

COMPILATION: learning disabled students & FCI: what accommodations?

Date: Mon, 09 Sep 2002

From: Jane Jackson <jane.jackson@asu.edu>

Teachers, I need your help.

- 1) Do you ever have any learning disabled students? If so, what accommodations do you make, when they take the Force Concept Inventory?
- 2) Last week, a physics professor asked me, "Are there any data on accommodations for learning disabled students taking the Force Concept Inventory?"

Do you have any?

I asked Sharon Osborn Popp, our evaluator. She replied:

"I know of no data on accommodations for students with learning disabilities with the FCI. I would be curious to know what percentage of high school students taking physics have individualized education plans re: learning disabilities, since recommendations about possible accommodations would certainly be helpful when administering the FCI. Allowing extra time would be the most straightforward reasonable accommodation, that I can think of,... but *the FCI is not intended to be a speeded test anyway - I would hope instructors are flexible enough with administration time that this would not generally affect students with LDs adversely*. I would like to know what other kind of accommodations have been granted to students with LDs, with respect to taking the FCI."

Can you help on this?

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Date: Mon, 09 Sep 2002

From: Chris Horton

FWIW: ----, my partner, who is [high level] autistic, was baffled by the motion drawings. When I explained these to her as like a strobe photograph of moving objects, pointing to objects and saying "here is object one and object two at the first flash, here they are at the second flash, here they are at the third flash," she considered for perhaps 10 seconds and then confidently answered in a way which was fully consistent with the rest of her test: she understands acceleration and is almost fully aristotelian on force questions. (Her score was 9 out of 30.) I have no reason to suspect that her difficulty in interpreting these drawings was a difficulty in understanding the underlying concepts or that my coaching gave the answers away.

I would thus look for difficulties in interpreting questions in various populations, how to distinguish problems of interpretation from problems due to the conceptual structure held by the student, and how to assist them with interpreting the question in a way that is free of cues to the desired answer.

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Date: Tue, 10 Sep 2002

From: CKOZUMPLIK@AOL.COM

I have never done it formally for kids with learning disabilities, but informally, on 2 occasions I have read aloud several of the FCI questions to individual kids after they took the test, and in both cases they chose responses that were different from the ones they chose when they read the questions to themselves (I'm not saying that they both chose correct responses, just that they chose different ones)...so maybe *kids with visual processing problems could benefit from having the questions read to them??*

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Date: Tue, 10 Sep 2002

From: Physicsguru2@netscape.net (Robert McDowell)

I have only had 1 special ed. student. The only accommodations he used were *extended time and clarification of directions/terms*. He could have used his notes but he opted not to.

My Physics is Junior/Senior so I do not see too many special ed. students who opt to take it (I think those who are able are sometimes discouraged because the special ed. teachers could not assist them).

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Date: Wed, 11 Sep 2002

From: David Hill <dwmhill@earthlink.net>

Peoria High is sort of the magnet school for special ed in our district. We have the blind, deaf, EMH, TMH, LD, ESL, etc. high school students for the district at our school. Each semester I have at least four or five students in Physics that are on a 504 IEP (Individualized Educational Plan) for

accommodations. They have varying degrees of learning disabilities.

Over the past 5 years, I have never really made any accommodations for my LD kids on the FCI. I do tell kids that the exam should take about 30 - 40 minutes, but *I don't limit their time as long as they are seriously working on the exam. I occasionally help kids with vocabulary (that aren't specific physics terms they should know from class)*. Most of my kids have the option of going to the resource room for help on exams, but no one has asked. So, basically my LD kids on a 504 plan are testing right along with the regular ed kids on the FCI.

I don't have any specifics on how those kids have done on the FCI compared to regular kids. I could look back a year or so, if needed (if I can remember who the LD kids were) to compare. I at least can start marking those kids this year, if you wish.