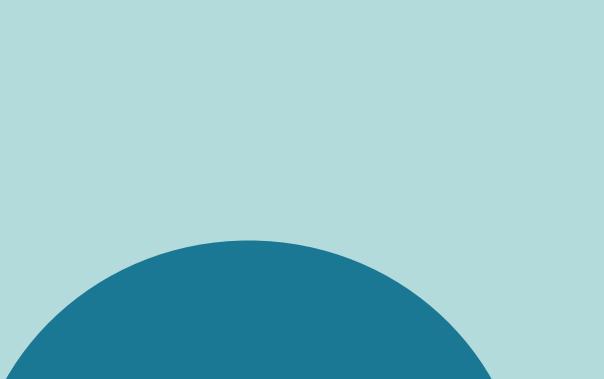
USCOTS 2023

COMMUNICATING with



Leveraging Educational Technology to Support Communication with/about Data

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Student to

student



- Weekly synchronous meetings
- Opportunities to build
- Small group work using breakout rooms
- Collaborative data analysis and software practice using shared
- One Socrative submission per



We can all picture an "ideal" environment for learning to communicate with/about data.

If your reality is different - e.g., online classes or large sections - you can leverage technology to facilitate three key types of communication.

Student to student



Students to instructor



Instructor to students



2. Can you find a confounding variable helps to explain the association between smoking and FEV in this sample?

Explain how it fits the definition of confounding by describing the associations you find in JMP (including the direction of the associations). Don't just rely on speculation.

Show Names 10/11 Students Answered

Age and Fev correltation suggests that the older a person is, the greater FEV. Additionally, since smoker tend to be older, age can be a confounding variable.

The cofounding variable is age. Age is associated with smoking and FEV. The younger you Age and gender are, perhaps, confounding variable which help to explain the association

between smoking and FEV in this sample. While the association between smokers and non-

smokers for FEV values apparent, the differece age and gender make is strong. Gender is a confounding variable between smoking and FEV. Females have a lower FEV and

a lower amount of smokers One confounding variable could be how much a smoker may smoke. A smoker could produce a higher FEV output if they only smoke a small amount. This could be explained by the graph built because the upper 50 percent of smokers have a higher FEV output than non-smokers.

Age is a potential confounding variable because most smokers are older and FEV tends to

Age, considering how younger people tend to smoke less than older people, the FEV for

Age is a confounding variable because a higher age relates to a higher FEV and a higher

One confounding variable that helps to explain the association between smoking and FEV in this sample is age. JMP graphs showed a strong positive association between both smoking and age and FEV and age.

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socrative

- Free for students: no subscription, no clicker
- Moderately priced for colleges: \$179/instructor account/year
- Both multiple choice and free response questions
- Quizzes with multiple questions
- Real-time monitoring of students' progress (even if they haven't submitted the quiz yet)
- Optional immediate feedback on multiple choice or short answer questions



- One easy-to-share document that communicates instructions and records class discussion in real-time.
- Multiple students responses can be reviewed in large group discussion (copy-pasted from Socrative)
- Text editing tools to show instructor feedback that addresses both conceptual understanding and precision of communication





- relationships
- screens
- group



Any given instructional strategy can be

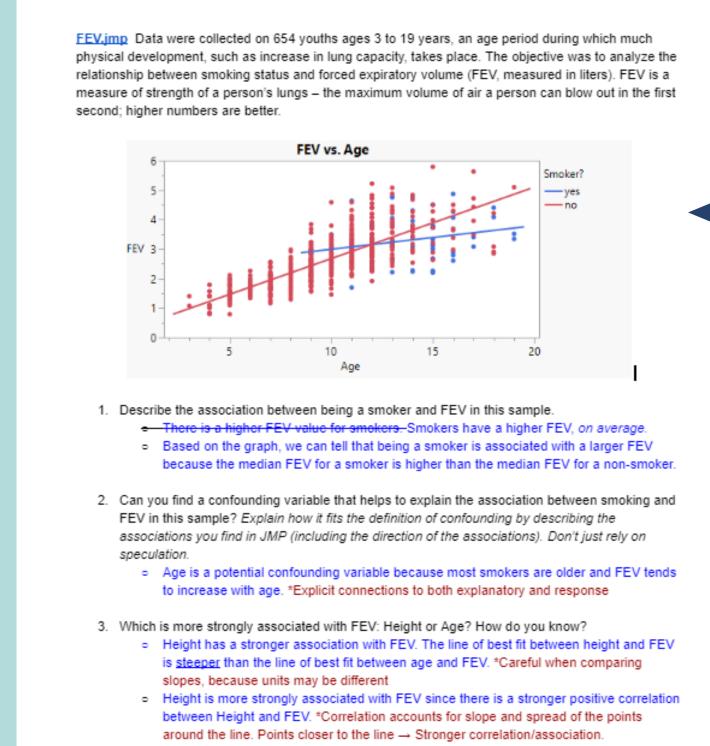
supported by a number of contrasting

technologies (old and new)...





Instructor to students



4. Which is more strongly associated with FEV: Gender or Smoking? How do you know? Smoking is more strongly associated with FEV. Comparing box and whisker plots, the difference in means medians between the FEVS of smokers and non-smokers is larger than the difference in means medians between the FEVs of males and females.