

Online, Out-of-class Resources and Cheating

Brandon James Johnson



Ayush Gupta



Andrew Elby



facebook®

terringPhysics®

groupme piazza

WebAssign®

theexpertTA.com



WeChat

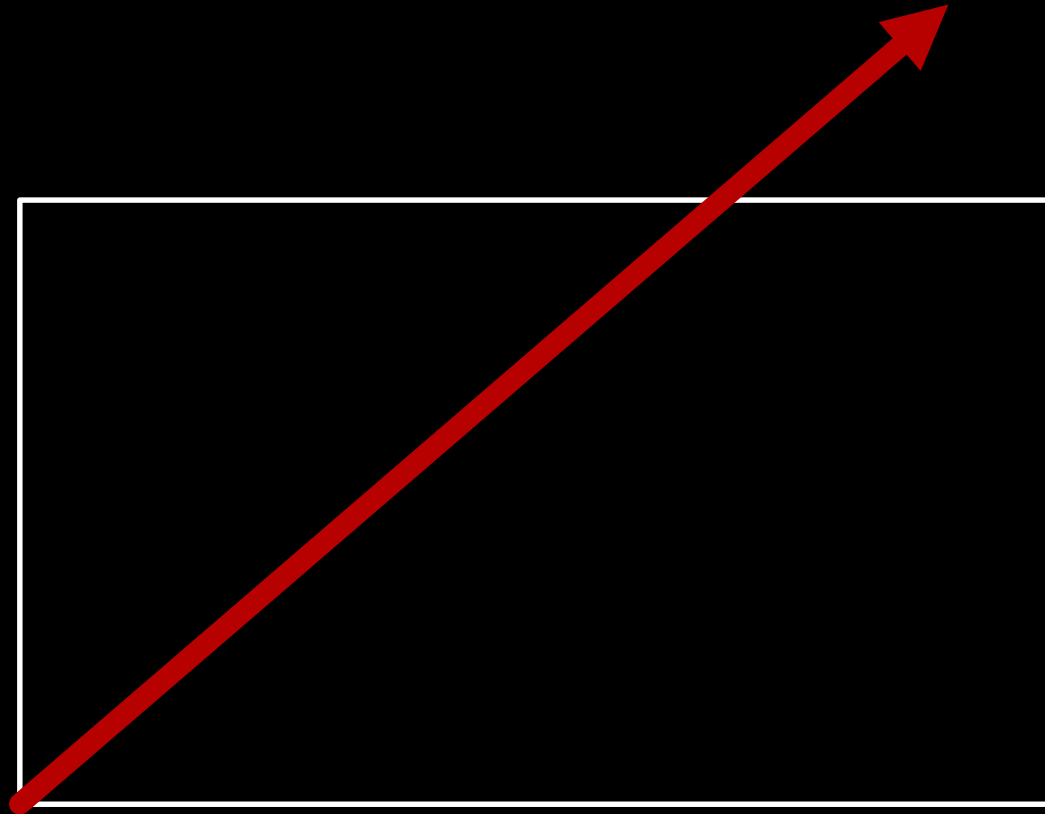


EDIA
yclopedia

Moderated Online Resources

- ▶ Finkelstein et al. (2005): PhET
- ▶ Countryman & Christian (2017): Smartphone Detectors
- ▶ Carpenter & Green (2017): Group Me
- ▶ Minichiello et al. (2013): Learning in Online Forums
- ▶ Jackson & Seiler (2018): Identity in Online Forums
- ▶ Rourke & Kanuka (2007) Barriers to online critical discourse
- ▶ Miller et al. (2016): Online Annotation System
- ▶ Parslow (2012): Khan academy
- ▶ Ryan et al. (2016): Computer problem solving coaches
- ▶ Vanlehn et al. (2005): Andes physics tutoring system
- ▶ Hendricks et al. (2017): open source textbooks
- ▶ Li et al. (2015): Web-based interactive teaching
- ▶ Roll et al. (2014): Online Problem-Solving Environments
- ▶ Allain & Williams (2006): WebAssign
- ▶ Kortemeyer (2009): Gender in Online Homework

CHEATING



ONLINE RESOURCES

King & Case (2014) E-cheating: Incidence And Trends Among College Students.

Some literature on cheating

- ▶ Heneghan (2012) Academic Dishonesty and the Internet in Higher Education
 - ▶ "Because many **students do not know exactly what constitutes cheating** and plagiarism through the use of the Internet, it is becoming increasingly more common and acceptable."
- ▶ Jones (2011) Academic dishonesty: Are more students cheating?
 - ▶ "With proper instructions and role modeling, **students can learn the difference between right and wrong.**"
- ▶ Curran et al. (2011) Cheating in Exams with Technology
- ▶ Kirstukas (2018) Detection and incidence of plagiarism in a solid modeling course



Dear Students of Maryland,

As we approach final exams and assignments, it is necessary to remind everyone that students, instructors, and the Office of Student Conduct work to maintain and advance a culture of academic integrity. This effort is simply impossible without the involvement of every person in our campus community.

You can contribute to our culture of academic integrity by knowing exactly what each instructor expects of their students prior to completing assignments or examinations, and by reviewing the [Code of Academic Integrity](#). If you do not understand your instructor's expectations, you should ask them to clarify what they are. Clear examples of academic dishonesty exist all around us including behavior such as:

- Sharing information about graded assignments on group chats (GroupMe, WeChat, etc.)
- Uploading/using graded assignments found on course websites like (Chegg.com, Quizlet, or Coursehero.com)
- Misleading an instructor to believe you are unable to complete an exam or assignment (e.g., saying you are sick when you are not)
- Having someone complete work on your behalf

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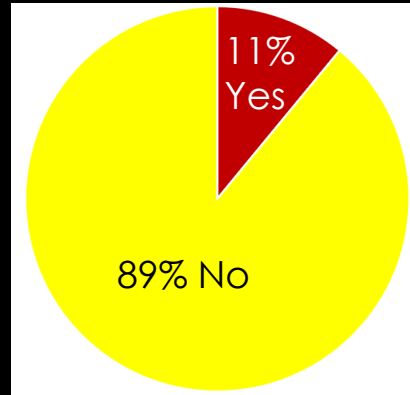
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Oftentimes students who have made dishonest decisions with their academic work explain that the choices were made due to stress, anxiety, pressure, or lack of awareness of expectations. We expect that all students will make academically honest decisions despite these [concerns](#), and seek additional support as they try to balance ethical decision-making with real-world challenges. The consequences of

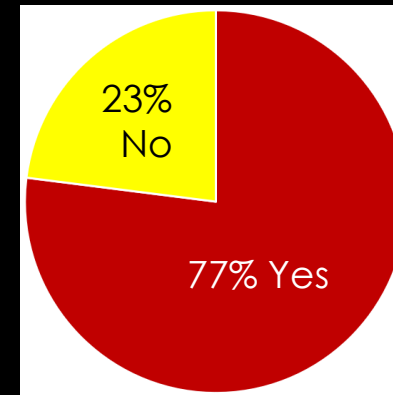
Ethics in out-of-class spaces

Is using solutions manuals cheating?

Students (N=195)



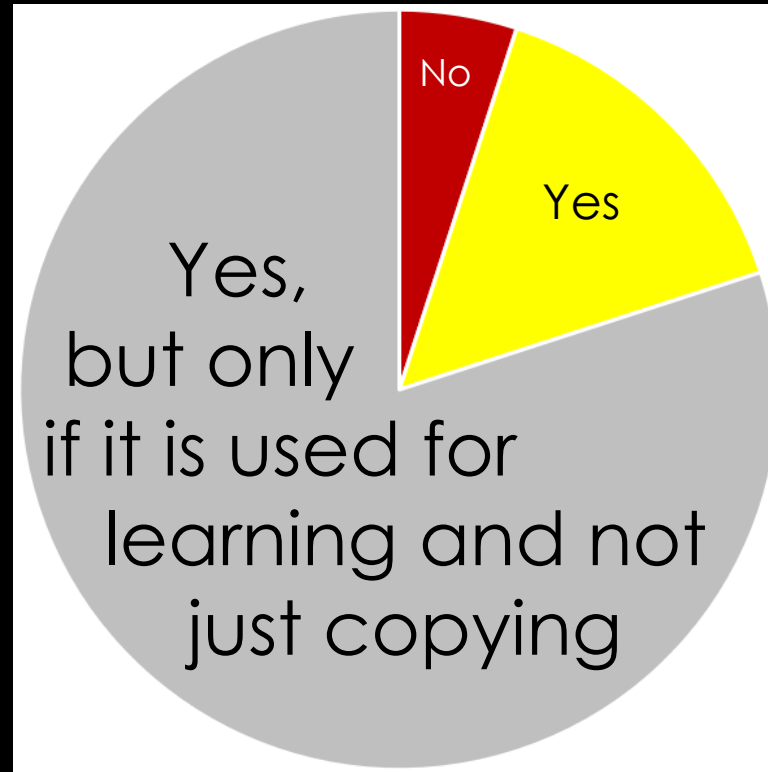
Faculty (N=38)



- Differences in reasons between students and faculty perception
- “Very few [students] report directly copying solutions.” (Minichiello et al., 2012)

Ethics in out-of-class spaces

Students, is using solutions manuals **ethical**? (N=334)



Ethics in unmoderated spaces

- Qualitative themes
 - Contrasting views of the role of solutions use
 - Student values/preferences that encourage solutions use
 - Mixed messages concerning solutions use
 - Students' understanding of the ethics of solutions use

Ethics in unmoderated spaces

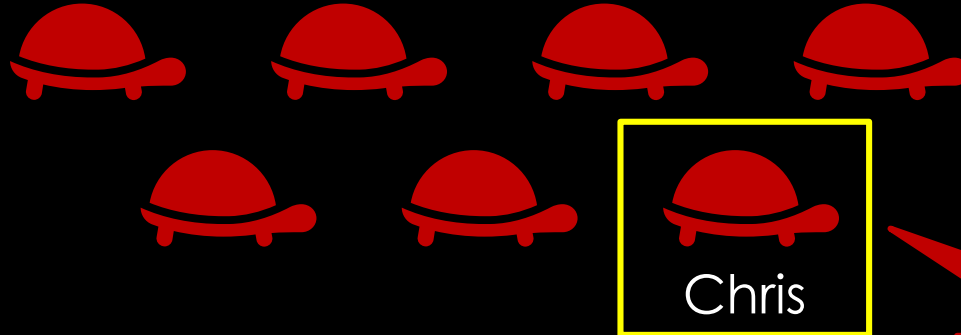
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Students' Understanding of the Ethics of Solutions Use

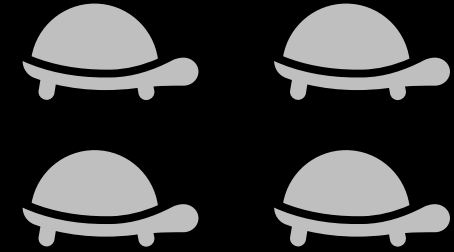
- Opinions vary about homework
- Depends on amount and quality of provided resources
- Epistemic intent

Interview Data Selection

Students



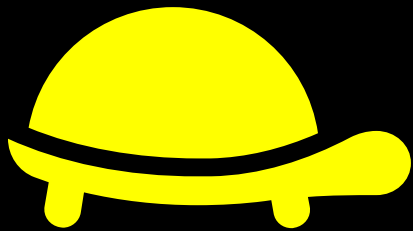
Instructors



Mastering

- Which resources and uses?
- Effect on learning?
- What counts as cheating?

MasteringPhysics®



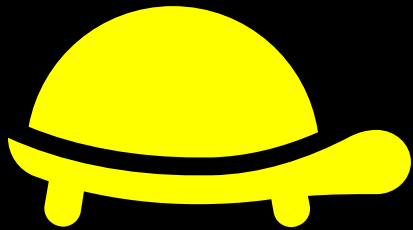
Brandon

Chris - Line 98:
Mastering is, I think, probably the worst program I've ever used 'cause it doesn't make sense, and I don't really understand. Like, nothing is explained in that, so it's- I it's- it's awful.

Interview Space



Chris



Brandon

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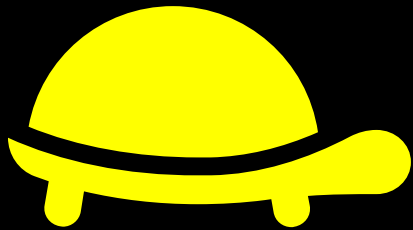
Chris - Line 179:
[Mastering Physics homeworks are] objectively hard for no reason. And, it doesn't help; it doesn't explain anything.

Interview Space



Chris

Wants help
for **learning**



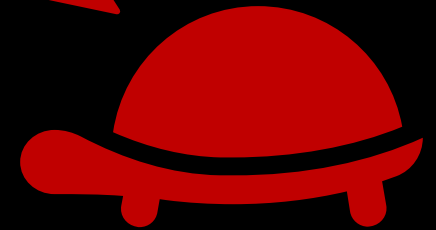
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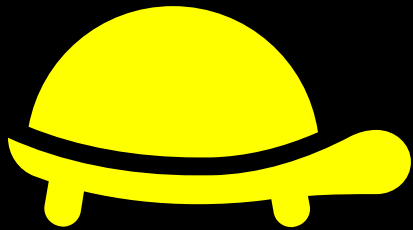
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Interview Space

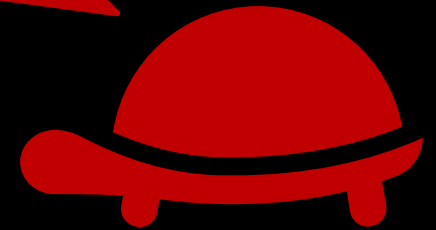


Chris



Brandon

Interview Space



Chris

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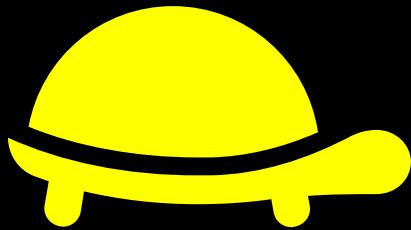
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Chris - Line 293:

Or, **honestly for Mastering, I'll just take the L [loss] sometimes.** I'll be like, "You know what, this questions is... no. I'm not."

Brandon - Line 385

Are there **ways that you think count as cheating**, and or like, I guess give me a list of things that might count as cheating and things that are acceptable to do.



Brandon

Chris - Line 390:

Like for example, **people that help you fill out Mastering, it's not cheating. Me asking like, 'Okay. I'm not getting this.' I don't think that's cheating.** I don't even think a lot of the times that if everything- **I think for me, cheating is everything but actually giving them, like, typing in the answer.**



Chris

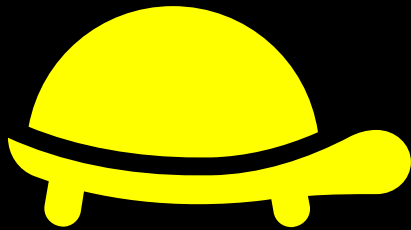
Interview Space

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Chris - Line 410:

See, I personally don't buy into Mastering. I don't give it any validity, so I feel like if I'm sitting there like, "What's the answer?" and someone just gives the answer, I'm like, "Okay." Like, I wouldn't- 'cause I don't think it's seriously- it doesn't- it doesn't give me anything.



Brandon

Interview Space



Chris

Chris - Line 410:

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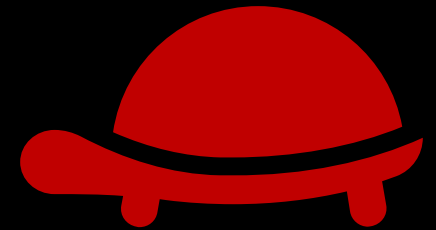
Brandon - Line 416

Alright, **so it doesn't give you anything**, and so what you're saying is like, **if you just take the answer from somebody, I'm not really cheating because it's not really helping me at all.**



Brandon

Interview Space



Chris

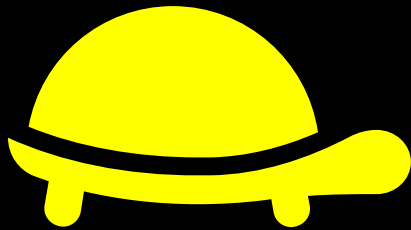
seriously- it doesn't- **it doesn't give me anything.**

Brandon - Line 416

Alright, **so it doesn't give you anything**, and so what you're saying is like, **if you just take the answer from somebody, I'm not really cheating because it's not really helping me [you] at all.**

Chris - Line 424:

Yes, 'cause I feel like it's no different for me, **it's no different from me** just accepting my, you know, **taking my L [loss] and hitting no, except this time I have something to type in instead of having to make up numbers.**



Brandon

Interview Space



Chris

Takeaways

Chris claims

- ▶ Mastering Physics doesn't support learning
- ▶ → Getting answers from friend isn't cheating
- ▶ Little difference between getting it wrong and getting better answers

Chris doesn't

- ▶ Mention effects to class grade distribution

Questions to ponder/explore

- What are the **structural aspects** about this whole learning environment (the classroom, Mastering Physics, etc.) which support reasoning and actions like Chris's?
- **What people or groups of people have the advantage** in navigating this structure?

Acknowledgements

Ayush Gupta

Andy Elby

Erin Ronayne Sohr

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Thank You

Action Items



Teachers should talk with (not at) their students about what cheating is

Researchers should work to better understand how online resources affect student learning

Let's not ask how we keep students from cheating, but instead, how we can **make learning environments that add value** to a student's life.