

Undergraduate Explanations of Instructional Behaviors

Background

- Nussbaum (1992) suggested that understanding how instructional behaviors can differentiate effective instructors from ineffective instructors will be valuable for higher education research.
- Varca and Pattison (2001) and Pattison et al. (2011) found that instructional behaviors are perceived on many different levels by students, from personal interactions to classroom level instruction.
- This study explored instructional behaviors associated with descriptive words students often use to describe their instructors.
- The descriptive words arose from a study comparing perceptions of GTAs and professors by students in introductory biology at the University of Tennessee (Kendall and Schussler, 2012) who found:
 - Professors are more structured, confident, authoritative, organized, experienced, knowledgeable, distant, formal, strict, serious, respected, and boring,
 - GTAs are more uncertain, hesitant, nervous, relaxed and laid-back, engaging, interactive, understanding, relatable, and personable.

Research Objective

- Identify the behaviors associated with the descriptive words undergraduates often use to describe their instructors.



Data collection

- Qualitative data was collected from undergraduates enrolled in 9 general biology courses (3 non-majors' biology classes, 2 biodiversity classes, 1 cell biology class, 2 genetics classes, and 1 ecology class) at the University of Tennessee in spring 2011.
- Students were asked to define and give examples of the 13 words shown on Tables 1 and 2.

Interviews

- 24 one-on-one interviews with volunteer participants between March 21st and April 21st.
- Interviews audio-taped and transcribed verbatim.
- The question format for each word was, "How would you define [descriptive word]? Can you provide me with some specific examples of how your instructor is/is not [descriptive word]?"

Online survey

- Sent the last week of spring 2011 semester.
- Undergraduates provided a written definition of each word.

Participants

- Interview participants were mostly first year (54%), non-biology major (71%), female (75%), and native English speakers (100%).
- Online survey participants were mostly first year (68%), non-biology major (73%), female (70%), and native English speakers (98%).

Data Analysis and Results

- Interviews and online surveys analyzed using a grounded theory approach with two researchers independently analyzing results for each descriptor.
- Final behaviors for each description were determined by consensus between the two researchers.
- Comparison of the results revealed that both methods of data collection resulted in similar examples for each descriptor. Thus, both sets of results were combined and are reported together.
- Some descriptors appeared to be opposites of each other (e.g., boring and engaging), consequentially, descriptors were sorted into positive and negative ends of an instructional spectrum (Table 1).
- Two descriptors, however, had no opposites: organized and respect (Table 2). It is hypothesized that organized has no negative counterpart and that respect is an overarching outcome encompassing many of the positive instructor characteristics shown in Table 1.
- The positive instructional behaviors were sorted into three themes and then placed in a schema to show how they may lead to the overarching outcome of respect for an instructor (Figure 1). "Respect" encompasses the noticeable classroom behaviors that students indicate earns their trust and makes them more willing to engage in the class.

Table 1. Undergraduate definitions of descriptive words, sorted into paired, positive and negative aspects.

Positive Terms	Definition	Negative Terms	Definition
<i>Engaging</i>	Keep student attention by being interactive or involved, have a passion for teaching, bring in examples, and communicate on student level.	<i>Boring</i>	Monotone, not engaging or interactive, not interesting, have no personal enthusiasm, do not come to student level, and as a result are unable to make material interesting and relevant to students.
<i>Enthusiastic</i>	Exciting, happy, enjoy and have a passion for teaching, care about students, are interactive, have a connection to the topic, are able to interest students, and use examples.	<i>Nervous</i>	Not confident, and thus are uncomfortable, shaky and sweaty, are a poor teacher, and do not know material.
<i>Confident</i>	Know the material and information, are sure of their teaching, can answer student questions, come prepared, do not stutter or shake, are calm, and thus are effective instructors.	<i>Uncertain</i>	Not confident, do not know the material, unable to answer student questions, are unsure how to teach, and often come off as being nervous.
<i>Relaxed</i>	Not nervous or anxious; comfortable, prepared, and laid-back. Approachable, flexible about rules, and confident.	<i>Distant</i>	Not personally approachable, not engaging or interactive in class, do not care about students, are intimidating, not relatable, and thus poor teachers.
<i>Relate</i>	Approachable, able to connect with students, have common interests, understand how to present the material to students; sometimes are still students.	<i>Strict</i>	Adhere to policies and rules, are inflexible, and not tolerant of bad behavior or distractions. Tough graders, and not laid-back or relaxed.
<i>Understanding</i>	Compassionate when dealing with student issues, are often flexible (especially in terms of deadlines), empathetic, and they know what it is like to be a student.		

Table 2. Undergraduate definitions of the descriptive words "organized" and "respect," in which there were no negative terms or similar words associated with them.

<i>Organized</i>	Have everything ready to go and orderly, have a plan for the course, start on time, provide prompt grading, do not lose assignments, have a conscientious flow to class, and typically use a PowerPoint.
<i>Respect</i>	Through their actions and knowledge they are able to earn the trust of students and in turn student will follow their rules and provide undivided attention to the instructor indicating they respect the instructors. Instructors which are respected are able to answer questions, able to make the material interesting, listen to students' perspective, and are willing to help students. Further, some instructors are respected due to their experience and seniority as an authoritative figure.

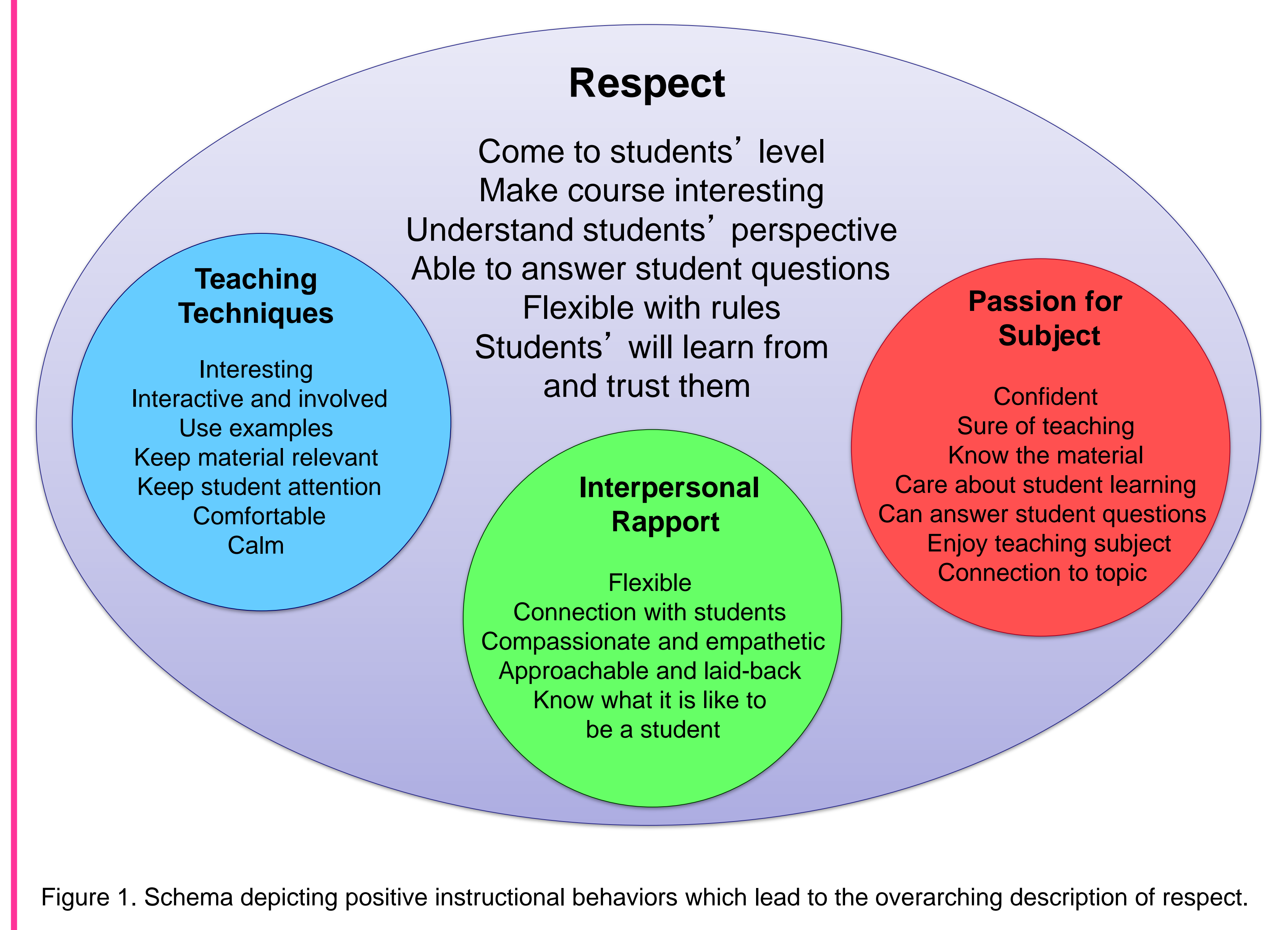


Figure 1. Schema depicting positive instructional behaviors which lead to the overarching description of respect.

Conclusions

- Instructor descriptions used by undergraduates are complex due to the multiple personal-level and classroom-level instructional behaviors that lead to the descriptions.
- When it comes to excellent instructors, students demand more than just good teaching; they also put a premium on interpersonal behaviors that indicate care and concern for students.
- Interpretations of descriptive words in student evaluations will help give instructors more insight into how undergraduates perceive them, and help them to understand that it is more than just their teaching that students are reflecting on (Helterbran, 2008; Nussbaum, 1992).
- Instructors can use this study to better understand what instructional behaviors could be modified in order to convey effective instruction and foster student learning.



Acknowledgements

- We would like to thank Raina Akin for her assistance analyzing interviews and online survey responses.
- We would like to thank the University of Tennessee Division of Biology and Department of Ecology and Evolutionary Biology for funding.

References

- Helterbran, V. R. (2008). The ideal professor: Student perceptions of effective instructor practices, attitudes, and skills. *Education*.
- Kendall and Schussler (2012). Does Instructor Type Matter? Undergraduate Student Perception of Graduate Teaching Assistants and Professors. *CBE: Life Sciences Education*.
- Nussbaum, J. F. (1992). Effective teacher behaviors. *Communication Education*.
- Pattison, P., Hale, J. R., and Gowers, P. (2011). Mind and soul: Connecting with students. *Journal of Legal Studies Education*.
- Varca, P. E., and Pattison, P. (2001). Attaining teaching excellence: A critical incident technique. *Journal of Legal Studies Education*.