Testing the Four-Phase Interest Development Survey for Chemistry

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**Table 1.** FID-CS items

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| --- |
| * 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)
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| * 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)
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**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)