

World Knowledge and Global Citizenship

Factual and Perceived World Knowledge as Predictors of Global Citizenship Identification

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Abstract

We examine the influence of factual and perceived world knowledge on global citizenship identification. Perceived world knowledge directly predicted global citizenship identification, while factual world knowledge did not (Study 1). Students' factual (Study 1) and perceived (Study 2) world knowledge predicted students' normative environment (degree that valued others prescribe being a global citizen) and global awareness (perceived knowledge of the world and one's connection to the world), which then predicted global citizenship identification, and identification with global citizens predicted endorsement of pro-social values and behaviours (e.g., intergroup empathy, valuing diversity). Overall, the results highlight the indirect influence of factual and direct influence of perceived world knowledge on students' felt connection with global citizens.

Keywords: world knowledge, global awareness, global citizenship, pro-social values

Globalization has brought about continual change, challenges, and opportunities, particularly within higher education, such that students are increasingly encouraged to become more globally fluent, collaborative, engaged, and aware. Researchers and theorists suggest that education should devote greater attention to increasing students' awareness and knowledge of the world in an effort to make the inevitable transition from a local, nationalistic, and independent perspective to a world-view that accounts for the interdependence brought about by globalization (Barber, 2002). However, despite decades of theoretical propositions, discussion, and debate regarding global education and global citizenship (e.g., Bourn and Shiel, 2009; Hicks, 2003) and the implementation of educational programmes around the world (e.g., Bourn, 2011; Zhao, Lin, and Hoge, 2007), how institutions and instructors approach global citizenship education pedagogically remains controversial (e.g., Pike, 2008; Standish, 2009, 2012; Young, 2010). One aspect of the controversy regards the role of education to teach students factual knowledge about the world (Standish, 2009, 2012) or focus on awareness of global systems and interconnectedness (e.g., Pike, 2008; Young, 2010). In the present paper we examine the roles of factual and perceived world knowledge in engendering global citizenship identification.

Global citizenship

Global citizenship is defined as awareness, caring, embracing diversity, promoting social justice and sustainability, and a sense of responsibility to act (Reysen, Larey, and Katzarska-Miller, 2012). This definition is consistent with themes highlighted in prior theorizing and discussions of the concept (e.g., Braskamp, 2008; Karlberg, 2008; Oxfam, 1997; Schattle, 2008) and empirical research examining global citizen identity (Reysen *et al.*, 2010; Reysen *et al.*, 2012). The identity—global citizen—is afforded by the sociocultural settings in which one is embedded. The extent that one's everyday environment includes valued others that prescribe being a global citizen, and provides information regarding the world and one's connection to others in the world, increases the likelihood of identifying as a global citizen and one's degree of identification with the group (Reysen and Katzarska-Miller, 2012). Once individuals appropriate global citizen as an identity, a social identity perspective (Hogg and Smith, 2007; Tajfel and Turner, 1979; Turner *et al.*, 1987) posits that one's degree of identification (i.e., felt connection with a social category) with the group predicts adherence to the group's content (e.g., beliefs, behaviours, values, emotions). Indeed, in a series of studies, Reysen and colleagues (2010) show that global citizenship identification (i.e., felt connection with global citizen identity) predicts the endorsement of pro-social values and behaviours (e.g., intergroup empathy).

In follow-up studies, Reysen and Katzarska-Miller (2012) tested a structural model of antecedents and outcomes of global citizenship identification. The antecedents include one's normative environment and global awareness. Normative environment is the perception that valued others (e.g., friends, family) embedded in one's everyday settings (e.g., school, work) prescribe a global citizen identity (i.e., an injunctive norm that one should be a global citizen). Global awareness is one's perceived knowledge of and interconnectedness with others in the world. Outcomes of global citizenship identification include pro-social values and behaviours (i.e., intergroup empathy, valuing diversity, social justice, environmental sustainability, intergroup helping, felt responsibility to act). Intergroup empathy is defined as a concern for and connection with people outside one's in-group. Valuing diversity is an appreciation and interest in the diverse cultures of the world. Social justice comprises attitudes regarding human rights and the equitable treatment of all humans. Environmental sustainability is a belief that humans are connected to nature combined with a desire to protect the natural environment. Intergroup helping is defined as aid to people outside one's in-group. Responsibility to act is defined as a moral duty to take action for the betterment of the world. The researchers showed that identification with global citizens mediates the relationship between the antecedents and pro-social outcomes. In the structural model, global awareness is operationalized as a *perception* of world knowledge and interconnectedness, but prior theorists suggest that factual world knowledge is also a component of global awareness.

Global awareness

Definitions of global awareness vary from factual world knowledge to taking a broader perspective of the world. Factual knowledge can be described as information regarding a specific domain (e.g., geography) and is often assessed via the amount of correct answers to a set of questions regarding the domain (Hunt, 2003). Theorists have suggested that students become globally aware through acquiring knowledge about global issues and world events (Morais and Ogden, 2011), the plurality of values and cultures (Braskamp, 2008; Haydon, 2006), cultural norms and the expectations of others (Hunter, White, and Godbey, 2006), and economic and international relations as they impact world events (Davies, 2008). Although not explicitly stated, these theorists describe global awareness in terms of learning factual knowledge about the world, yet all note that more than factual knowledge (e.g., skills, values) is needed to be a global citizen. Other theorists suggest that global awareness is engendered through a greater understanding of the interconnectedness of humans (Karlberg, 2008) or an understanding of one's place in the world (Killick, 2012). However, the majority of theorists propose that global awareness is a combination of factual world knowledge and an understanding of human interconnectedness (Banks, 2008; Dower, 2002; Gibson, Rimmington, and Landwehr-Brown, 2008; Hanvey,

1976; Ibrahim, 2005; Oxfam, 1997; Pike and Selby, 1988; Weathersby, 1992). Thus, conceptualizations of global awareness tend to centre on factual world knowledge and a felt interconnectedness with others. Yet little empirical research exists that examines the relationship between factual knowledge and global citizenship identification.

Recent research suggests that factual world knowledge is not a direct predictor of global citizenship identification. Katzarska-Miller, Reysen, Kamble, and Vithoji (in press) asked participants in three nations (USA, Bulgaria, and India) to rate their normative environment (degree that valued others prescribe being a global citizen), exposure to media and discussions with others concerning global events, and global citizenship identification, and complete a factual world knowledge quiz (e.g., what is the capital of India?). Participants sampled in the USA reported lower ratings of their normative environment, less exposure (media and discussions with others) to information about other countries, and lower global citizenship identification, and performed significantly worse on the factual world knowledge quiz than participants sampled in Bulgaria and India. Importantly, the relationship between comparison of the samples (USA vs. Bulgaria, USA vs. India) and participants' global citizenship identification was mediated by their perceived normative environment as prescribing a global citizen identity and not factual world knowledge or exposure to global information. The results suggest that factual world knowledge may not be a direct predictor of global citizenship identification; however, individuals' *perception* of their knowledge may serve as a mediator between engagement with everyday environments and global citizenship identification.

Reysen *et al.* (2012) provide circumstantial evidence for the notion that factual world knowledge is an indirect predictor of global citizenship identification through the perception that one is globally aware (operationalized as a *perception* of world knowledge and interconnectedness). The researchers assessed college students' antecedents, identification, and outcomes of global citizenship at the beginning and end of a semester. The researchers calculated the number of words related to global citizenship contained in each class syllabus (30 classes were examined). Controlling for students' ratings on the global citizen measures at the beginning of the semester, the greater frequency of global citizen-related words in the class syllabus predicted greater global awareness, which in turn predicted greater global citizenship identification. Following the assumption that classes with more global citizen-related words in the syllabus taught students more factual information about the world, the results suggest that factual world knowledge indirectly predicts identification with global citizens through perceived global awareness. However, further research that directly assesses factual world knowledge is needed.

Present studies

The purposes of the present studies are to (1) examine whether factual or perceived world knowledge uniquely predicts global citizenship identification; and (2) examine the influence of factual and perceived world knowledge on the model of antecedents and outcomes of global citizenship identification. Prior research (Katzarska-Miller *et al.*, in press) shows that factual world knowledge does not directly predict global citizenship identification. However, one's *perception* of knowledge and interconnectedness does directly predict one's degree of identification with global citizens (Reysen and Katzarska-Miller, 2012). Based on research by Reysen *et al.* (2012), factual world knowledge may indirectly predict global citizenship identification through the perception that one is globally aware. The relationship between factual and perceived world knowledge is examined in two studies.

In Study 1, students completed a multiple-choice test regarding factual world knowledge prior to rating antecedents, identification, and outcomes of global citizenship. Based on prior research (Katzarska-Miller *et al.*, in press) we hypothesize that factual world knowledge will not directly predict global citizenship identification beyond perceived world knowledge (i.e., global awareness). However, consistent with research from Reysen and colleagues (2012), we predict that factual world knowledge will influence global citizenship identification indirectly through participants' perception of their normative environment and global awareness. Because Study 1 is correlational, in Study 2 we manipulate participants' perception of their degree of factual world knowledge. We hypothesize that the perception that one is knowledgeable (vs. unknowledgeable) about the world will predict global citizenship identification through participants' perceived normative environment and global awareness. In both studies, we expect to replicate Reysen and Katzarska-Miller's (2012) model of antecedents and outcomes of global citizenship identification.

Study 1

The purposes of Study 1 are to test factual and perceived world knowledge as predictors of global citizenship identification and to examine the influence of factual world knowledge on the model of antecedents and outcomes of global citizenship identification.

Method

Participants and procedure

Participants ($N = 110$, 64.5% women; $M_{\text{age}} = 20.0$, $SD = 1.79$) included undergraduate students at Transylvania University. Participants completed a factual world knowledge test regarding facts about the world prior to rating antecedents, identification,

outcomes of global citizenship, and demographic information (gender, age). Factual world knowledge is assessed via the amount of correct answers on a multiple-choice world knowledge test and perceived knowledge is assessed via ratings on Reysen and Katzarska-Miller's (2012) measure of global awareness (perceived knowledge of and interconnectedness with the world).

Measures

Factual world knowledge test

We constructed a 25-question multiple-choice test regarding geography (e.g., 'Where is Argentina located?'), social justice (e.g., 'About how many children die each year from malnutrition?'), environmental sustainability ('What country produces the most carbon dioxide emissions annually?'), religion ('What percentage of the Turkish population is Muslim?'), cultures ('What country still uses a caste system?'), and intergroup helping ('How many victims of disasters and emergencies does the Red Cross help annually?'). The difficulty of the questions was evidenced by an average score of 43 per cent, and due to the small number of questions and large variety of domains tested the reliability across all items was small ($\alpha = 0.27$). The number of questions answered correctly (0 = *incorrect*, 1 = *correct*) was divided by the total number of questions to form a factual world knowledge test score.

Global citizenship

To assess the antecedents (normative environment, global awareness), identification, and pro-social outcomes (intergroup empathy, valuing diversity, social justice, environmental sustainability, intergroup helping, felt responsibility to act) of global citizenship, we adopted measures from prior research (Reysen and Katzarska-Miller, 2012; Reysen *et al.*, 2012). Four items (e.g., 'My friends think that being a global citizen is desirable') assessed the perception that others in one's normative environment prescribe being a global citizen ($\alpha = 0.80$). Four items (e.g., 'I understand how various cultures of this world interact socially') assessed global awareness ($\alpha = 0.76$). Two items (e.g., 'I strongly identify with global citizens') assessed global citizenship identification ($\alpha = 0.91$). Two items (e.g., 'I am able to empathize with people from other countries') assessed intergroup empathy ($\alpha = 0.78$). Two items (e.g., 'I am interested in learning about the many cultures that have existed in this world') assessed valuing diversity ($\alpha = 0.88$). Two items (e.g., 'Those countries that are well off should help people in countries who are less fortunate') assessed social justice ($\alpha = 0.80$). Two items (e.g., 'People have a responsibility to conserve natural resources to foster a sustainable environment') assessed environmental sustainability ($\alpha = 0.81$). Two items (e.g., 'If I could, I would dedicate my life to helping others no matter what country they are from') assessed intergroup helping ($\alpha = 0.65$). Lastly, two items (e.g., 'Being actively involved in global issues is my responsibility') assessed responsibility

to act ($\alpha = 0.83$). The items were rated on a 7-point Likert-type response scale, from 1 = *strongly disagree* to 7 = *strongly agree*.

Results

To examine associations between assessed measures, we conducted partial correlations controlling for participants' gender and age (see Table 1 for means, standard deviations, and correlations).¹ All assessed variables were significantly positively correlated, with the exception that social justice was only marginally significantly related to factual world knowledge and global citizenship identification. To test the unique influence of factual world knowledge and antecedents (normative environment, perceived global awareness) as predictors of global citizenship identification, we conducted a regression analysis. We simultaneously entered factual world knowledge, global awareness, and normative environment as predictors; global citizenship identification as the dependent variable; and participants' gender and age as covariates. The results show that normative environment ($\beta = 0.32$, $p < 0.001$) and global awareness ($\beta = 0.49$, $p < 0.001$) are significant predictors of global citizenship identification, while factual world knowledge ($\beta = 0.13$, $p = 0.09$) is not, $F(5, 104) = 21.42$, $p < 0.001$, $R^2 = 0.51$. Thus, one's normative environment and global awareness are direct predictors of global citizenship identification, while factual world knowledge does not directly predict identification. However, factual world knowledge may indirectly predict global citizenship identification.

To examine the influence of factual world knowledge on the model of antecedents and outcomes of global citizenship identification, we conducted a path analysis using Amos 19 (with bias-corrected bootstrapping, 5,000 iterations). Due to the related nature of the two antecedents (normative environment and global awareness), and the six outcomes (e.g., valuing diversity, responsibility to act), we allowed the disturbance terms for these sets of variables to co-vary. Furthermore, we included participants' gender and age as covariates in the model. The predicted path model adequately fit the data, $\chi^2(19) = 66.43$, $p < 0.001$, NFI = 0.905, CFI = 0.925.

As shown in Figure 1, factual world knowledge predicted normative environment ($\beta = 0.23$, $p = 0.003$, $CI = 0.077$ to 0.380) and global awareness ($\beta = 0.19$, $p = 0.034$, $CI = 0.015$ to 0.349). Normative environment ($\beta = 0.35$, $p < 0.001$, $CI = 0.149$ to 0.554) and global awareness ($\beta = 0.50$, $p < 0.001$, $CI = 0.338$ to 0.679) predicted global citizenship identification. Identification with global citizens predicted intergroup empathy ($\beta = 0.52$, $p < 0.001$, $CI = 0.328$ to 0.675), valuing diversity ($\beta = 0.52$, $p < 0.001$, $CI = 0.356$ to 0.655), social justice ($\beta = 0.16$, $p = 0.036$, $CI = 0.014$ to 0.304), environmental sustainability ($\beta = 0.27$, $p = 0.005$, $CI = 0.089$ to 0.456), intergroup helping ($\beta = 0.30$, $p = 0.002$, $CI = 0.117$ to 0.480), and felt responsibility to act ($\beta = 0.46$, $p < 0.001$, $CI = 0.288$ to 0.616). The indirect effect of factual world knowledge on global citizenship

identification was reliably carried by normative environment and global awareness ($\beta = 0.18$, $p = 0.002$, $CI = 0.059$ to 0.297). In other words, greater factual world knowledge led to perceiving valued others in one's normative environment as prescribing a global citizen identity and perceiving one's self as knowledgeable and interconnected with others in the world. Perception of one's normative environment and one's global awareness then predicted a greater felt connection to global citizens, which in turn led to greater endorsement of pro-social values and behaviours.

Discussion

The purposes of Study 1 were to test whether factual or perceived world knowledge uniquely directly predict global citizenship identification and examine the influence of factual world knowledge as an indirect predictor of global citizenship identification. As hypothesized, one's perceived knowledge (i.e., global awareness) is a better direct predictor of global citizenship identification than factual world knowledge. However, as hypothesized, factual world knowledge did indirectly influence global citizenship identification through participants' perceived normative environment and global awareness. Building on the results of Study 1, we manipulate participants' perception of their world knowledge in Study 2.

Study 2

The purpose of Study 2 is to examine the effect of perceived world knowledge on the model of antecedents and outcomes of global citizenship identification. The experimental manipulation of the perception of one's amount of world knowledge (knowledgeable vs. unknowledgeable about the world) is hypothesized to predict global citizenship identification through participants' perception of their normative environment and global awareness.

Method

Participants and procedure

Participants ($N = 81$, 77.8% women; $M_{\text{age}} = 24.85$, $SD = 9.57$) received partial course credit towards their introductory psychology course at Texas A&M University-Commerce. Participants read a fictitious news article regarding a world knowledge multiple-choice test that predicts students' world connectedness, which is currently undergoing validation by having thousands of students completing the test. In order to provide greater experimental realism, students were then presented with a normal distribution curve coupled with an explanation of the meaning of the results of the test with respect to world knowledge (e.g., scores above 89 per cent indicate high knowledge and greater connection with the world). Students then completed the 25-item multiple-choice test from Study 1.

After students had completed the world knowledge test, the experimenter left the laboratory purportedly to print the results of the test. While in an adjoining room, the experimenter printed a blank sheet of paper and shuffled papers within hearing distance of the participants. The experimenter then returned to the laboratory with a manila envelope that was randomly selected. The results contained the same normal distribution curve participants were shown earlier and reported either (1) a score of 17 per cent indicating low level of world knowledge, (2) a score of 90 per cent indicating a high level of world knowledge, or (3) a statement that the test is still undergoing validation and no results can be accurately presented (i.e., no feedback). Because the test was rather difficult (the mean score was 43 per cent in Study 1), students were expected to feel unsure of their performance and therefore accept the fictitious score presented in the feedback. The experimenter, blind to the feedback condition, instructed participants to look at their score and then complete a survey regarding global issues and emotional experience.

Measures

To assess antecedents, identification, and outcomes of global citizenship, participants completed the same measures utilized in Study 1: normative environment ($\alpha = 0.90$), global awareness ($\alpha = 0.86$), global citizenship identification ($\alpha = 0.92$), intergroup empathy ($\alpha = 0.85$), valuing diversity ($\alpha = 0.82$), social justice ($\alpha = 0.61$), environmental sustainability ($\alpha = 0.70$), intergroup helping ($\alpha = 0.69$), and responsibility to act ($\alpha = 0.84$). To examine if change in identification with global citizens is due to participants' emotional reaction to the feedback, we included a 20-item measure of positive ($\alpha = 0.93$) and negative ($\alpha = 0.89$) affect (Watson, Clark, and Tellegen, 1988). Lastly, participants reported their age and gender. All items used a 7-point Likert-type response scale, from 1 = *strongly disagree* to 7 = *strongly agree*.

Results

Mean differences

To examine the effect of perceived world knowledge on the assessed variables, we conducted a one-way MANOVA with the manipulation (low score vs. no feedback vs. high score) as the independent variable, antecedents, identification, and outcomes of global citizenship, and positive/negative affect as dependent variables. The omnibus test was significant, Wilks's $\Lambda = 0.41$, $F(11, 68) = 3.47$, $p < 0.001$, $\eta_p^2 = 0.36$. Means, standard deviations, main effects, and post hoc comparisons (using a Tukey's correction for multiple comparisons) are shown in Table 2. Participants rated their normative environment, global awareness, and global citizenship identification significantly higher in the high score (high world knowledge) condition compared to the low score (low world knowledge) condition. Although we did not expect the manipulation to directly influence outcomes of global citizenship identification, felt

responsibility to act for the betterment of the world was significantly higher in the high score condition than the control condition (i.e., no feedback), while the other outcomes of global citizenship identification did not differ significantly between conditions.

Due to the nature of the manipulation (i.e., informing students they performed well or failed a test), we included measures of affective experience. Participants felt more positive and less negative affect in the high score condition compared to the no feedback and low score conditions. Because participants' emotional experience may influence their degree of global citizenship identification, prior to testing the influence of the manipulation of perceived world knowledge on the model of antecedents and outcomes of global citizenship identification we first examine whether emotional experience mediates the relationship between the manipulation and global citizenship identification.

Mediation analysis

To test whether emotional experience and antecedents to global citizenship identification mediate the relationship between the manipulation of perceived world knowledge and global citizenship identification, we conducted a multiple mediator analysis using Preacher and Hayes's (2008) SPSS macro (with bias-corrected bootstrapping, 5,000 iterations). We entered the manipulation of perceived world knowledge (-1 = low score, 0 = no feedback, 1 = high score) as the independent variable, antecedents of global citizenship identification (normative environment, global awareness) and affect (positive, negative) as mediators, and global citizenship identification as the dependent variable.

The manipulation of perceived world knowledge predicted global citizenship identification ($\beta = 0.34, p = 0.002$), normative environment ($\beta = 0.39, p < 0.001$), global awareness ($\beta = 0.35, p = 0.002$), positive affect ($\beta = 0.46, p < 0.001$), and negative affect ($\beta = -0.36, p = 0.001$). Normative environment ($\beta = 0.34, p < 0.001$) and global awareness ($\beta = 0.62, p < 0.001$) predicted identification with global citizens, while positive ($\beta = 0.04, p = 0.609$) and negative ($\beta = 0.10, p = 0.126$) affect did not. The mediators significantly reduced the relationship between the manipulation of perception of world knowledge and global citizenship identification ($\beta = 0.01, p = 0.859$).

The total effect of the mediators showed a full mediation of the relationship between the manipulation and global citizenship identification as indicated by the absence of zero between the 95 per cent confidence interval at the $p < 0.05$ (two tailed) level ($CI = 0.211$ to 0.911). Normative environment ($CI = 0.063$ to 0.462) and global awareness ($CI = 0.164$ to 0.653) mediated the relationship between the manipulation and global citizenship identification, while positive ($CI = -0.102$ to 0.181) and negative

($CI = -0.178$ to 0.010) affect did not. Because participants' emotional reaction to the manipulation of feedback did not predict global citizenship identification, we tested the influence of the manipulation on the model of antecedents and outcomes of global citizenship identification.

Path analysis

To examine the influence of perceived knowledge on the model of antecedents and outcomes of global citizenship identification, we conducted a path analysis using Amos 19 (with bias-corrected bootstrapping, 5,000 iterations). Due to the related nature of the two antecedents (normative environment and global awareness), and the six outcomes (e.g., valuing diversity, responsibility to act), we allowed the disturbance terms for these sets of variables to co-vary. The predicted path model adequately fit the data, $\chi^2(19) = 30.70$, $p = 0.044$, $NFI = 0.936$, $CFI = 0.973$.

As shown in Figure 2, the manipulation of perceived world knowledge (-1 = low score, 0 = no feedback, 1 = high score) predicted normative environment ($\beta = 0.39$, $p = 0.002$, $CI = 0.156$ to 0.579) and global awareness ($\beta = 0.34$, $p = 0.005$, $CI = 0.097$ to 0.549). Normative environment ($\beta = 0.35$, $p = 0.001$, $CI = 0.173$ to 0.545) and global awareness ($\beta = 0.62$, $p < 0.001$, $CI = 0.419$ to 0.771) predicted global citizenship identification. Identification with global citizens predicted intergroup empathy ($\beta = 0.53$, $p = 0.001$, $CI = 0.263$ to 0.722), valuing diversity ($\beta = 0.59$, $p = 0.001$, $CI = 0.400$ to 0.737), social justice ($\beta = 0.34$, $p = 0.010$, $CI = 0.088$ to 0.564), environmental sustainability ($\beta = 0.40$, $p = 0.001$, $CI = 0.182$ to 0.581), intergroup helping ($\beta = 0.45$, $p = 0.001$, $CI = 0.233$ to 0.625), and felt responsibility to act ($\beta = 0.50$, $p = 0.001$, $CI = 0.230$ to 0.688). The indirect effect of the manipulation on global citizenship identification was reliably carried by normative environment and global awareness ($\beta = 0.35$, $p = 0.002$, $CI = 0.145$ to 0.529).

Discussion

Building upon the correlational results of Study 1, which showed perceived (vs. factual) world knowledge directly predicts global citizenship identification, in Study 2 we manipulated participants' perception of their amount of world knowledge. Participants who were informed that they lack world knowledge rated their normative environment, global awareness, and global citizenship identification significantly lower than participants who were informed that they are knowledgeable about the world. As hypothesized, participants' perception that they are knowledgeable (vs. unknowledgeable) about the world predicted greater global citizenship identification through the antecedents (normative environment, global awareness).

General discussion

The purposes of the present studies were to examine whether factual or perceived world knowledge directly predict global citizenship identification, and examine the influence of factual and perceived world knowledge on the model of antecedents and outcomes of global citizenship identification. Supporting our hypothesis, factual world knowledge did not directly predict global citizenship identification, but rather indirectly influenced identification through participants' perceived normative environment and global awareness (Study 1). When participants were informed that they were knowledgeable (vs. unknowledgeable) about the world, they identified more strongly with global citizens, and the relationship between perceived world knowledge and global citizenship identification was mediated by perceived normative environment and global awareness (Study 2). Additionally, in both studies, Reysen and Katzarska-Miller's (2012) model of antecedents and outcomes of global citizenship identification was replicated (i.e., antecedents predict global citizenship identification, global citizenship identification predicts pro-social outcomes). Together, the results suggest that although teaching students factual world knowledge can lead to global citizenship identification, students' perception of their global awareness and normative environment are the conduits for engendering the felt connection to the identity.

Global awareness

Consistent with prior theorizing (e.g., Schattle, 2008), global awareness is an antecedent to identification with global citizens. Theorists have offered a variety of definitions of global awareness that centre on knowledge of the world (e.g., Braskamp, 2008; Hunter *et al.*, 2006; Morais and Ogden, 2011), interconnectedness (e.g., Karlberg, 2008; Killick, 2012), and a combination of knowledge and interconnectedness (e.g., Banks, 2008; Dower, 2002; Gibson *et al.*, 2008; Hanvey, 1976; Oxfam, 1997; Pike and Selby, 1988; Weathersby, 1992). In line with prior theorizing, we define global awareness as a combination of world knowledge and felt interconnectedness. However, we operationalize global awareness as one's *perception* of knowledge and felt interconnectedness. The results of the present studies show that although factual world knowledge is associated with global citizenship identification, the relationship is mediated by the perception of one's global awareness (perceived knowledge and interconnectedness) and normative environment (Study 1). Indeed, when students were informed that they were knowledgeable (vs. unknowledgeable) about the world, they identified more strongly with global citizens (Study 2). Together, the results suggest that one's perception of world knowledge and interconnectedness combine to form a reliable measure of global awareness that directly predicts global citizenship identification, while factual world knowledge is an indirect predictor.

The results of the present studies inform recent debates regarding the implementation of global citizenship education in schools. Standish (2009, 2012) criticizes global citizenship education for teaching learning processes over theoretical and factual knowledge and suggests that the current academic trends are leading to a demise of traditional disciplines in schools. He argues for a greater focus on teaching facts in specific disciplines (vs. interdisciplinary approaches to learning). Although Standish agrees that pro-social values are beneficial, he argues against incorporating global citizen values in the educational system, because local and national interests should dictate what is taught. Conversely, Pike (2008) and Young (2010) recently criticized global citizenship education for compartmentalizing subjects rather than focusing on teaching students about the interconnectedness of global systems (e.g., understanding one's connection to others in the world and to global issues). The results of the present set of studies partially support both arguments. Teaching factual knowledge is important, but to engender global citizenship identification instructors also need to highlight students' degree of awareness of their knowledge and interconnectedness with others around the world. Thus, consistent with prior theorizing (Pike, 2008; Pike and Selby, 1988; Young, 2010), instructors need to raise students' global awareness, including students' connections to larger global systems, in order to engender global citizenship identification.

More generally, the results of the present studies suggest that the perception that one is knowledgeable and interconnected is more important than factual knowledge to experience a connection with global citizens. Braskamp (2008) suggests that a liberal education is required to be a global citizen. Following this logic, a person who does not have access to a formal education cannot be a global citizen. However, following a social identity perspective (Tajfel and Turner, 1979; Turner *et al.*, 1987), individuals can, and do, perceive themselves to be members of groups without belonging to an organized group (Reysen and Branscombe, 2010). Thus, there is not an established amount of specific knowledge required to be a global citizen. Individuals can perceive themselves to be global citizens and feel a connection to the identity without a formal education. This notion is similar to Dower's (2002) suggestion that everyone is a global citizen, but due to lack of awareness of the identity, people are unable to recognize and accept their global membership. Consistent with prior theorizing (e.g., Pike, 2008; Pike and Selby, 1988; Young, 2010), the goal for global citizenship educators is to link knowledge with students' awareness of themselves within and interconnected with a larger world to engender global citizen identification.

Global citizenship

The present studies support the model of antecedents and outcomes of global citizenship identification (Reysen and Katzarska-Miller, 2012; Reysen *et al.*, 2012). The extent that one's everyday environment includes valued others who

prescribe global citizen identity and raise global awareness predicts one's degree of identification with global citizens. In line with a social identity perspective (Hogg and Smith, 2007; Tajfel and Turner, 1979; Turner *et al.*, 1987), one's degree of global citizenship identification predicts endorsement of pro-social values and behaviours that represent the group's content (e.g., valuing diversity). The present results also inform the association between factual world knowledge and the perception of one's normative environment.

Past research (Reysen and Katzarska-Miller, 2012; Reysen *et al.*, 2012) and the present results show ratings of one's normative environment and global awareness are moderately positively associated. Additionally, factual world knowledge (Study 1) and perceived world knowledge (Study 2) predicted participants' perception of their normative environment as encouraging an injunctive norm to identify as a global citizen. We suggest that individuals who are embedded in environments where valued others (e.g., friends, family) prescribe a global citizen identity are likely to also be globally aware. Thus, individuals with greater world knowledge are likely to have friends and family that value global citizenship. Additionally, when students are informed that they are knowledgeable about the world (vs. unknowledgeable), they may be primed to consider other people in their life who encourage them to identify as a global citizen.

Limitations

The present studies are limited by the sample of participants. Undergraduate college students at Transylvania University (Study 1) and Texas A&M-Commerce (Study 2) may have responded differently to the measures than participants sampled in other cultural settings or from different populations (e.g., age, occupation). The use of undergraduate college students possibly hinders the ability to generalize the present findings. Future research in settings outside higher education institutions is needed (e.g., high school students). Second, we relied on self-reported endorsement of pro-social values and behaviours. Future research may include direct behavioural observations to assess pro-social actions. Additionally, future research may include a mixed-method design to examine qualitative as well as quantitative responses. Third, the factual world knowledge test did not reliably tap a general knowledge of the world (Study 1). The test items were meant to be difficult to answer (in order for participants to be unaware of how well they performed) and to assess the amount of factual knowledge across a wide variety of domains (e.g., geography, cultures, environmental issues, social injustices). Although the averaged score did correlate with global citizen-related measures (showing convergent validity), the test is not a psychometrically sound assessment of one's overall world knowledge. The construction of such a test is outside the scope of the present studies, yet such a test would be advantageous for future researchers to explore. Lastly, the model

of antecedents and outcomes of global citizenship identification may include unmeasured variables. Although the model tested in the present studies replicates prior research (Reysen and Katzarska-Miller, 2012; Reysen *et al.*, 2012), there may exist constructs that are not currently included in the model.

Conclusion

In two studies we examined the role of factual and perceived world knowledge as predictors of global citizenship identification and the influence on the model of antecedents and outcomes of global citizenship identification. In Study 1, factual world knowledge did not directly predict, but rather indirectly predicted, global citizenship identification through perceived knowledge (i.e., global awareness) and perceived normative environment. The results suggest that perception of one's knowledge (vs. factual world knowledge) is a better predictor of identification with global citizens. Perceived world knowledge influenced global citizenship identification through one's perceived normative environment and global awareness. Overall, the results highlight the importance of global awareness and normative environment in engendering global citizenship identification. Given the consistency and variety of pro-social outcomes exhibited by highly identified global citizens, global citizenship education appears to be a worthwhile endeavour both in and outside the classroom.

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Note

¹ To examine possible gender differences in Study 1, we conducted a MANOVA with gender as an independent variable and assessed measures as dependent variables. The omnibus test was significant, Wilks's $\Lambda = 0.78$, $F(10, 99) = 2.78$, $p = 0.005$, $\eta_p^2 = 0.22$. Women ($M = 5.06$, $SD = 1.12$) rated their normative environment higher than men ($M = 4.38$, $SD = 1.49$), $F(1, 108) = 7.24$, $p = 0.008$, $\eta_p^2 = 0.06$. Women ($M = 6.42$, $SD = 0.75$) showed greater social justice beliefs than men ($M = 5.81$, $SD = 1.43$), $F(1, 108) = 8.60$, $p = 0.004$, $\eta_p^2 = 0.07$. Women ($M = 6.18$, $SD = 0.88$) endorsed environmental sustainability to a greater extent than men ($M = 5.74$, $SD = 1.39$), $F(1, 108) = 4.13$, $p = 0.045$, $\eta_p^2 = 0.04$. Women ($M = 6.01$, $SD = 1.04$) rated intergroup helping higher than men ($M = 5.45$, $SD = 1.24$), $F(1, 108) = 6.52$, $p = 0.012$, $\eta_p^2 = 0.06$. Women ($M = 5.89$, $SD = 1.14$) rated valuing diversity marginally significantly more than men ($M = 5.41$, $SD = 1.37$), $F(1, 108) = 3.92$, $p = 0.050$, $\eta_p^2 = 0.04$. Lastly, women ($M = 5.68$, $SD = 1.11$) rated their felt responsibility to act marginally significantly higher than men ($M = 5.18$, $SD = 1.50$), $F(1, 108) = 3.93$, $p = 0.050$, $\eta_p^2 = 0.04$. No other significant differences between men and women were found. Because of these differences we control for participants' gender in all of the analyses for Study 1. Due to the small number of men in Study 2 (18 men, 63 women), we were unable to examine gender differences (i.e., sample size per cell is too small to conduct analyses).

Table 1: Correlations between assessed variables, Study 1

Variable	1	2	3	4	5	6	7	8	9	10
1. Factual world knowledge	1.0	--	--	--	--	--	--	--	--	--
2. Normative environment	0.24*	1.0	--	--	--	--	--	--	--	--
3. Global awareness	0.20*	0.33**	1.0	--	--	--	--	--	--	--
4. Global citizen identification	0.30**	0.51**	0.61**	1.0	--	--	--	--	--	--
5. Intergroup empathy	0.21*	0.43**	0.57**	0.51**	1.0	--	--	--	--	--
6. Valuing diversity	0.34**	0.42**	0.46**	0.52**	0.67**	1.0	--	--	--	--
7. Social justice	0.17+	0.26**	0.33**	0.17+	0.34**	0.50**	1.0	--	--	--
8. Environmentalism	0.21*	0.40**	0.44**	0.27**	0.41**	0.58**	0.76**	1.0	--	--
9. Intergroup helping	0.37**	0.29**	0.43**	0.31**	0.48**	0.64**	0.60**	0.62**	1.0	--
10. Responsibility to act	0.37**	0.36**	0.52**	0.47**	0.52**	0.77**	0.59**	0.59**	0.74**	1.0
Mean	0.43	4.82	5.05	4.26	5.17	5.72	6.20	6.03	5.81	5.50
Standard deviation	0.10	1.30	1.16	1.51	1.35	1.24	1.08	1.10	1.14	1.27

Note: + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Partial correlations controlling for participant gender and age.

Table 2: Means (standard deviations) by feedback condition, Study 2

Variable	Low score	No feedback	High score	F(11, 78)	p-value	η_p^2
Normative environment	3.73 (1.42) _a	4.22 (0.88) _{ab}	4.94 (1.24) _b	7.00	0.002	0.152
Global awareness	4.53 (1.22) _a	4.79 (1.03) _a	5.57 (1.27) _b	5.78	0.005	0.129
Global citizen identification	3.78 (1.53) _a	4.17 (1.03) _{ab}	4.94 (1.38) _b	5.39	0.006	0.121
Intergroup empathy	4.96 (1.39) _a	4.65 (1.52) _a	5.35 (1.29) _a	1.70	0.189	0.042
Valuing diversity	5.20 (1.35) _a	5.06 (1.33) _a	5.43 (1.37) _a	0.52	0.600	0.013
Social justice	5.94 (0.88) _a	5.56 (1.17) _a	5.91 (1.29) _a	0.98	0.379	0.025
Environmental sustainability	5.87 (0.96) _a	5.65 (1.05) _a	6.07 (0.99) _a	1.22	0.300	0.030
Intergroup helping	5.44 (1.30) _a	5.33 (1.04) _a	5.85 (1.11) _a	1.51	0.228	0.037
Responsibility to act	5.07 (1.42) _{ab}	4.87 (1.25) _a	5.87 (1.00) _b	4.95	0.010	0.113
Positive affect	3.59 (1.35) _a	3.68 (1.10) _a	5.10 (1.06) _b	14.02	< 0.001	0.264
Negative affect	2.64 (1.14) _a	2.43 (0.96) _a	1.73 (0.77) _b	6.59	0.002	0.145

Note: Means with differing subscripts are significantly different at $p < 0.05$. 7-point Likert-type scale, from 1 = *strongly disagree* to 7 = *strongly agree*.

Figure 1: Influence of factual world knowledge on path model of antecedents and outcomes of global citizenship identification – all paths significant at $p < .05$

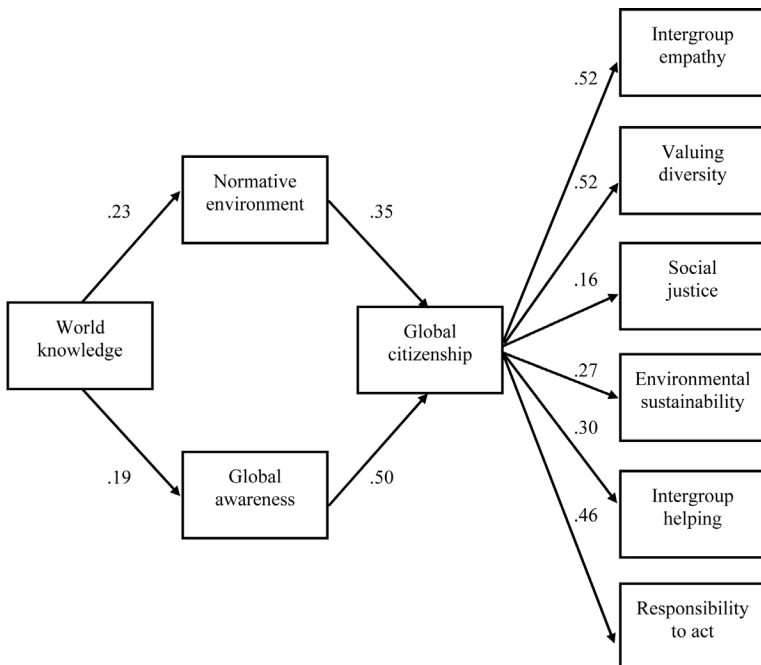
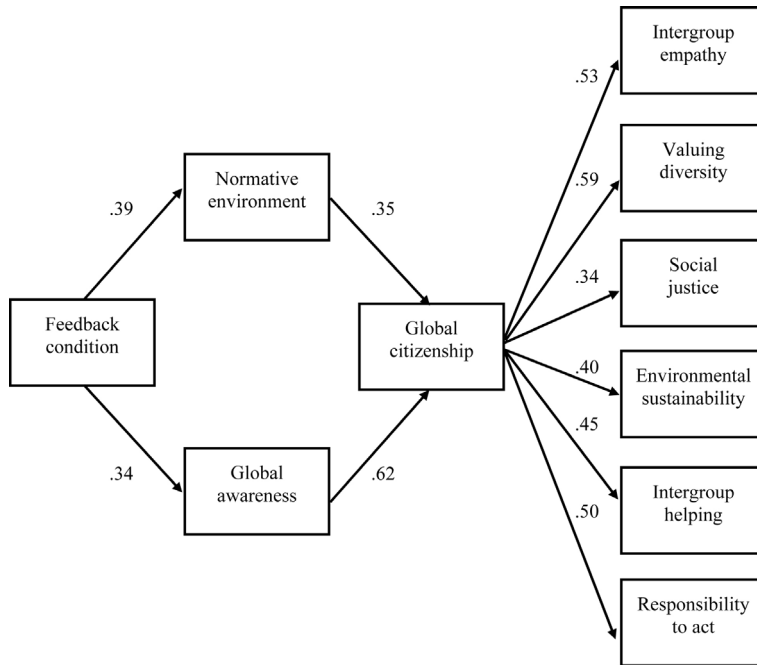


Figure 2: Influence of perceived world knowledge manipulation (-1 = low score, 0 = no feedback, 1 = high score) on model of antecedents and outcomes of global citizenship identification – all paths significant at $p < .01$



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