

**Education for Values and Citizenship:**  
A Preliminary Study of Undergraduate Coursework as a Factor in  
Empathic Concern, Perspective-Taking, and Meaning in Life<sup>1</sup>

**Introduction**

This project sought to identify whether undergraduate education at the University of British Columbia may contribute to students' ability to represent and empathize with the perspective of others, and if so, whether these changes differ by discipline. The value of a university education is frequently articulated in terms of citizenship—roughly, the tools and disposition to understand and contribute to a pluralistic society (e.g., Harlap et al., 2008). If this is true, then university education may have an effect on students' tendency to understand and empathize with others (empathic concern & perspective taking) and perception of the meaningfulness of their own lives as contributing citizens. We explored this question by sampling students across years at the University of British Columbia and comparing mean trait levels of meaning in life, empathic concern and perspective-taking across students in 4 years of university at UBC.

An education in the “arts” (including humanities and social sciences) is generally thought to contribute to broader types of education (e.g. moral reasoning, perspective taking) while an education in areas such as “applied science” is generally thought to focus more on specific job related skills (e.g. how to build a bridge, design a building). Therefore, the hypothesised change in empathic concern

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and perspective taking may be stronger over time in students pursuing one type of education (e.g. arts) versus another (e.g. applied science). We explored this question by comparing the rate of change in traits across years in students pursuing different types of education.

## **Method**

### **Participants**

Participants (N=5,316) were recruited by UBC's VP Academic and University Affairs to participate in the Undergraduate Experience Survey (UES), an internal university survey which is administered every spring. Questions concerning study measures (listed below) were asked after completion of the core survey. Upon completion of the main survey, students were asked if they would be willing to answer several further questions and, if so, they were entered into a drawing to win a \$100 gift card.

### **Measures**

*Empathic concern.* Empathic concern was measuring using a 7-item subscale of the interpersonal reactivity index (IRI; Davis, 1983). This subscale measures the degree of empathy people feel toward others (example item: I often have tender, concerned feelings for people less fortunate than me; 1 = Does not describe me well, 5 = Describes me very well).

*Perspective-taking.* Perspective taking was measuring using a 7-item subscale of the interpersonal reactivity index (IRI; Davis, 1983). This subscale measures how prone an individual is to take on another person's perspective (example item:

Before criticizing somebody, I try to imagine how I would feel if I were in their place; 1 = Does not describe me well, 5 = Describes me very well).

*Meaning in life.* Meaning in life was assessed using a 5-item presence of meaning in life subscale of the Meaning in life questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2006). This subscale measures how much people feel that they have meaning in their lives (example item: My life had a clear sense of purpose; 1 = Absolutely Untrue, 7 = Absolutely True). This scale and all validated scales below were computed in the manner described in the associated scale development paper.

*Year in School.* Students reported their year in school in one of four categories creating a 4-point scale (1=1<sup>st</sup> year, 2=2<sup>nd</sup> year, 3=3<sup>rd</sup> year, 4=4/5<sup>th</sup> year). Students were fairly equally distributed across the years (Table 1).

*Discipline.* Students reported their major, and these majors were divided into four groups. The first group is *Science* which encompasses “hard science” disciplines such as biology, physics, and math. The second group is *Arts* which encompasses all majors in the arts program, including psychology, philosophy, economics and music. The third group is *Applied Science* which refers to majors such as engineering, computer science and architecture. The fourth group is *Business* which is comprised solely of students in the business school. Three majors were not a good fit within any of the four groups listed above (cognitive systems, kinesiology and social work). These groups had too few respondents to stand alone (<50 respondents per year). Therefore, these students were excluded from analyses (n =272).

## Results

### Main Effects

**Empathic Concern.** Empathic concern was compared across the four years of university. It had no discernable pattern across year in university. Empathic concern was lowest in year two and roughly equal in all other years (Table 1). Unsurprisingly, there was no significant correlation between empathic concern and year in university ( $r = .01, p = .32$ ).

**Table 1.** Means (and standard deviations) for meaning in life, empathic concern, and perspective taking across years in university.

	Year			
	1	2	3	4
<b>N</b>	1409	1054	1297	1556
<b>Meaning in Life</b>	2.93 (1.05)	3.01 (1.03)	3.11 (1.03)	3.17 (1.01)
<b>Perspective Taking</b>	3.66 (.60)	3.66 (.59)	3.71 (.63)	3.75 (.60)
<b>Empathic Concern</b>	3.76 (.67)	3.70 (.70)	3.76 (.70)	3.77 (.69)

**Perspective-Taking.** Perspective taking was compared across the four years of university. It increased in each year in university (Table 1). The correlation between perspective taking and year in university was small but significant ( $r = .06, p < .001$ ), indicating that students in later years had higher levels of perspective taking compared to those in earlier years.

**Meaning in Life.** Overall meaning was compared across the four years of university. Meaning in life increased in each year in university (Table 1). The correlation between meaning and year in university was small but significant ( $r =$

.09,  $p < .001$ ), indicating that students in later years experienced more meaning in their lives compared to those in earlier years.

### Effects by Discipline

**Empathic concern.** The correlation between empathic concern and year differed in the four areas (Table 3). Empathic concern was only significantly correlated to year among arts students. This positive correlation was significantly different from one of the other groups (Applied Science;  $z\text{-Score} = 2.01, p = .045$ ). Again, this may indicate that in disciplines in the arts, such as psychology, empathy is emphasized due to its importance in these fields.

**Table 2.** Correlation (and p-value) between year in university and meaning in life, empathic concern, and perspective taking.

	Area			
	Science	Arts	Applied Science	Business
<b>N</b>	1809	1779	1015	441
<b>Meaning in Life</b>	.10 ( $<.001$ )	.09 ( $<.001$ )	.06 ( $<.001$ )	.09 (.058)
<b>Perspective Taking</b>	.06 (.012)	.06 (.009)	.02 (.45)	.14 (.003)
<b>Empathic Concern</b>	.005 (.82)	.05 (.031)	-.03 (.37)	.07 (.13)

**Perspective-taking.** The correlation between perspective taking and year differed in the four disciplines (Table 2). Science, arts and business students had significant positive correlations between year and perspective taking, meaning that as students got later in these programs they also reported higher levels of perspective taking. Of all the disciplines, business students had the highest correlation. The business students between year and perspective taking was

significantly different from the correlation in applied science students ( $z$ -Score=2.06,  $p = .039$ ). This indicates that the increase in perspective taking across year in program is significantly higher in business students than it is in applied science majors. This may be due to the nature of a business education, in which understanding the motivations of others is crucial for effective managers and marketers. Perspective-taking may be less emphasized in applied science curriculums, such as engineering, where the focus is more technical.

**Meaning in life.** Meaning in life did not substantially differ in the four discipline groups. All disciplines had positive correlations (Table 2) and none of the correlations were statistically different from any other.

## Discussion

Meaning in life and perspective taking both were found to increase across years in education. In addition, perspective taking was found to increase more quickly in students in the business disciplines, while empathic concern was found to increase more quickly in students in the arts disciplines. It is interesting to note that perspective-taking is “double-edged,” as recent findings have emphasized (e.g., Galinsky et al. 2008, Cohen 2010): a person may deploy perspective-taking strategically in self-interest, or empathically for prosocial ends.

These results are correlation and causation can not be inferred. In order to test causation, a longitudinal study should be run that follows students across their university experience and measures if time spent in university leads to increases in meaning and perspective taking. However, it seems unlikely to the authors that

students with similar ages and from the same generation have notable differences in their understanding of meaning or ability to take on others perspectives.

This research indicates that different areas of education may influence students in different ways. Students in all disciplines seem to have higher meaning in life during later years in university. However, students in the arts may be influenced to become more empathetic during their time in university, while students in the business program may experience greater increases in perspective taking.

## References

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## MEANING IN LIFE

Please answer the use the scale below to indicate how you felt about each statement below OVER THE LAST 8 WEEKS.

- 1- Absolutely Untrue
- 2- Mostly Untrue
- 3 - Somewhat Untrue
- 4 - Can't Say True or False
- 5 - Somewhat True
- 6 - Mostly True
- 7 - Absolutely True

Over the last 8 weeks, I felt like...

1. I understood my life's meaning. \_\_\_\_\_
2. My life had a clear sense of purpose. \_\_\_\_\_
3. I had a good sense of what makes my life meaningful. \_\_\_\_\_
4. I had discovered a satisfying life purpose. \_\_\_\_\_
5. My life had no clear purpose. \_\_\_\_\_

## INTERPERSONAL REACTIVITY INDEX

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. When you have decided on your answer, fill in the letter on the answer sheet next to the item number. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

### ANSWER SCALE:

A	B	C	D	E
DOES NOT				DESCRIBES ME
DESCRIBE ME				VERY
WELL				WELL

I often have tender, concerned feelings for people less fortunate than me. (EC)

I sometimes find it difficult to see things from the "other guy's" point of view. (-PT)

Sometimes I don't feel very sorry for other people when they are having problems. (-EC)

I try to look at everybody's side of a disagreement before I make a decision. (PT)

When I see someone being taken advantage of, I feel kind of protective towards them. (EC)

I sometimes try to understand my friends better by imagining how things look from their perspective. (PT)

Other people's misfortunes do not usually disturb me a great deal. (-EC)

If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (-PT)

When I see someone being treated unfairly, I sometimes don't feel very much pity for them. (-EC)

I am often quite touched by things that I see happen. (EC)

I believe that there are two sides to every question and try to look at them both. (PT)

I would describe myself as a pretty soft-hearted person. (EC)

When I'm upset at someone, I usually try to "put myself in his shoes" for a while.  
(PT)

Before criticizing somebody, I try to imagine how I would feel if I were in their place.  
(PT)

NOTE: (-) denotes item to be scored in reverse fashion

PT = perspective-taking scale

EC = empathic concern scale