**Online Supplemental Material**

**Preliminary Analyses**

The pattern of correlations (see Table S.1) was as expected, with positive emotions positively correlated with other positive emotions and negatively correlated with negative emotions. However, within-person boredom and frustration were not significantly correlated with one another. In addition, between-person frustration was positively correlated with excitement. In general, control and value were positively correlated with positive emotions and negatively correlated with negative emotions. Science career intentions were positively correlated with excitement, happiness, and control. Lastly, ACT science scores were negatively correlated with excitement, frustration, value, and science career intentions. ACT science scores were positively correlated with control. Intraclass correlations revealed that 29-46% of the variation in emotions (ICChappy = .43, ICCexcited = .37, ICCfrustrated = .29, ICCbored = .39), control (ICC = .42), and value (ICC = .46) was attributable to between-person differences.

Missing data analyses examined whether ESM response rates (proportion of surveys completed out of a possible total of 20) were significantly different across groups defined by gender, racial/ethnic minority status, grade, age, and social economic status (SES), using free and reduced lunch as a measure of SES. Individual students’ response rates were calculated by dividing the number of completed ESM surveys by the total possible (0 = student completed no ESM surveys, 1 = student completed all surveys). *T*-tests were used to examine differences in response rates by gender, minority status, and SES. A one-way ANOVA was used to examine response rate differences by grade and age. There were no significant differences in response rates by gender [*t* (235) = .62, *p* = .54], minority status [*t* (183) = .86, *p* = .39], SES [*t* (231) = -.01, *p* = .99], grade [*F* (3, 240) = 1.73, *p* = .16], or age [*F* (1, 242) = 2.59, *p* = .11]. There were no significant differences in response rates for science career intentions on any of the demographic indicators examined.

 We also used a chi-square test to examine whether there were systematic differences in students who had missing or complete data on outcome variables (science career intentions and ACT science scores) by gender, racial/ethnic minority group membership, and SES. For science career intentions (comparing those missing vs. not missing), there were no significant differences by gender [*χ2* (1) = .11, *p* = .74], race/ethnicity [*χ2* (1)= .91, *p* = .34], or SES [*χ2* (1) = 1.62, *p* = .21]. Similarly, comparing those who had ACT science scores the following year to those who did not, there were no significant differences by gender [*χ2* (1) = .01, *p* = .93]; however, there were significant differences by race/ethnicity [*χ2* (1) = 11.72, *p* < .001] and SES [*χ2* (1) = 12.87, *p* < .001]. Specifically, 64% of racial/ethnic minority students were missing ACT science scores compared to 40% of White students. Further, 68% of students who received free lunch were missing ACT science scores compared to 44% of students who did not receive free lunch. Thus, the students in the final analysis examining ACT scores as a function of emotion profile experiences underrepresented the experiences of Black, Hispanic, and low-SES students. However, we note that the average ACT score for the sample (*M* = 19.05) was the same as the average reported for the entire school, indicating the subsample of students included in our ACT analyses were representative of the larger school population in this regard. Further, the ACT sample was still relatively diverse despite the associations of missing data with demographic characteristics. Specifically, 31% of those with ACT data were Hispanic/Latino (compared to 37% in the full sample), 11% were Black (compared to 12% in the full sample), and 30% received free/reduced lunch (compared to 33% in the full sample).

Table S.1.

*Within- and Between-Person Correlations and Overall Descriptive Statistics for Study Variables*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| *Within-person* |  |  |  |  |  |  |  |  |
| 1. Excitement |  |  |  |  |  |  |  |  |
| 2. Happiness | 0.45\*\*\* |  |  |  |  |  |  |  |
| 3. Frustration | -0.12\*\*\* | -0.22\*\*\* |  |  |  |  |  |  |
| 4. Boredom | -0.14\*\*\* | -0.17\*\*\* | 0.17\*\*\* |  |  |  |  |  |
| 5. Control | 0.26\*\*\* | 0.36\*\*\* | -0.14\*\*\* | -0.15\*\*\* |  |  |  |  |
| 6. Value | 0.14\*\*\* | 0.14\*\*\* | 0.03 | -0.10\*\*\* | 0.29\*\*\* |  |  |  |
| *Between person* |  |  |  |  |  |  |  |  |
| 1. Excitement |  |  |  |  |  |  |  |  |
| 2. Happiness | 0.66\*\*\* |  |  |  |  |  |  |  |
| 3. Frustration | 0.21\*\* | -0.10 |  |  |  |  |  |  |
| 4. Boredom | -0.06 | -0.27\*\*\* | 0.39\*\*\* |  |  |  |  |  |
| 5. Control | 0.31\*\*\* | 0.50\*\*\* | -0.22\*\* | -0.37\*\*\* |  |  |  |  |
| 6. Value | 0.23\*\* | 0.30\*\*\* | -0.05 | -0.44\*\*\* | 0.52\*\*\* |  |  |  |
| 7. Science Career Intentions | 0.20\*\*\* | 0.16\* | 0.04 | -0.14 | 0.11 | 0.32\*\*\* |  |  |
| 8. Science ACT Scores | -0.11 | -0.04 | -0.25\* | <0.001 | 0.08 | -0.23 | -0.09 |  |
| Mean | 0.84 | 1.51 | 0.61 | 1.33 | 1.77 | 1.15 | 1.54 | 19.05 |
| SD | 1.01 | 1.04 | 0.88 | 1.14 | 0.80 | 0.92 | 0.73 | 4.09 |
| Minimum | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 10 |
| Maximum | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 33 |

\*\*\**p* < .001, \*\**p* < .01, \**p* < .05. Means and standard deviations represent overall descriptive statistic