



# An Ethnographic Study of Laughter Occurred in a High School Students' Science Internship

Jaime A. Cano & Pei-Ling Hsu  
 jacano2@miners.utep.edu & phsu3@utep.edu  
 Teacher Education Department, College of Education, University of Texas at El Paso



No. DRL 1322600

## Problem & Purpose

Research shows that one of the key factors that contributes to the success of the internship for the students is their interactions with scientists (Catalão, 2012).

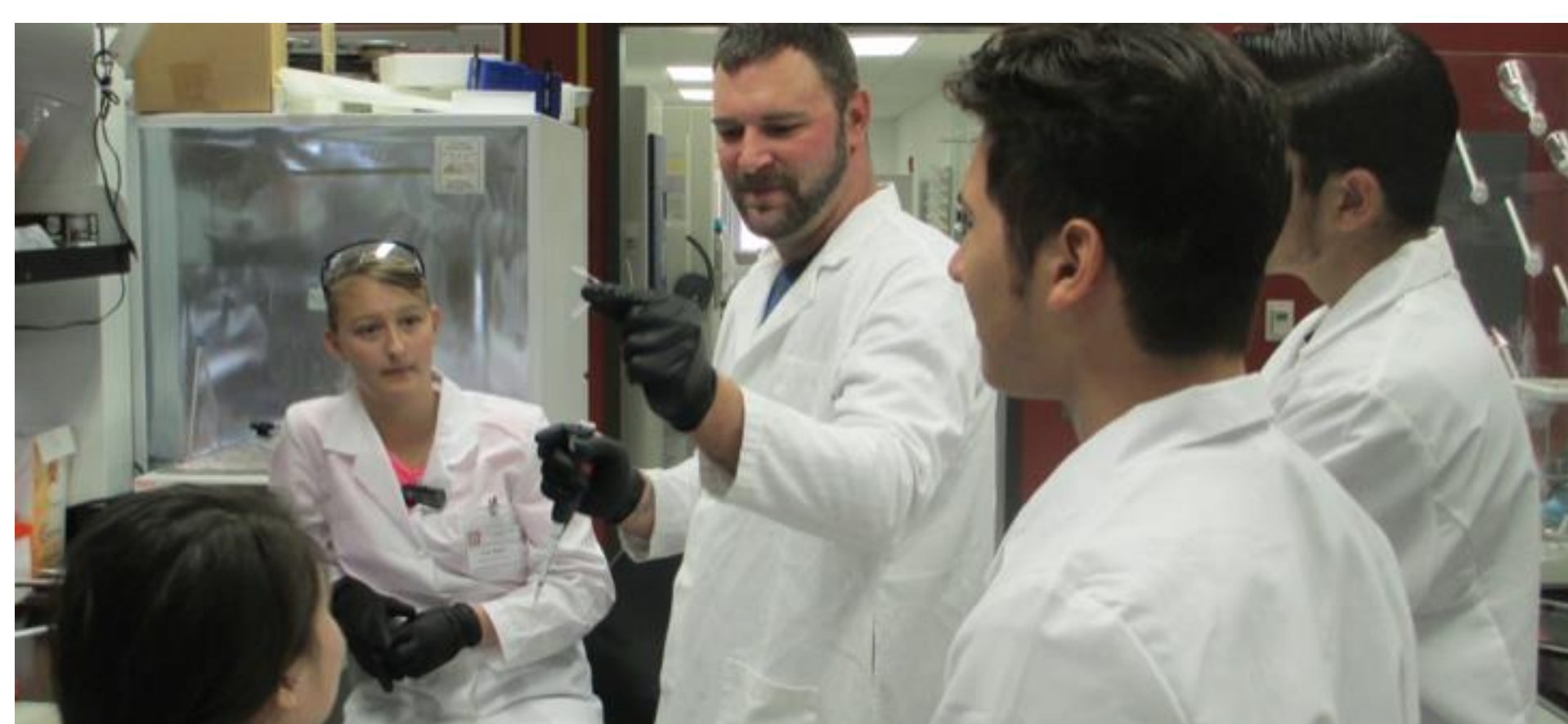
That is, the quality of the student-scientist interaction plays a crucial role in influencing the quality of students' science learning experience (Catalão, 2012).

However, scientists sometimes can be intimidating because of the complexity of scientific language and advanced knowledge involved in their scientific practice (Seabrook, 2004).

The purpose of this ethnographic study is to investigate how an exemplary scientist engaged high school students with humor in a 7-month science internship.

## Research Context

- Work With a Scientist Program
  - ✓ 7 months internship, including 10 Saturdays and 20 week days in summer time
  - ✓ 36 high school students
  - ✓ 4 scientists and their research teams
  - ✓ Open inquiry projects
  - ✓ Proposal presentations to the public
  - ✓ Final presentations to the public



## Method & Data Source

- Data analysis:
  - ✓ The framework of "Appropriate Uses of Humor by Teachers" (Wanzer, Frymier, Wojtaszczyk, & Smith, 2006)
  - ✓ Science related humor and laughter
  - ✓ Non science-related humor and laughter
- Data sources
  - ✓ 100 hours of internship videos
  - ✓ Field notes, pictures, artifacts, transcriptions

## Analytic Framework - Appropriate Uses of Humor by Teachers (Wanzer, Frymier, Wojtaszczyk, & Smith, 2006)

Appropriate Humor Categories		
• Humor Related to Material (tactic not specific)	• Using Media or External Objects to Enhance Learning	• Teacher Performance
• Critical/Cynical	• Jokes	• Role Playing/Activities
• College Life Stereotypes	• Stories	• Creative Language Usage
• Examples		• Directed Towards Student/Teasing

## Results

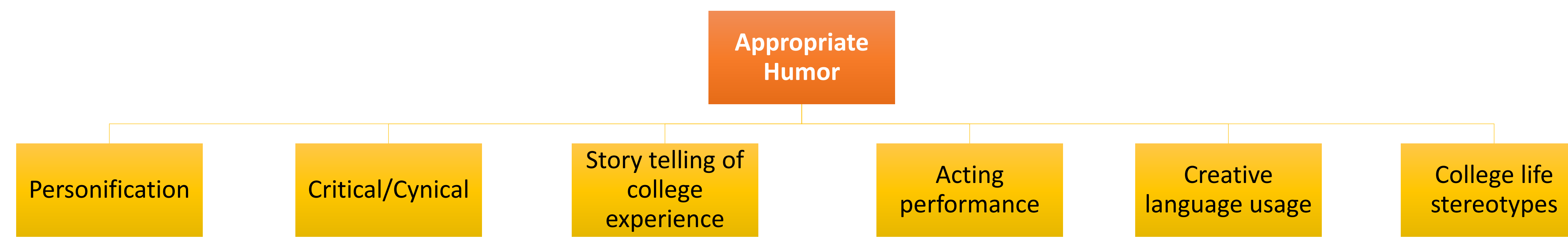


Table 1. Humor Categories

Category	Definition	Example
Personification	The teacher gave human characteristics to unanimated objects or animals.	20140517-8: "I wanted to put you closer and get together. Our table need to touch each other so that our thoughts can transfer from one table to another."
Critical/cynical	The teacher was critical or cynical about course material or non-course material in an effort to be humorous (e.g., sarcasm).	20140125-3: "So the indicator is going to be also inside and then when, when the reaction is done then the indicator is going to scream. Not by voice (laughter)...by color." 20140616-19: "Hmm. Next time, train your voice to go faster, would you?"
Story telling of college experience	The teacher made fun of her experiences and anecdotes at college.	20140201-4: "So it's quite fun. But I don't mean to turn you guys into a nerd, chemistry nerd. But uh ... I also ..."
Acting performance	The teacher acted a certain way to mimic certain behaviors of materials and people.	20140517-7: "I have been drinking bottled water for long time. And how come I'm fine?" And you'd be like, 'Uh, because God is protecting you (exaggerating)' 20140701-27: "Let him be grey. We have to respect Josh wish. So grey. Man that is so grey"
Creative language usage	The teacher used funny and entertaining language to answer questions from students.	20140701-12: "Cold, um, <i>no se</i> (Spanish for I don't know) [laughter]. That is why we're doing research." 20140701-29: "Me too. I say I love myself too."
College life stereotypes	The teacher made fun of stereotypical college behaviors.	20140517-18: "So, how about-- Now, this is just like. This sounds like a PhD. [program?]. Sounds like I need to go to graduate school for that right there."

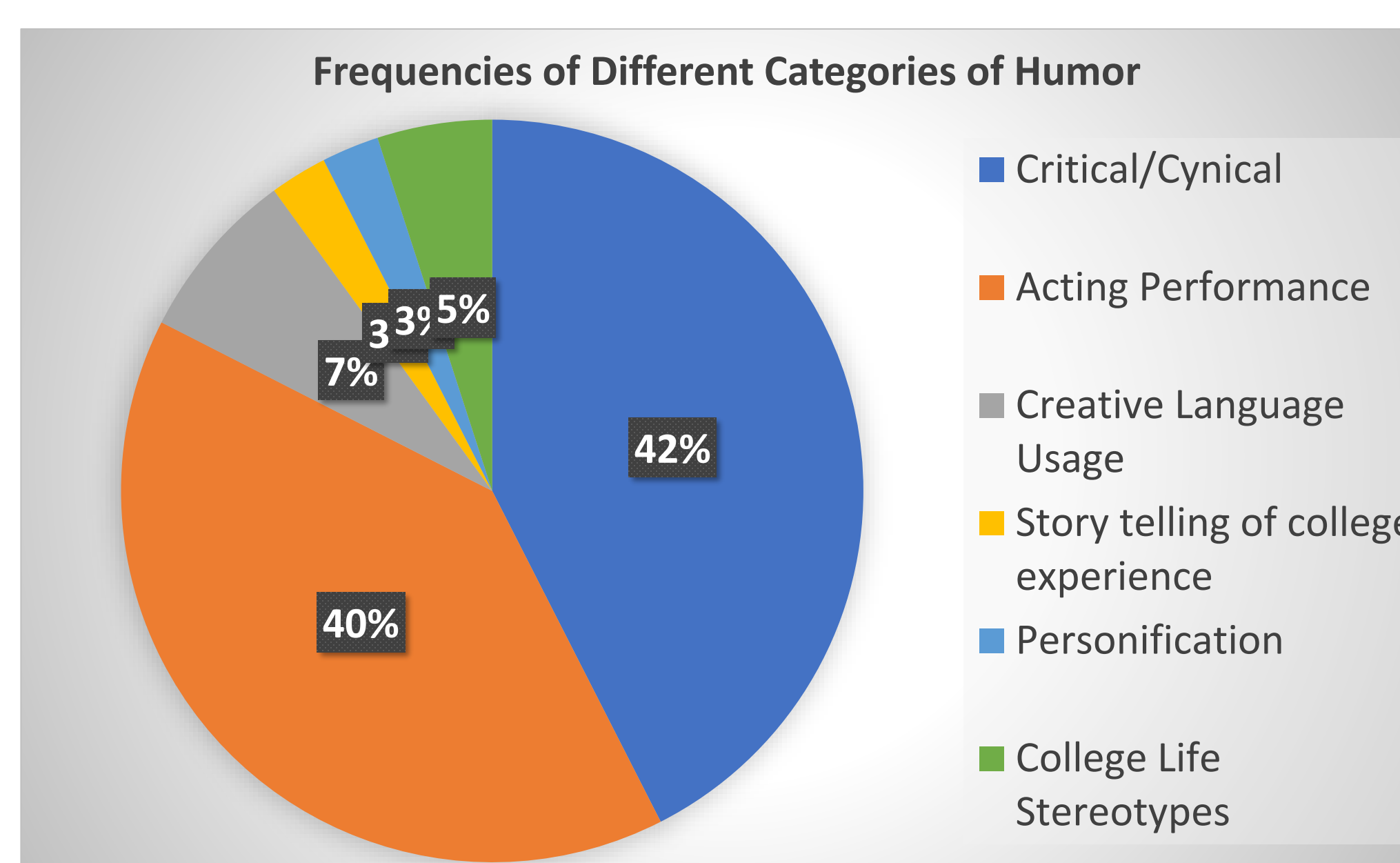
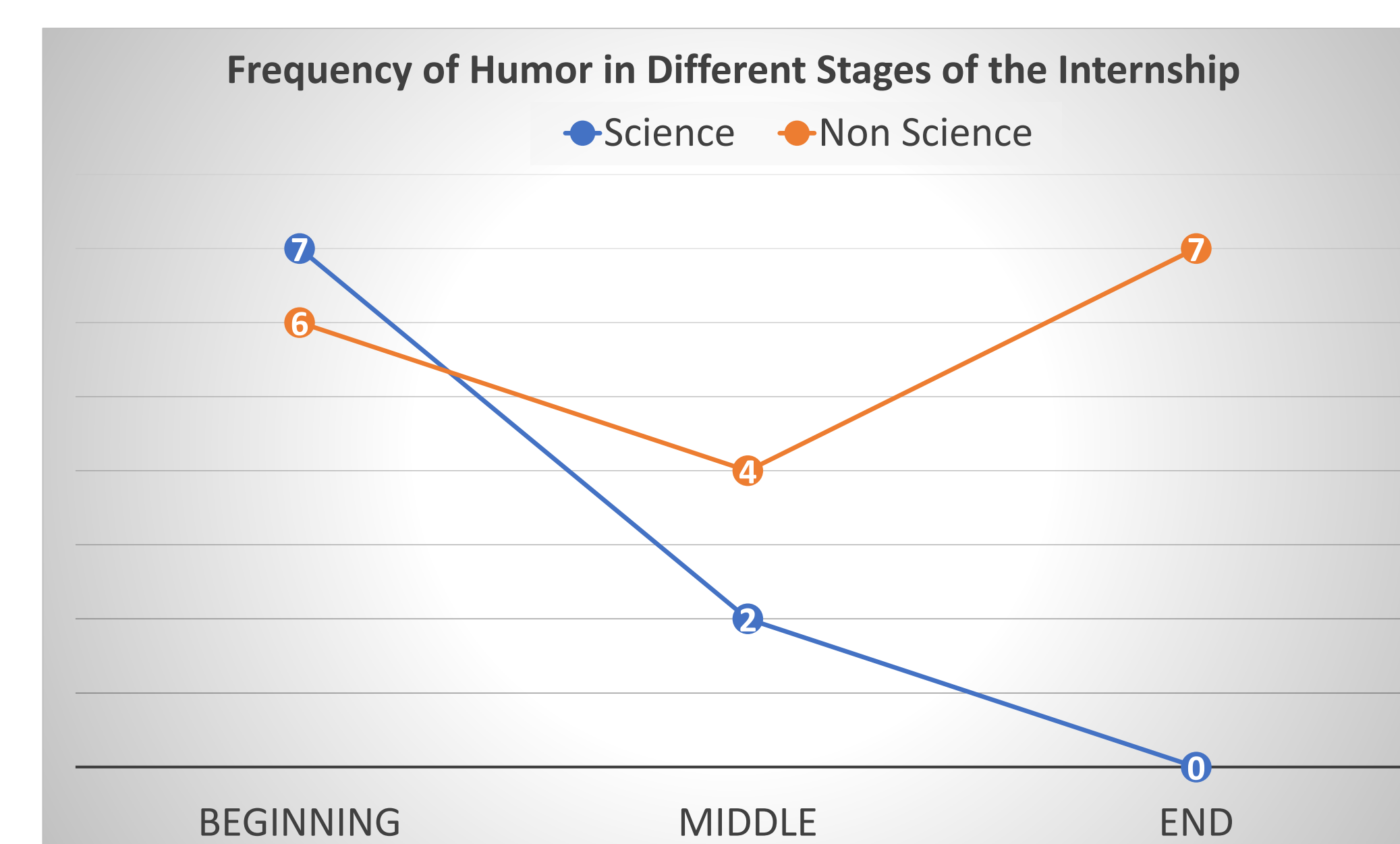


Chart 1. Frequencies of Different Categories of Humor



Graph 1. Frequencies of Humor in Different Stages of the Internship

## Conclusions

- It was found that there were 6 categories of humor that triggered the student's laughter derived from the framework of "Appropriate Use of Humor by Teachers" demonstrated in **table 1**.
- As illustrated in **chart 1**, the two most commonly used categories of humor were "critical/cynical" and "acting performance".
- As demonstrated in **graph 1**, science-related humor was used the most at the beginning stage of the internship. As time goes by, the use of science-related humor decrease.
- As demonstrated in **graph 1**, non science-related humor was used regularly throughout the internship. In particular, at the end of the internship, all humor was non science-related.

## Discussion & Implication

- This ethnographic study demonstrated how an exemplary scientist engaged students with various humor, which enacted students' laughter. As a result, students were not afraid of the scientist and were able to learn scientific knowledge and enjoy the process simultaneously.
- These findings of different categories of humor can be used by educators, especially scientists, who would like to engage their students in science.
- This study investigated an exemplary scientist's use of humor as a case study. Using a similar framework approach, future research may study different styles of humor use in diverse settings.
- This study found that the scientist's humor can engage students in science. Future research may also conduct experimental studies to investigate the effects of humor on students' science learning and engagement.

## References

- Catalão, C. H. (2012). Learning science through work experience: Ciencia Viva science internships program for senior secondary school students. *International Journal of Science and Society*, 3(1), 13-26.
- Seabrook, M. S. (2004). Intimidation in medical education: Students and teachers perspectives. *Studies in Higher Education*, 29(1), 59-74.  
doi:10.1080/1234567032000164877
- Wanzer, M. B., Frymier, A. B., Wojtaszczyk, A. M., & Smith, T. (2006). Appropriate and Inappropriate Uses of Humor by Teachers. *Communication Education*, 55(2), 178-196.  
doi:10.1080/03634520600566132