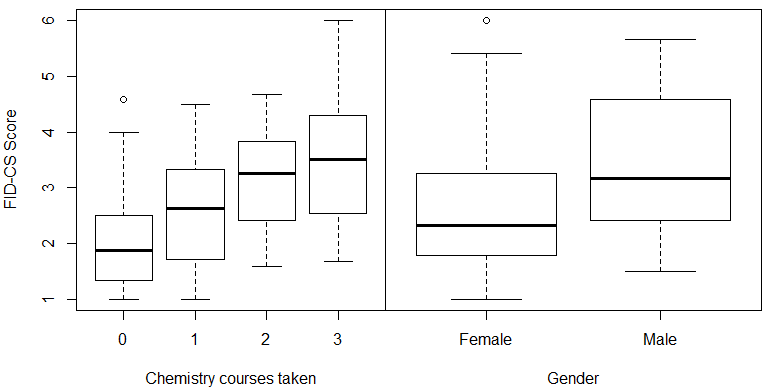
Testing the Four-Phase Interest Development Survey for Chemistry

Joseph E Michaelis, Sally P.W. Wu, Martina A. Rau, Mitchell J. Nathan

University of Wisconsin-Madison

**Table 1.** FID-CS items

|  |
| --- |
| * I enjoy learning about chemistry even when it is very difficult. (PER) |
| * I know way more about chemistry than other students I know. (KNOW) |
| * I think about my own questions about chemistry that are not for required for class at least once a week. (QUES) |
| * Compared to other students, I am way better at doing chemistry work. (SE) |
| * Knowing about chemistry is extremely valuable to me. (VALUE) |
| * I work on chemistry projects or learning chemistry that is not required for class at least once a week. (CE) |
| * I know a lot about the chemistry topics that I find interesting. (KNOW) |
| * I think everyone should know a lot about chemistry (VALUE) |
| * I'm inspired to learn more about chemistry on my own when I see something in chemistry that interests me. (PER) |
| * I always learn more about chemistry on my own if I find it interesting (QUES) |
| * When chemistry interests me, I am confident that I can learn about it extremely easily. (SE) |
| * When I'm working on something in chemistry that I think is interesting, I continue working even when it takes a lot of time. (PER) |

****

**Fig. 1**. Distribution of FID-CS scores (left) and FID-CS scores

by total chemistry courses (right)

**Table 2.** Mean scores for various FID scales by age group and content area

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Domain & Study Type | Ages | Mean  (SD) | *N* | α | Distribution |
| **Chemistry:**  Educational Psychology Students in a lab study using a chemistry intelligent tutoring system | College | 2.72  (1.11) | 158 | 0.88 | C:\Users\Joe\Box Sync\Research Studies 2016-17\AERA 2018\Histograms\CHEM Hist.png |
| Domain & Study Type | Ages | Mean  (SD) | *N* | α | Distribution |
| **Reading**:  Children reading with educational robot or control condition (2017 & 2018 combined) | 10 – 12 | 5.46  (1.03) | 32 | 0.88 | C:\Users\Joe\Box Sync\Research Studies 2016-17\AERA 2018\Histograms\multiplot for AERA handout.png |
| **Engineering**:  Visitors to Biomedical Engineering outreach event  (2017 & 2018 combined)  *\*Shortened survey* | K – 8th | 4.41  (1.08) | 1552 | 0.81 |
| **Engineering:**  Students in survey evaluation study  (2016) | High School | 3.23  (1.21) | 145 | 0.91 |
| **Engineering:**  Students in an out-of-school FIRST Robotics competition club (2016) | High School | 5.33  (0.76) | 20 | 0.83 |

* Four-Phase Interest Development Surveys (FID) are valid, reliable, and adaptable measures of interest.
* Suited for identifying *relative* interest level for differentiating or scaffolding activities by student interest.
* We provide regular updates for means and distributions: [www.bit.ly/steminterest](http://www.bit.ly/steminterest)