Basic Communication Course Annual

Volume 33 Article 13

2021

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Research Article

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Abstract

Public speaking anxiety inhibits students in the basic course classroom, whether face-to-face, hybrid or online, and beyond. Equipping instructors with the tools necessary to empower students to manage that anxiety and excel in their basic communication course is a goal of scholars and practitioners. In this study, the researchers examine applying and testing a math anxiety model (i.e., Kelly at al., 2015) to the challenge of public speaking anxiety. We expanded the original model by examining instructor verbal immediate behaviors alongside their nonverbal immediate behaviors. We also tested the Instructional Beliefs Model (IBM; Weber et al., 2011), which indicates that student beliefs (i.e., perceived immediacy mediates the relationship between student characteristics (i.e., intrinsic motivation) and instructor behaviors (i.e., verbal and nonverbal immediate behaviors) and the instructional outcome (i.e., public speaking anxiety) The data best fit the adapted math anxiety model; however, the influences were extremely low. This calls into question whether instructor immediate behaviors and student public speaking anxiety have been examined together many times before, but never published due to statistically insignificant results or low effect sizes.

Keywords: nonverbal immediate behaviors, verbal immediate behaviors, perceived immediacy, intrinsic motivation, public speaking anxiety

Introduction

Here, in the introduction of the paper, readers expect to see a strong theoretical argument rationalizing a study or a well-crafted overview of literature, identifying a hole to be addressed. This introduction is going to be a bit different, but readers can rest assured that this honesty is in the spirit of transparency. Rather than this paper arising from a research agenda or a deep dive into the literature, it initially arose from a conversation between friends. The lead author on this paper teaches a lot of sections of the basic course, and because of this, he is constantly looking for ways to inoculate students against their own anxieties so that they can be successful. In an effort to broaden his search for classroom interventions, he started reading other anxiety literatures and stumbled upon a model of math anxiety that explains students' math anxiety as influenced by teacher behaviors and student characteristics. So, he turned to his friend who enjoys conducting instructional research and asked, "Do you think this model applies to public speaking anxiety too?" While his friend did not know for sure that it applied, it certainly seemed plausible, and so they decided to investigate. (Spoiler Alert: The results were not quite what was expected.)

Where there are students enrolled in presentation-focused basic communication courses, there is speech anxiety, regardless of whether the format is face-to-face, hybrid, online asynchronous, or virtual synchronous (Broeckelman-Post & Pyle, 2017; Puckett, 2016). For many students, the anxiety may cause some physical discomfort (e.g., rapid heart rate and increased body temperature); problems focusing (e.g., forgetting facts or worrying about failure); and nervous behaviors (e.g., tapping the podium or speaking rapidly; Bodie, 2010). For others, the anxiety can be debilitating and prevent them from realizing their full potential (Jackson et al., 2017). If highly speech anxious students enroll in our courses, they may ghost on speech days and do just enough to pass the class. Others will keep dropping after the first few classes, petition the administration to waive the requirement, or, in the most extreme cases, elect not to complete the requirement and fail to graduate. As we try to design courses that meet the needs of our students who experience anxiety, we can look at another anxiety-producing subject, mathematics, for some direction. Therefore, the purpose of this study was to test whether public speaking anxiety

would perform similarly to math anxiety when examined in conjunction with immediate behaviors, perceived immediacy, and intrinsic student motivation.

Math Anxiety Model

Math anxiety develops over time based upon a person's experiences with manipulating numbers (Shi & Liu, 2016) and has become prevalent in United States' classrooms (Maloney et al., 2013). Indicators of math anxiety include sweaty palms, increased heart rate, uneasiness in one's stomach, feelings of despair, and worry (Plaisance, 2009). Because of its prevalence, researchers began looking for ways to minimize its negative impact on individuals. One approach included examining immediacy and student intrinsic motivation (Kelly et al., 2015); their math-anxiety model purports that instructors' nonverbal immediate behaviors indirectly influence math anxiety and student intrinsic motivation through the intervention of perceived immediacy. Each of these variables is addressed below.

Immediacy: Nonverbal Behaviors and Perceived. Displaying immediate behaviors is a teacher characteristic associated with positive learning outcomes. The literature on instructor immediacy has suffered from conflation between immediate behaviors and the psychological response to those behaviors, particularly in the instructional literature (Kelly & Westerman, 2016). Instructor immediate behaviors lead students to feel physically or psychologically closer to the instructor (Gorham, 1988). Students' perceived immediacy with their instructor is their psychological response to observing their instructor's immediate behaviors as well as any non-immediate behaviors that decrease perceived immediacy (Kelly et al., 2015). Although instructor immediate behaviors have been studied judiciously since the 1970s, perceived immediacy, which consistently mediates the relationships between instructor immediate behaviors and students' reactions to those behaviors, has only been studied within the last 10 years (Kelly & Westerman, 2016).

Most instructor immediate behavior research has focused on nonverbal behaviors, such as making eye contact, smiling, and using vocal inflection (Allen et al., 2006; Zhang & Witt, 2016). The presence of these behaviors correlates positively with a variety of classroom outcomes, including students' perceived cognitive learning (Richmond et al., 1987; Violanti et al., 2018), affective learning (Baker, 2004), motivation (Allen et al., 2004), clarity (Chesebro & McCroskey, 2001; Violanti et al., 2018), civility (Miller et al., 2014), and attendance (Rocca, 2004). Further,

instructors who display nonverbal immediate behaviors regularly are more likely to be perceived as credible (Teven & Hanson, 2009).

Student Intrinsic Motivation. Shroff and Vogel (2009) define intrinsic motivation as a student's willingness to show competence and desire to take on activities for the sake of their own well-being and curiosity; Cheng et al. (2020) define it as doing something on the basis of its own inherent characteristics that offer pleasure. Intrinsic motivation is the desire to do a job for its own sake (Greener, 2019). When someone does an intrinsically motivated task, the reward is the task itself (Lei, 2010).

Competency and autonomy are crucial to student intrinsic motivation, such that students who do not see themselves as competent and able to work independently do not have the raw material from which to develop intrinsic motivation (Huang et al., 2016). Students who are confident in their abilities are more likely to be intrinsically motivated (Shroff & Vogel, 2009), which must be preceded by excitement to learn about a subject and accompanied by teacher enthusiasm (Patrick et al., 2000). Confident students who are intrinsically motivated experience long-term goal achievement as well as persistence and performance (Shin et al., 2018).

Intrinsic student motivation positively associates with learning goals, engagement, and achievement, voluntary persistence in educational tasks, conceptual understanding, giftedness, psychological wellbeing, and academic success with a lower risk of students dropping out and less anxiety during homework (Froiland & Worrell, 2016). It also leads to long-term goal achievement as well as confidence, persistence, and performance (Shin et al., 2018). Additional benefits of intrinsic motivation include cognitive engagement; striving for true understanding; undertaking challenging aspects of a task; skill application; positive outcomes of learning; achievement; perception of competence; self-efficacy; actively participating in class; as well as lower anxiety, depression, stress, and frustration (Lei, 2010). In short, intrinsic motivation is a characteristic that students bring into the classroom that can lead to a variety of positive classroom outcomes for learners.

Even with the evidence indicating intrinsic motivation led to positive educational outcomes, it still remained to be seen whether it also mitigated negative educational outcomes such as math anxiety. The results indicated that perceived immediacy indeed mediated the relationship between instructor nonverbal immediate behaviors and math anxiety as well as student intrinsic motivation. Given that both math and public speaking anxiety are context-specific—if you are not working with numbers or not engaging in public speaking, then you are not anxious—the current study set

out to replicate the Kelly et al. (2015) findings by swapping the two anxieties and extending the research to include instructor verbal immediate behaviors.

Public Speaking Anxiety Model

Public speaking anxiety goes by many names, including *stage fright* and *performance anxiety* (Jangir & Govinda, 2018). In short, it is a person's fear of orally addressing groups of people (Bodie, 2010). In anticipation of giving an oral address, public speaking anxiety can have physical and psychological effects, ranging from sweaty hands to one's mind going blank (Durlik et al., 2014; Jangir & Govinda, 2018; Vassilopoulos, 2005). For some students, public speaking anxiety is so overwhelming that they withdraw from the course (Ashlock, 2015), which can prevent them from completing their degree at many universities where a basic course is a graduation requirement.

While the mere knowledge that a public speaking event will occur is enough to trigger public speaking anxiety (McCroskey, 1982), other stimuli can also affect it. Angry facial expressions from audience members are such a trigger (Wieser et al., 2010). In fact, individuals with public speaking anxiety are hyper-aware of the audience's facial expressions and typically search for expressions of discontent, which heightens their anxiety symptoms (Dimberg & Thunberg, 2007).

Public speaking anxiety is a unique type of communication apprehension because individuals who feel anxious about public speaking may not feel apprehension in any other communication context (Westwick et al., 2019). For students who suffer from public speaking anxiety, their ability to learn can become compromised as they avoid assignments and courses that require presentations (Nash et al., 2016). Likewise, public speaking anxiety can prevent individuals from reaching their full potential in careers as they struggle to show their knowledge and competence during presentations (Westwick et al., 2015).

Public speaking anxiety has been linked to students' low self-esteem, with speculation that anxiety is caused by low self-esteem, or that negative public speaking experiences can trigger public speaking anxiety and lower self-esteem simultaneously (Pearson et al., 2011). Students who are not confident in their own voice (e.g., tone or volume) are more prone to experiencing public speaking anxiety (Marinho et al., 2018).

Following the logic of the math anxiety model (Kelly et al., 2015), it is possible that instructor immediate behaviors influence public speaking anxiety and intrinsic

motivation through the mediation of perceived immediacy. Yet, a limitation of this model as published by Kelly et al. (2015) is that it disregards instructor verbal immediate behaviors.

Verbal Immediacy. Instructor verbal immediate behaviors were first proffered as a construct by Gorham (1988) in her study of instructor behaviors and perceived student learning. Seven years later, Robinson and Richmond (1995) wrote a critique of Gorham's (1988) instructor verbal immediate behaviors measure, identifying validity concerns with the measure. Communication scholars largely abandoned this measure and focused on studying only nonverbal immediate behaviors thereafter. Yet, verbal instructor immediate behaviors continue to be examined in studies outside the communication field where they are found to increase learning and engagement (e.g., Baker 2010; Furlich, 2016; Velez & Cano, 2012; Williams, 2010). More recent examinations of the instrument's validity have found evidence that the measure has strong items whose utility is obscured by weak items; by respecifying the measure, instructor verbal immediate behaviors can be validly assessed (Kelly et al., 2010; Ma & Hample, 2018; Violanti et al., 2018).

Violanti et al. (2018) replicated foundational instructional studies (Chesebro & McCroskey, 2001; Richmond et al., 1987) regarding students' perceptions of learning related to instructors' nonverbal immediate behaviors with the addition of the perceived immediacy and verbal immediate behaviors measures. The study found that, consistent with observations of nonverbal immediate behaviors, students' perception of learning was also positively correlated with verbal immediate behaviors and perceived immediacy (Violanti et al., 2018).

Instructional Belief Model

While replicating the Kelly et al. (2015) model would explain the relationship between immediate behaviors and public speaking anxiety, a competing model, the Instructional Beliefs Model (IBM) explains how instructor, student, and classroom characteristics interact to affect student learning (Weber et al., 2011). According to the IBM, instructor behaviors (e.g., immediate behaviors), student characteristics (e.g., intrinsic motivation), and classroom characteristics (e.g., classroom policies outlined on the syllabus) all indirectly influence student learning through the mediation of student beliefs (e.g., control of learning). Kelly et al. (2020) recently argued that perceived immediacy acts as a student belief, even though it is a belief about the relationship with instructor rather than a belief about one's own ability to

learn. Combined with instructor immediate behaviors and student intrinsic motivation, perceived immediacy should mediate the relationship between student/instructor characteristics and anxiety if the IBM is accurate.

Rationale and Hypotheses

The math anxiety and IBM models place student intrinsic motivation as either an antecedent or outcome respectively. Given that disparity, this study seeks to identify whether the math anxiety or IBM better explains the relationships among instructor immediate behaviors, students' intrinsic motivation, perceived immediacy, and students' public speaking anxiety. As observed in prior research (e.g., Kelly et al., 2015, Violanti et al., 2018), it is predicted that:

> H1: Perceived immediacy is positively correlated with student intrinsic motivation.
>
> H2: Nonverbal instructional immediate behaviors are positively correlated with perceived immediacy.
>
> H3: Verbal instructional immediate behaviors are positively correlated with perceived immediacy.

Because perceived immediacy has been previously observed to correlate negatively with other classroom anxieties (Johnson & Kelly, 2020; Kelly et al., 2015; Kelly et al., 2018; Kelly et al., 2020; Kelly & Gaytan, 2020), it is further predicted that:

> H4: Perceived immediacy negatively correlates with public speaking anxiety.

These hypotheses join to form the mediated models depicted in Figure 1 (public speaking version of math anxiety) and Figure 2 (IBM).

Figure 1

Proposed Public Speaking Anxiety Model

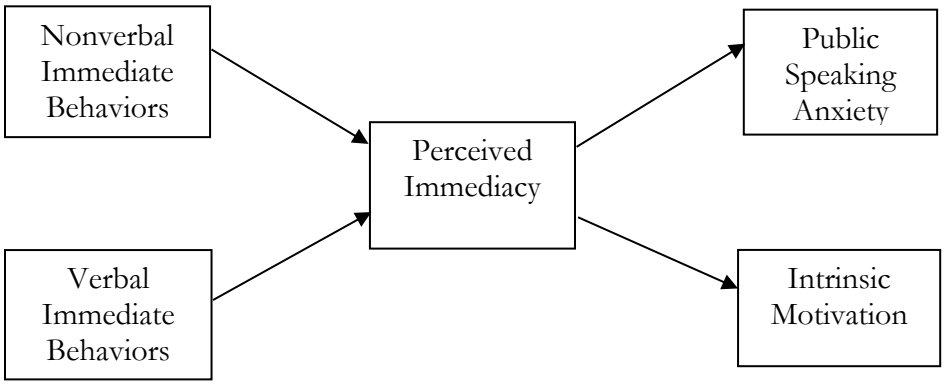
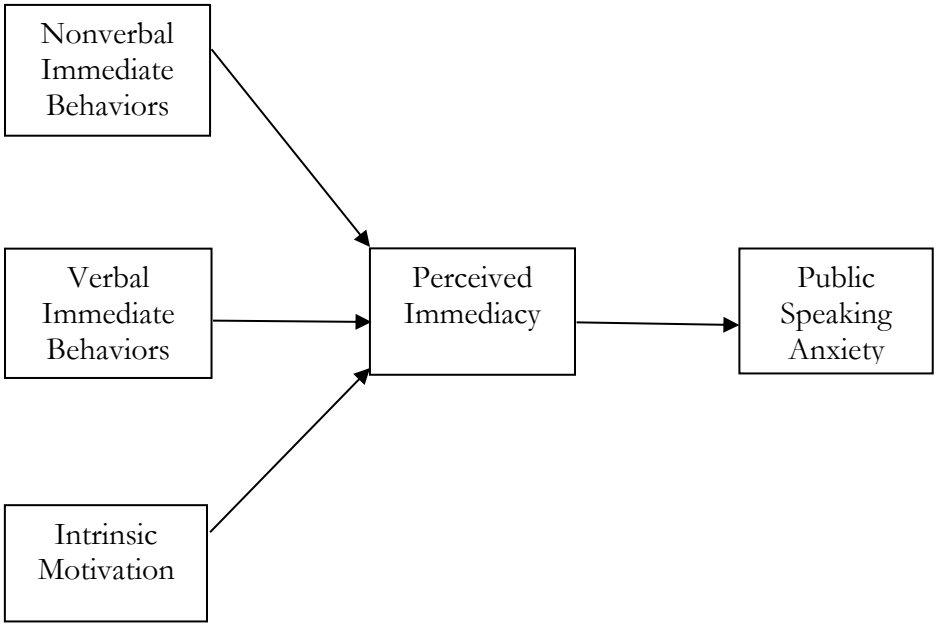


Figure 2

Proposed IBM Model



Method

Participants

In total, a convenience sample of 596 students participated in this study over the course of three semesters. After eliminating the incomplete data, 501 remained in the final data set. Among those students, 191 indicated that they were male, 301 indicated that they were as female, 3 indicated that they were female identifying as male, 6 indicated that they were male identifying as female, and 1 did not disclose their sex. The average age of participants was 19.58 (SD = 2.31) and the range was 18 to 45 years old. In terms of delivery, 418 students indicated that they attended a traditional face-to-face public speaking course, 82 indicated that they met in a synchronous online course, and 3 were enrolled in a hybrid course. Students' class rank broke down as follows: 143 first-year students, 265 sophomores, 65 juniors, 27 seniors, and 1 did not respond.

Procedure

After securing Institutional Review Board approval, a link to an online questionnaire was posted in a human subjects pool at a large southeastern U.S. higher education institute; the link was not made available until after students had completed their first speech in the course (either impromptu or introductory). Any student, 18 or older, enrolled in public speaking or business and professional communication, which are presentation-focused courses, was invited to participate. Participants could choose to participate in this study as one of many options for earning course credit. The link provided in the human subjects pool directed participants' browsers to an informed consent. Once consent was acknowledged, participants were redirected into the questionnaire. On average, participants needed 10 minutes to complete the questionnaire with the order of the measures being randomly assigned to each participant to avoid order or fatigue effects.

Instrumentation

Public Speaking Apprehension. Public speaking apprehension was measured through McCroskey's (1982) six-item submeasure of the Personal Report of Communication Apprehension (PRCA). A sample item is "I have no fear of giving a speech." Croucher et al. (2019) found that while the PRCA exhibited many validity issues as a measure overall, the submeasures used separately yielded much better fit

and had strong items obscured by one or two weak items. Thus, following the recommendation of Croucher et al. (2019), the public speaking apprehension submeasure was used with the anticipation that the measure would need to be respecified to drop problematic items. The items were set to a 7-point response scale with response options ranging from *Disagree Strongly* to *Agree Strongly*.

Immediate Behaviors. Richmond et al.'s (1987) nine-item nonverbal instructional immediate behaviors and Gorham's (1988) 20-item verbal instructional immediate behaviors measures were used. Sample items included "Looks at the class while talking" and "Asks questions or encourages students to talk" respectively. Violanti et al. (2018) recently examined the validity of these measures and found that as with the public speaking anxiety sub-measure, these measures have strong items obscured by weak items among the modern student population. As such, the measures are expected to be respecified with the removal of problematic items. The items were set to a 7-point response scale with response options ranging from *Disagree Strongly* to *Agree Strongly*.

Perceived Immediacy. The Kelly et al.'s (2015) nine-item perceived immediacy measure was used. This semantic differential measure provides a 7-point response scale. A sample item includes "responsive-unresponsive." The measure was reported to have good evidence of content validity in Violanti et al.'s (2018) recent evaluation of instructional communication measures.

Intrinsic Motivation. Pintrich's (1991) intrinsic motivation assessment was used. It contains four Likert-type items (e.g., "In a class like this, I prefer course material that arouses my curiosity, even if it is difficult to learn") with a response 7-point response scale ranging from *Disagree Strongly* to *Agree Strongly*. Artino (2005) reported that the measure has excellent evidence of convergent validity.

Results

Before testing hypotheses, the data were split such that those who completed the measures between the first speech and week six of the semester were used to conduct the confirmatory factor analysis (CFA) to make any respecifications (N = 238) and those who completed the scales between week six and the end of the semester were used to test the respecified scales as a measurement model and test the hypotheses (N = 283). The measures were subjected to confirmatory factor analysis (CFA) to examine their proposed vs. observed factor structure. The AMOS Maximum Likelihood Parameter Estimation Algorithm was used. The analyses revealed that several items across measures caused a statistically significant amount

of residual error on the other items. These items were removed one at a time beginning with the most problematic items. Each time an item was removed, the measurement model was respecified and examined for residual error anew. This resulted in one item being removed from the perceived immediacy measure (*involved-aloof*), one item from the public speaking anxiety measure (*jumbled thoughts*), two from the nonverbal immediate behaviors measure (*has tense body* and *uses a variety of vocal expressions*), and 11 from the verbal immediate behaviors measure. The nine retained instructional verbal immediate behavior items are listed in the appendix. Item respecification was expected in the public speaking anxiety and immediate behaviors measures, but unexpected in the perceived immediacy measure. Fit statistics for original and modified measures are displayed in Table 1. Descriptive statistics for the original and modified measures are displayed in Table 2.

Table 1

Fit Statistics

		GFI	CFI	RMSEA	SRMR
Original	Intrinsic Motivation	.99	.99	.07	.03
	Nonverbal Immediate Behaviors	.88	.86	.15	.06
	Verbal Immediate Behaviors	.73	.55	.13	.11
	Perceived Immediacy	.83	.91	.16	.06
	Public Speaking Anxiety	.85	.81	.22	.10
Modified	Nonverbal Immediate Behaviors	.97	.98	.06	.04
	Verbal Immediate Behaviors	.96	.96	.09	.05
	Perceived Immediacy	.96	.98	.10	.02
	Public Speaking Anxiety	.99	.99	.07	.02
Measurement		.84	.91	.07	.06

Note. Kenny et al. (2014) have argued that RMSEA is not a relevant statistic when there are few degrees of freedom, as there are in scale testing. Those values are presented here because they are common practice, not because they played a significant role in the decision-making process.

Table 2
Descriptive Statistics

Respecification data	Range	Mean	SD	Skewness	Kurtosis	α
Verbal Immediate Behaviors	2.50-7.00	5.60	.91	-1.003	1.22	.83
Nonverbal Immediate Behaviors	2.14-7.00	5.41	1.06	-.39	-.50	.84
Perceived Immediacy	1.83-7.00	5.90	1.01	-.95	.68	.94
Intrinsic Motivation	1.00-7.00	4.57	1.02	-.22	.68	.76
Public Speaking Anxiety	1.00-7.00	4.72	1.21	-.33	.05	.80
Testing data	**Range**	**Mean**	**SD**	**Skewness**	**Kurtosis**	**α**
Verbal Immediate Behaviors	1.50-7.00	5.48	1.10	-1.07	1.56	.85
Nonverbal Immediate Behaviors	1.43-7.00	5.34	1.13	-.67	.09	.85
Perceived Immediacy	1.33-7.00	5.55	1.44	-.94	.13	.96
Intrinsic Motivation	1.00-7.00	4.28	1.27	-.18	-.07	.80
Public Speaking Anxiety	1.00-7.00	4.82	1.41	-.34	-.53	.85

Individual hypotheses were tested through Pearson correlations. Consistent with Hypothesis 1, a small positive statistically significant correlation was observed between students' intrinsic motivation and perceived immediacy. Consistent with Hypotheses 2 and 3, moderate positive statistically significant correlations were observed between both immediate behavior measures and perceived immediacy. Finally, the data were consistent with Hypothesis 4, yielding a small negative statistically significant correlation between perceived immediacy and students' public speaking anxiety. Correlations among all variables are presented in Table 3.

Table 3
Correlation Matrix

Respecification data	1	2	3	4
1. Verbal Immediate Behaviors				
2. Nonverbal Immediate Behaviors	.71**			
3. Perceived Immediacy	.54**	.52**	.	
4. Intrinsic Motivation	.29**	.27**	.13	
5. Public Speaking Anxiety	-.07	-.08	-.15*	-.28**
Testing data	**1**	**2**	**3**	**4**
1. Verbal Immediate Behaviors				
2. Nonverbal Immediate Behaviors	.66**			
3. Perceived Immediacy	.63**	.57**		
4. Intrinsic Motivation	.22**	.14*	.22**	
5. Public Speaking Anxiety	-.10	-.01	-.15*	-.13*

*$p < .05$, **$p < .01$

The models were tested through Structural Equation Modeling (SEM) using the AMOS maximum likelihood estimation algorithm. As evidenced in Table 4, the Math Anxiety Model we replicated and extended as well as the Instructional Beliefs Model yielded acceptably fitting models based upon significant chi-square values, which led to examination of the fit indices. The following standards for assessing fit (CFI > .95 is good, SRMR < .08 is good, and RMSEA ≤ .08) are deemed acceptable (Byrne, 2016). Therefore, both models were deemed acceptable for the data.

Table 4

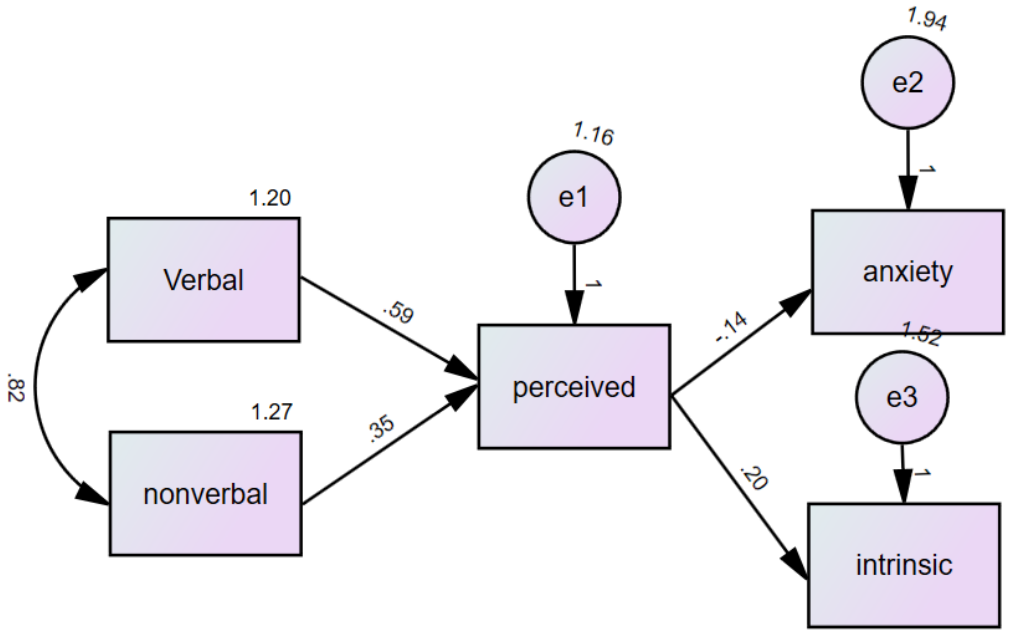
Summary of Fit Indices for Models Tested

Model	χ2	df	p	RMSEA	CFI	SRMR
Public Speaking Anxiety Model	9.57	5	.09	.06	.99	.04
Instructional Beliefs Model	5.55	3	.14	.05	.99	.03

Because global fit statistics supported both models, indirect effects were tested through bootstrapping with 500 subsamples and a 95% confidence interval. The public speaking anxiety model (see Figure 3) produced statistically significant indirect effects for verbal immediate behaviors ($.336 < \varrho < .560$; standardized indirect effect of .10 on intrinsic motivation and -.07 on public speaking anxiety) and nonverbal immediate behaviors ($.152 < \varrho < .385$; standardized indirect effects of .06 on intrinsic motivation and -.04 on public speaking anxiety). In the IBM, the indirect relationship between students' intrinsic motivation and public speaking anxiety was not statistically significant ($-.009 < \varrho < .173$). The IBM fit is likely attributable to the indirect effects being within sampling error of zero; thus, the most conservative decision is to conclude that the data do not support this model. Therefore, the public speaking anxiety model created from the math anxiety model explains the data best.

Figure 3

Supported Model



Note. Standardized regression weights

Discussion

As predicted, instructor immediate behaviors (verbal and nonverbal) as well as students' intrinsic motivation were positively correlated with perceived immediacy; perceived immediacy was negatively correlated with public speaking anxiety. These findings aligned with expectations from the instructional communication work on math anxiety (e.g., Kelly et al., 2015; Kelly et al., 2018; Kelly et al., 2020). When students feel a stronger connection with their instructors, they feel less public speaking anxiety. Consistent with the math anxiety literature, the data patterns supported predictions that perceived immediacy mediated the relationships between the exogenous variables (instructor nonverbal immediate behaviors and instructor verbal immediate behaviors) and the endogenous variables (student intrinsic motivation and public speaking anxiety).

Practical Implications

That the supported model was consistent with previous studies focusing on instructor communication and student math anxiety is not surprising. As noted in prior studies, instructor communication can act as an intervention for classroom anxieties, freeing students' working memory so that they can concentrate on the task at hand (Kelly et al., 2015, Kelly et al., 2020; Kelly & Gaytan, 2020). Yet, each of these relationships is mediated by perceived immediacy. As such, the classroom implications for this study echo prior literature implications: the set of behaviors recognized as instructor immediate behaviors is not a panacea checklist that controls perceived immediacy (Kelly et al., 2015). Rather, the commonly recognized immediate behaviors are an excellent list of behaviors to begin practicing for professors who wish to become more immediate with their students; it is crucial to engage in perception checks when relying upon these behaviors to ensure the behaviors are perceived as intended.

Further classroom implications come from observing the difference in magnitudes between the indirect relationships the verbal and nonverbal immediate behaviors have with students' public speaking anxiety. Just as Ellis (1995) reported finding a statistically significant relationship between teacher verbal immediate behaviors and students' public speaking anxiety, the verbal immediate behaviors were stronger in this study. Additionally, the verbal immediate behaviors had a stronger effect on students' perceptions of closeness with the instructor. Therefore, it is possible that instructors who wish to impact students' public speaking anxiety through communication may find verbal messages to be more impactful than nonverbal behaviors.

The direct relationship between perceived immediacy and students' public speaking anxiety was quite small. Indeed, the $r^2 = .026$, students' psychological response to their instructors' communicative behaviors accounted for 2.6% of the variance in their public speaking anxiety. While it is critical for instructors to practice developing perceived immediacy with their students to assist with a variety of classroom outcomes, it seems that public speaking anxiety is simply not a student characteristic upon which instructors have a large impact through immediacy alone. Some of the other variables that might exert a stronger impact on public speaking anxiety include classroom dynamics, relationships with their peer audience members, and previous experience engaging in public speaking. Therefore, it is critical to address public speaking anxiety in other ways.

While this study looked specifically at instructor behaviors, we have to remember that classrooms, like organizations, form their own cultures (Deal & Kennedy, 1982). As instructors, we have the ability to enhance the connections among students and instructor (Wood, 1982). As people become more familiar with each other in these stronger cultures, they become more comfortable interacting with each other. Activities such as think-pair-pair-share where two students interact with each other first to address the prompt and then two pairs join each other to form a foursome and discuss the prompt again help to build classroom cultures.

With the small relationship between perceived immediacy and public speaking anxiety, it is possible there becomes a point of diminishing returns—we enhance students' perceptions of immediacy productively up to a point at which those perceptions become added stressors that increase their public speaking anxiety because students feel obligated to perform well for instructors they feel closer to. One of the ways to address this possibility is to talk about it. Communication instructors, scholars, and researchers know how common public speaking anxiety is (Dwyer, 2012; Hunter et. al, 2014, Motley, 1997; Thomas, 1997), and that must be acknowledged in classrooms. Very often students just need to know they are not alone and others share their worry and anxiety (Ablamowicz, 2005). Just knowing that they are not the "only one" takes a tremendous weight off and opens the possibility that if others can manage it, so can they. Acknowledging public speaking anxiety demystifies it, beginning the process of addressing it. Naming the fear helps them conquer it (Steimle, 2016) and discussing the anxiety feels empowering.

Another way to address the increased anxiety levels involves reframing what a speech or presentation is. Instead of regarding speeches as performances, which tend to elevate anxiety and fear (Motley, 1997), reframe presentations as conversations or an opportunity to share something they are passionate about. Decreasing pressure to perform and increasing opportunities to connect changes the classroom dynamics (Kelly, 2010); students begin to see themselves as part of a larger collective and less of an isolate in the front of the room. Through reframing, the audience becomes an engaging part of the activity rather than a judgmental jury waiting for them to falter. This reframing also opens the door to promoting storytelling. As the oldest form of human communication, storytelling has existed in all civilizations from early cave drawings to today's social media posts. Storytelling is recognized as a great method for teaching and learning, but is especially effective in public speaking where it can train students to focus on a plot rather than their anxiety symptoms, while still

providing opportunities to grow as a speaker (Prentiss, 2004). Sharing stories builds connections.

Research Implications

Perhaps the most notable finding in this study is the nonexistent correlation between instructors' nonverbal immediate behaviors and students' public speaking anxiety. In reviewing the literature to prepare for this study, research specifically examining instructors' nonverbal immediate behaviors and students' public speaking anxiety was sparse (e.g., Ellis, 1995; Swenson, 2011). With an abundance of classroom research on both communication apprehension and nonverbal immediate behaviors, it is curious that so few published studies examined the relationship between these variables. Given the historic tendency of the communication discipline to publish only statistically significant results (McEwen et al., 2018), it could be that a non-statistically significant relationship between these variables has been observed numerous times by researchers, but rarely published.

Researchers may not typically consider the situational aspects of communication apprehension, beyond classroom apprehension (e.g., Frymier, 1993; Zhang, 2005). Croucher et al. (2019) warns that the composite communication apprehension measure's use (McCroskey, 1982) has led to a proliferation of measurement error, and therefore overestimation in our knowledge of communication apprehension. While Croucher et al. (2019) is clear that McCroskey (1982) is to be applauded for his foundational work in measurement of communication apprehension, communication scholars now have the tools to see that while the composite measure is consistently reliable, there is little to no evidence of validity; it is an excellent tool for heightening people's awareness of their anxiety in different contexts, just not for measuring apprehension as a trait across contexts. As such, it is advisable that future instructional research on students' communication apprehension should not use a global measure of communication apprehension, but instead focus on measuring situational apprehensions.

This study further supports previous findings (Kelly et al., 2010; Violanti et al., 2018), concluding that there is utility in studying instructors' verbal immediate behaviors. Both studies concluded there were strong items in Gorham's (1988) measure whose utility was obscured by weaker items. Instructor misbehaviors of antagonism and lectures (Goodboy & Myers, 2015) include a variety of verbal and nonverbal instructor behaviors considered to be non-immediate instructional

behaviors (Kelly et al., 2020). As such, face-to-face instructor immediate behaviors should be considered in both verbal and nonverbal channels. To better understand the role these behaviors play, we need a consistent and validated way of examining the two constructs in both face-to-face and mediated contexts; whether we start over and build from the ground up or continue attempting to validate a subset across diverse samples remains to be seen.

Finally, both of the tested models were supported through global fit statistics. Just as researchers need to move beyond simply examining scale reliability to considering scale validity (Croucher et al., 2019; Kelly & Westerman, 2020), they need to move beyond simply examining global fit indices to test models. Had the authors not taken the time to drill down to the direct and indirect effects, they could have drawn incomplete conclusions about each model's utility, believing both the IBM and public speaking models fit the data well.

Limitations

This study was limited in that the sample was fairly non-diverse in terms of class delivery platform and assessed immediate behaviors observed in primarily non-mediated contexts. It is quite likely that a variety of immediate and non-immediate cues influence students' perceived immediacy through mediated communication channels (Vareberg & Westerman, 2020). Future research on instructor immediate behaviors should also consider those behaviors that occur in mediated channels, even for out-of-class communication.

This study also focused on the traditional face-to-face classroom where students learn a rational universal approach to presenting: standing at or near a podium with an introduction (attention getter, thesis, credibility statement, and preview), body (main points with evidence), and conclusion (restate points or thesis, close on a memorable note). Today's students will enter more culturally diverse organizations than generations past and need to be prepared to meet changing demands when it comes to speaking in public. Future research should examine public speaking anxiety with alternative instructional approaches (e.g., competency-based course design, varying levels of instructor clarity, or goals-based grading) and presentation practices (e.g., employing alternative forms of organizing, speaking while seated in a circle such as would be done at a meeting, or utilizing mediated channels to deliver an audio or audio-visual presentation).

Finally, data for the respecification of measurement models was collected earlier in the semester than the model testing data. Therefore, differences in effect magnitudes observed in the two datasets may be attributable to the amount of time spent in the class. This cannot be determined from the present data.

Conclusions

The findings of this paper articulate a rare occurrence, an instance in which the traditional instructor nonverbal immediate behaviors do not strongly impact a particular student learning outcome (c.f., Allen et al., 2006). Yet, the data were consistent with patterns in which both instructor verbal and nonverbal immediate behaviors indirectly impacted students' public speaking anxiety and intrinsic motivation through the mediation of perceived immediacy, even if variance accounted for is small. Recently, researchers have called for publishing studies consistent with theory and models even when, and perhaps most especially when, the results are not statistically significant (Kelly & Westerman, 2020; McEwan et al., 2018). It seems impossible to believe that this study is among less than a handful examining instructor nonverbal immediate behaviors and students' public speaking anxiety (c.f., Ellis, 1995, Yu, 2011; Zhang & Oetzel, 2006), two of the most studied constructs in instructional and basic course literature. It seems more probable that such studies were conducted, but never published due to statistically insignificant results. To enhance our understanding of the IBM and work towards theory development in instructional communication regarding various communication anxieties, publishing such studies is necessary. The authors hope to see replication of this work utilizing other samples to improve our understanding of instructor immediate behaviors, both verbal and nonverbal, and other direct influences on public speaking anxiety.

The study's findings also point to a need to examine what we are doing in the basic communication classroom. Many of today's students have grown up in environments where their interactions with others and outside free play have been replaced with text-based interactions, video games, and surfing the internet. These students enter our classrooms with widely varying experiences, preparedness, and confidence for speaking in front of others. We may also be the only liaison they encounter for preparing them to present in a globally and culturally diverse workplace (few universities have more than one oral communication requirement and non-accredited programs do not have specific guiding standards for communication skills). Thus, finding ways to meet them where they are and help

them set individual, rather than universal, learning goals should be a priority. Managing anxiety while strengthening competence and efficacy allows students to focus on the audience, content, and delivery during their presentations as well as better prepares them for the careers they will enter after graduation.

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Appendix

Instructor Nonverbal Immediate Behaviors Items

1. Uses monotone/dull voice when talking.
2. Smiles at the class as a whole, not just individual students.
3. Moves around the classroom while teaching.
4. Has a very relaxed posture while talking to the class.
5. Smiles at individual students in the class.
6. Uses a variety of vocal expressions when talking to the class.

Instructor Verbal Immediate Behaviors Items

1. Uses personal examples of talks about experiences she/he has had outside of class.
2. Asks questions or encourages students to talk.
3. Uses humor in class.
4. Gets into conversations with individual students before or after class.
5. Invites students to contact or meet with him/her outside of class if they have questions or want to discuss something.
6. Praises students' work, actions, or comments.

Note: Ma and Hample (2018) used verbal immediacy items No. 1, No. 2, No. 3, and, "Asks other people's opinions," which did not remain in the respecified model with these data; Violanti et al. (2018) retained all of these verbal immediate behavior items in addition to nine other items.