and some of the eight capacities (described in Table 1). For example, a commitment to serve one's community is a central tenet of the SCM, and it also emerged as a factor in our data. In addition, comfort with change and a commitment to values were found as factors and are explicit parts of the SCM model (H.S. Astin 1996). Nonetheless, the factors also differed from the SCM in at least three important ways. First, items from the SCM's 'consciousness of self' capacity failed to load on any factor in the students' responses, suggesting that prior to leadership training, students do not recognise the connection between being self-aware and leadership success. Others have noted

that university students may undervalue the challenge and importance of self-knowledge (Ariely 2009), and our data highlight the fact that developing this ability should not be ignored in leadership development (Fincher 2009). Second, none of the SCM's 'commitment' items loaded onto any factor, suggesting that students without leadership experience may not realise how difficult leading actually is, and therefore underestimate the importance of remaining committed to goals despite challenge and setbacks. And finally, whereas collaboration and teamwork are an explicit focus within the SCM, no 'teamwork' factor emerged in our findings. Instead, items from the collaboratively oriented capacities of the SCM (collaboration, common purpose and controversy with civility) loaded onto factors that are notably individualistic in nature. As such it seems that, prior to training and experience, students may not realize the importance of relationships and reciprocal influence in the practice of leadership. This finding is consistent with past research (e.g. Schertzer and Schuh 2004), which has found that inexperienced students believe that leadership is primarily about individual command-and-control activities.

Implications

These findings highlight an important issue for leadership educators: students' pre-existing beliefs. University leadership courses across academic disciplines often begin with a description of their leadership model (Mainella and Love 2011); however, based on findings in student learning (Bransford, Brown and Cocking 2000; Ambrose, et al. 2010), the results of doing so are likely to be poor if that introduction does not fit with the beliefs students bring to the course. It could be more effective to explicitly connect students' beliefs and perspectives with the model to be taught. While leadership education courses are presumably no more prescriptive than courses in any other discipline, leadership educators are faced with a unique challenge in this regard because 'leadership is one of the most observed phenomena on earth' (Burns 1978, 3). As a result, even introductory students often arrive with strongly held beliefs and conceptions about leadership. Failing to take account of these pre-existing beliefs will undermine the educator's efforts. Our findings can assist by providing insight about those pre-existing beliefs. For example, if most students believe effective leaders should be open-minded and community-oriented, instructors can begin with these two ideas and build a conceptual bridge to the (prescriptive) importance of teamwork and collaboration.

Our findings can also assist leadership educators in considering how programs are advertised to prospective students. If students believe that effective leadership involves the above four factors, programs should reach out to students with messages that connect to these areas. Messages about learning how to become more adaptive, or developing skills for acting on one's values, may be more attractive to students than promises of learning skills for effective teamwork or how they can develop their knowledge of self and others.

Suggestions for future research

This study was exploratory in nature, reflecting the lack of research about students' pre-existing beliefs. However, the consistency of our findings across groups, and their ability to explain other leadership attitudes, suggest the potential utility of this sort of investigation. Our study used pre-existing data collected as part of the Multi-Institutional Study of Leadership (MSL), which utilised the Social Change Model of Leadership Development (SCM) as a theoretical framework.

While the results we found in these data were compelling, they are unlikely to be comprehensive; the MSL was not developed to test the entire scope of students' leadership beliefs. As such, further study should be conducted to extend beyond the SCM. A combination of qualitative and quantitative investigations can be used to build a more complete picture of students' beliefs. While we feel confidence in the generalizability of the four belief factors identified in this study, we have no reason to believe that they are the only relevant factors. There may be other important beliefs that students hold, but which were not reflected in the items written for the SCM. Themes that emerge from student interviews and focus groups could be informative in this regard.

In addition, other populations of university students should be explored to enrich our understanding of students' pre-existing beliefs about leadership. While some evidence exists that predictors of university student leadership capacity may be similar across international populations (Humphreys 2007; Dugan, Rossetti Morosini and Beazley 2011), cultural values regarding the practice of leadership can be a powerful influence on beliefs (House et al. 2004). More research should be conducted with multi-institutional populations, especially outside of the USA.

Conclusion

Even though universities' leadership education efforts are growing, the study and evaluation of these programs lags behind. Because the practice of leadership is so ubiquitous in contemporary society, we advance the notion that accounting for students' pre-existing beliefs about leadership is important in effectively training future leaders. If educators better understand what students believe about leadership, they can more effectively design curricula that bridge these beliefs with effective practice. Toward this end, we examined survey data which showed that students with no leadership training nonetheless held a consistent set of beliefs about leadership. Further, we demonstrated that these pre-existing beliefs predict students' leadership attitudes and actions in a variety of contexts. These findings, while preliminary, offer important insights to educators, especially regarding the curriculum of introductory courses and experiences. Our findings also provide the foundation and motivation for further research using mixed methodologies and diverse populations of students to build a more complete picture of the pre-existing leadership beliefs of university students.

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